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The Distribution of Wealth in America, 1983-2013

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Executive Summary

Wealth is one of the most important measures of economic well-being, but also one of the most difficult to measure. Transactions for some types of wealth, such as stocks and bonds, occur very frequently at prices which are readily available, and provide a current valuation; transactions for other types, such as owner-occupied homes, occur much less frequently and the value of the home is not easily measured in between transactions. In addition, shares of stock in a specific corporation are identical; the sale of any 100 shares establishes the value of all shares. By contrast, homes can differ widely; the sale of one three-bedroom, two-bath home does not establish the market value of all such homes even in an area as small as a city block. Research on wealth has been limited by these and other differences, despite extensive and serious efforts by numerous economists and other analysts.

In 1983 the Federal Reserve board began to sponsor a survey of household wealth, the Survey of Consumer Finances. The SCF has been conducted every three years since then. The 2013 survey is the most recently completed; the 2016 survey is underway at present and will become available late in 2017. The SCF contains the most detailed information available about the wealth of American households. It consists of detailed interviews with several thousand households. Some are chosen randomly from the population, while others are selected because they are expected to be households with high wealth. Each household is asked several hundred questions about its assets and its debts, and also about its demographic and other economic attributes. The typical interview last about 90 minutes, but some are substantially more than three hours.

Much of the research on wealth has focused on its distribution – the extent to which wealth ownership is concentrated among a small number of households, and whether it is becoming more or less concentrated over time. This has been true since the first SCF in 1983, and indeed before then using other data. The distribution of wealth in the United States is more concentrated than the distribution of income, as reported in the Current Population Survey conducted yearly by the U.S. Bureau of the Census. Also, the distribution of income has become increasingly more unequal since about 1969. It is natural to expect a similar change for wealth, but that need not necessarily occur.

This study uses the surveys since 1983 to analyze the changes in the distribution of wealth. There are some differences between the 1983 survey and the surveys from 1989 to 2013, so some of the analysis is based on the shorter period.

Wealth and Income

The term "wealthy" is often used indiscriminately to refer to people with high incomes as well as people with high wealth. For that reason, it is essential to make clear the distinction between *wealth* and *income*. Wealth is a stock and income is a flow. For any particular household *at any particular time*, wealth is the value of the total assets it owns, minus the total amount of its debts. Wealth is synonymous with net worth. Income is the money that a household receives *over a given period of time*, reported most commonly for a calendar year.

Some assets yield income – stocks have a value and pay dividends. But some important assets do not have an income counterpart. Owner-occupied homes are the most valuable asset for many households, and for all U.S. households combined, but they do not produce income. Conversely, wages and salaries – income from working – is the most important category of income, but it does not have a wealth counterpart. It is therefore quite possible for high-wealth households to have low incomes, such as elderly homeowners who are "house poor," and similarly for doctors or lawyers or other professionals to start their careers at a good salary but have little in the way of assets – just a checking account and a car (and perhaps a loan on the car). It is also possible for the income and the wealth of a household to change in opposite directions, at least for some time.

American Wealth Over Three Decades

Household wealth in the U.S. increased rapidly between 1983 and 2007. In real terms (throughout this study values are expressed in 2013 dollars, unless otherwise specified), total wealth tripled (from $24 trillion to $73 trillion); average wealth per household more than doubled (from $280,000 to $625,000); and median household wealth increased by 70 percent (from $80,000 to $136,000). Then the Great Recession and the subsequent weak recovery brought about abrupt reversals: total wealth dropped from $73 trillion to $62 trillion by 2010 with a slight increase to $65 trillion by 2013; average wealth per household dropped to $528,000 by 2013, and median household wealth dropped to $81,000 – almost the same as in 1983. This experience is unlike the aftermath of other recent recessions, during which a decline in wealth was temporary, and quickly reversed.

The Changing Composition of Household Wealth

The SCF disaggregates assets into financial and nonfinancial categories. Throughout the three decades, nonfinancial assets comprised the larger share of net worth, but financial assets were an increasing share. In 1983, nonfinancial assets amounted to 72 percent of net worth; by 2013 they amounted to 54 percent. Throughout the period, the most widely held assets were transaction accounts, vehicles, owner-occupied homes, and retirement accounts, in that order. Over 85 percent of households had transaction accounts (90 percent from 1998 through 2013); about 85 percent owned vehicles (rising from 84 percent in 1989 to 87 percent by 2007 and declining to 86 percent by 2013) about 65 percent owned homes (rising from 64 percent to 69 percent in 2004, then dropping to 65 percent by 2013); over 35 percent had at least one retirement account in 1989, rising to about 50 percent by 1998 and remaining at about that level through 2013. The most common liabilities were credit card balances, home mortgages, and car loans; the first two were held by between 38 and 48 percent of all households, the last by 30 to 35 percent. Through 2010, home equity constituted the largest share of total household wealth, privately-owned businesses the second largest (proprietorships, partnerships and closely held corporations whose stock was not widely traded), and retirement accounts a steadily growing third. In 2013 the value of unincorporated businesses slightly exceeded home equity. Home mortgage debt was by far the largest liability, between two-thirds and three-quarters of all household debt.

The growth in retirement accounts was paralleled by increasing ownership of stocks, both directly and indirectly held. In 1989 there were two major household assets, owner-occupied homes and closely-held businesses, which together accounted for about half of total household wealth, even subtracting mortgage debt. By 2001, the total value of stockholdings was larger than either, and amounted to almost a quarter of household net worth; together these three asset categories constituted over 60 percent of household wealth, and continued to do so through 2013.

Changes in the Distribution of Wealth, 1983-2013

The distribution of wealth, and also of income, can be measured by describing the entire distribution (the Gini coefficient) or by measuring the concentration at the high end of the distribution, such as the richest one percent or 10 percent (the concentration ratio). The Gini coefficient is calculated by ranking households from the poorest to the richest, and measuring the cumulative share of total wealth owned by the corresponding cumulative share of all households. If the distribution of wealth is perfectly equal, the Gini coefficient is zero; if all wealth is owned by one single household, the Gini coefficient is unity.

From 1992 to 2007, the distribution of wealth became slightly more unequal by either measure. The changes from one survey to the next were not statistically significant, but the cumulative change was large enough that there was a statistically significant increase in inequality over several surveys, for example 1998 to 2007. There was an increase in wealth across the full distribution; both rich and poor became wealthier.

In the Great Recession, this pattern changed. Rich households and poor households and those in between became poorer. The rich were less affected: the richest 10 percent lost about seven percent of their wealth, while the remaining 90 percent lost about 22 percent of theirs. During the weak recovery after 2009, the distribution of wealth continued to become more unequal. In 2007, the richest 10 percent of U.S. households owned over 71 percent of total household wealth; in 2013 they owned almost 75 percent.

This experience contrasted with the period between 1983-1992. The distribution of wealth became insignificantly more unequal during the expansion that began in 1983, but it became more equal again during and immediately after the 1990-1991 recession. In 1992 the concentration of wealth was about the same as in 1983. The 1983 survey was different from the later surveys in various ways, so comparisons with later surveys are not precise, but it is clear that the experience during and after the 1990-1991 recession was quite different than the experience during and after the Great Recession.

Wealth is much more unequally distributed than income, partly because it is more closely connected to age. Young adults typically start with a salary, a checking account and a car. Over time, their income rises, and they also add to their assets, commonly starting a retirement account and buying a home. Their wealth is likely to increase more rapidly than their income, and continues to do so as they get older. Income has generally been highest for households in their late 40s to late 50s, in the range of $75,000 to $85,000; wealth has generally been highest for households that are about 10 years older, and is in the range of $225,000 to $300,000. This difference usually continues into retirement, until households start to draw on their wealth for living

expenses. Age is the most important factor for analyzing the distribution of wealth, although certainly many other factors matter as well.

How Come?

Several asset and liability categories stand out as contributors to the difference between the experience during the 1980s and the experience during the Great Recession. The category with the most notable difference, and also with the greatest change during the recession and its aftermath, was owner-occupied housing. During the unprecedented peacetime inflation between 1965 and 1982, the real value of financial assets dropped dramatically and the demand for real assets rose sharply as households sought protection against inflation. The most widely held real asset was owner-occupied homes. The homeownership rate rose from 62.9 percent in 1965 to a then-record 65.6 percent in 1982, a very large increase by historical standards. Then as the inflation rate dropped during the 1980s, homeownership decreased and real home prices fell. During and after the 1990-1991 recession, homeownership was stable and real house prices declined slightly. In contrast, homeownership and house prices rose strongly during the 2014-2007 expansion, while since 2007 both have fallen.

Home equity is by far the most important asset for middle-wealth households, and they have been the hardest hurt. Their homeownership rate dropped by more than 10 percentage points in six years. For those who kept their homes, their equity fell by nearly 50 percent, and their total wealth by about 40 percent. The homeownership rate was stable for the richest 30 percent, and while their equity dropped, the decline was less than for those in the middle. The decline in homeownership and home equity was the biggest factor in the increase in inequality.

At the same time, the market for second homes – vacation homes – was strong, particularly after 2010. There were one million more vacation homeowners in 2013 than three years earlier, and they owned 1.4 million more homes. Their vacation home equity increased by over 50 percent. Vacation homeowners were wealthier than most households to begin with, and became somewhat more so.

Student debt increased through recessions and recoveries, also contributing to a more unequal distribution of wealth. In 1989 there were eight million households (nine percent of all households) where someone had a student loan, and their total education debt was about $82 billion. By 2007, there were 18 million households (15 percent) with a total debt of $426 billion; by 2013, there were 24 million (20 percent) with a total debt of $710 billion. In 2010, total outstanding student debt exceeded the total value of car loans, and also exceeded total credit card debt. Most student debt is owed by households in the lower half of the wealth distribution, and most are relatively young; the median age for the head of household with student debt has consistently been about 35. Most have a low net worth, partly because they are young and partly because they have student debt. The Great Recession had a substantial impact on these debtors; the median wealth of households with student debt dropped from $43,000 in 2007 to $15,000 in 2013. About 20 percent had a negative net worth in 2007 because their student debt exceeded the aggregate total of all their assets and all their other debts. By 2013, the proportion was about 30 percent.

The steadily growing proportion of households with retirement accounts might be expected to promote a more equal distribution of wealth. About half of all households had retirement accounts by 1998, and that has been true ever since. The same is true for stocks; since 1998 about half of all households have owned stocks, either directly or indirectly – through mutual funds, trusts and annuities, but most importantly through retirement accounts. As of 2013, 87 percent of households that owned stocks did so through their retirement accounts; only 28 percent owned stocks directly, and the percentages were smaller for other forms of ownership.

Although half of all households have retirement accounts, the accounts owned by the richest households have consistently had a large share of the assets, and their share increased during and after the Great Recession. Between 1992 and 2007, the retirement accounts of the richest 10 percent of households consistently held about 60 percent of the total value in all accounts. As of 2007, their share was 59 percent. By 2010, their share had risen to 65 percent, and it remained at that proportion in 2013. This was less than their share of total net worth. Retirement assets have not been as concentrated among the richest households as has total wealth and thus it is correct to say that retirement accounts have contributed to a more equal distribution of wealth; but since the Great Recession retirement assets have become more concentrated among the rich.

The Families in the Middle

The changes within these various asset and liability categories affected the families in the middle of the wealth distribution – typical American families. There has been relatively little research attention given to the families in the middle. They deserve more attention. As mentioned above, real median household wealth was about $80,000 in 1983, rising to about $136,000 by 2007, and then dropping to $81,000 in 2013. There was hardly any difference between 1983 and 2013; but there was a horrendous loss of 40 percent during the Great Recession and the weak recovery.

This was essentially the experience of families around the median – the middle 10 percent, those whose net worth was between the 45th and the 55th percentile of the wealth distribution. In 2007, the wealth of these families ranged from about $105,000 to $175,000. In 2013, in 2013 the range was between $59,000 and $111,000. Thirty years earlier, the range had been very similar, about $62,000 to $98,000.

The families in the middle were certainly not the same families in 2013 as they were in 1983, but they were largely the same sorts of families. They were mostly middle-aged, mostly married couples, and if married mostly with children living at home. The real median income of these families was about $48,000 in the earliest survey, peaked at about $54,000 in 2007 and declined to about $46,000 in the latest one – much the same pattern as their wealth. In both years, their income was higher than the median for all households reported by the Census Bureau. One possible contributor to the drop in income between 2007 and 2013 may be that unemployment was higher among the families in the middle. There was no working adult in about five percent of the families where the head of the household was under 65 in 2007; in 2013, about 10 percent did not have a working adult.

It was not particularly noticeable to the public that typical families in 2013 were essentially no wealthier than typical families had been in 1983. Even if the families in

the middle in 2013 were the children of families in the middle in 1983, it would not have been obvious to them. Actual prices more than doubled over those three decades: $35,000 in 1983 dollars had the same purchasing power as $82,000 in 2013. Also, most middle-wealth homeowners probably would have had to estimate the value of both the home their parents lived in back in 1983 and the home they owned in 2013.

But the 40 percent decline in wealth between 2007 and 2013 was certainly noticeable, and noticed. About 90 percent of the families in the middle owned a home in 2007, and their equity in their home was about $92,000. This was two-thirds of their wealth. By 2013, only about 82 percent owned a home, and their equity had been cut almost in half, from $92,000 to $51,000. The drop in the value of their home accounted for about 85 percent of the decline in their net worth. Something similar happened to their retirement accounts. In 2007 about 55 percent had accounts, with an average value of $40,000. In 2013 only 47 percent did, and the assets in their accounts were about $32,000, accounting for about 13 percent of the decline in their wealth.

These families were typical of a much broader group, amounting to half of all families: those between the 30th percentile and the 80th percentile of the wealth distribution. For most of these families, their most important assets were their homes and their retirement accounts, which together represented over half of their net worth. On average, they lost 37 percent of their wealth.

In every wealth bracket, Americans were hurt by the Great Recession, but not all Americans were hurt to the same extent. The richest 10 percent saw their average wealth drop from $4.5 million to $4 million, a loss of about 11 percent. As a result, their share of total household wealth increased from 71 percent in 2007 to 75 percent in 2013 – their largest share reported in any Survey of Consumer Finances over the full three decades. The share of the 10 percent in the middle dropped from 2.1 percent to 1.6 percent. Between 2007 and 2013, the distribution of wealth became noticeably more unequal, for the first time since the first SCF in 1983.

The depth of the recession, the weakness of the recovery, and the more unequal distribution of wealth may all have contributed to the dissatisfaction of Americans with the current state of America. Since the beginning of 2009, a majority have consistently said they believe America is “on the wrong track,” as opposed to “going in the right direction.” Typically, about 60 percent have the negative view, compared to about 30 percent with the positive. Current opinions are modestly less negative than they were in 2013, but more negative than they were in 2010, just after the Great Recession.

1. The Distribution of Wealth: The Political and Analytical Context

Economic inequality in the United States has attracted a great deal of attention in recent years, beginning with President Obama's major speech in December 2013.[1] Among economists and other social scientists, Thomas Piketty's 700-page book on inequality, *Capital in the Twenty-First Century*, has been much praised and much criticized.[2] But inequality has been front-page news for more than three decades. Liberals express great concern about increasing inequality; conservatives decry it as an obsession.[3] It is an important issue in tax policy debates, and in discussions of programs intended to help the poor in the short run, such as welfare, and in the long run, such as education.

This study analyzes the distribution of wealth, one of the most important measures of economic well-being. It uses the Federal Reserve Board's triennial Survey of Consumer Finances, first conducted in 1983 and most recently in 2013. The SCF contains the most detailed information available about the wealth of American households.

[1] Barack Obama, "Remarks by the President on Economic Mobility," December 4, 2013, available at https://www.whitehouse.gov/the-press-office/2013/12/04/remarks-president-economic-mobility.
[2] Thomas Piketty, *Capital in the Twenty-First Century* (Cambridge, Massachusetts and London England: The Belknap Press of Harvard University Press, 2014).
[3] *The Washington Post* published a series of 10 editorials on inequality beginning on March 12, 2006 and running through December 24, 2006; Arthur C. Brooks, "The Left's 'Inequality' Obsession," *Wall Street Journal*, July, 19, 2007, p. A15.

Inequality: What We Know, and What We Don't

It is widely believed that the richer are getting richer and the poor are getting poorer, and have been for a long time – at least since "Ain't We Got Fun?" became a popular song in the 1920s.[4]

There are several reasons for thinking so. Total wealth has increased dramatically in America since consistent data first became available in 1983. At that time, we Americans were worth $33 trillion, in the aggregate; by 2013, the latest date for which detailed information is now available, we were worth almost double that amount, $65 trillion (both measured in 2013 dollars). It is easy to see that some people are very rich. *Forbes* magazine annually publishes a list of the 400 richest families in the country. Their combined net worth is estimated at $2.34 trillion, which is a new record.[5] It is also regularly reported that there are more millionaires or billionaires now than there were a few years ago. From this it is easy, but not necessarily accurate, to infer that inequality is increasing; some of the rich are getting richer.

In addition, the distribution of income has become more unequal in the United States, and has been doing so since about 1969. There is much more information available about household income than about household wealth, and many people do not clearly distinguish between income and wealth. This is true of journalists, business people, ordinary citizens, and even economists, in my experience.

A third reason is that "wealth" commonly seems to be thought of only as "financial wealth." When I mention my research on the distribution of wealth to journalists, people in business, ordinary citizens or economists, they almost invariably respond with a comment about the stock market. Stock indices have risen dramatically over the last three decades; the Standard and Poor's 500 rose elevenfold between 1983 and 2013, there were impressive stock market booms in the 1980s, 1990s, and 2000s. (There were also large and sharp declines during 2000-2002 and 2008-2009.) The conventional wisdom is that rich people own stocks and middle-class and poor people don't, or don't own much; with the rise in stock prices, it seems to follow quite logically that the distribution of wealth is becoming more unequal.

Finally, wealth is in fact unequally distributed, much more so than income, for perfectly understandable reasons. The most important is that people accumulate wealth over their lifetimes, so that older people are on average much wealthier than younger people. The fact that wealth is unequally distributed *now*, however, does not mean that it is *more* unequally distributed than it used to be. But it is easy to confuse "high inequality" with "rising inequality."

Some academic studies have also contributed to the conventional wisdom, particularly some of the early research using the first Surveys of Consumer Finances. When the tabulations of the 1983 SCF were published, the data appeared to show a very large increase in the concentration of wealth among the very richest Americans, compared to

[4] The song was published in 1921, and was so popular that F. Scott Fitzgerald could refer to it in *The Great Gatsby* in 1925 (p. 76 of the 1998 Oxford University Press edition).
[5] The "Forbes 400" issue of *Forbes Magazine*, Vol. 196, No. 5 (October 19, 2015), p. 8.

somewhat similar previous surveys.[6] Subsequent investigation of the data showed that the increase in concentration was entirely the result of an error in the information for one household, which reported an extremely large holding in one asset category, and which also had the biggest weight of any household in the survey. (The SCF, like virtually all economic surveys, is based on a sample of households, and those households are then weighted to reflect the total population. Similar techniques are employed for political polls.) A follow-up interview with the household determined that the original data was erroneous.[7] In the meantime, however, the original calculation had attracted substantial media and political attention.[8] The SCF results were published during the heated political debates about the economic policies of President Reagan; critics of the President cited the SCF as showing that the President's program was helping the rich and hurting the poor. A report published by the Joint Economic Committee, relying on the original results of the SCF, sharply attacked the President and attracted further attention.[9]

The correction was reported by the Federal Reserve Board and the Survey Research Center of the University of Michigan (which conducted the SCF for the Fed). It was noted in the press, and the JEC published a second report using the corrected data to argue that the distribution of wealth had not changed.[10] But this was not enough to countermand the original impression.[11] Inequality remained a component of the standard critique of Reaganomics. Indeed, and ironically, the error seems to have generated the current research and policy interest in the distribution of wealth. Had the data originally been reported correctly, there would have been much less for scholars to explain to begin with, and probably much less interest by the media.

In fact, even the original, erroneous tabulation did not imply anything about President Reagan's policies. The 1983 SCF was being compared to a 1977 Survey of Consumer Credit, which contained much less information about wealth, omitting several categories of assets including one very important category, ownership of unincorporated or closely-held businesses. In 1983, these businesses accounted for over 20 percent of total household net worth, and over 50 percent of their value belonged to the richest one percent of households. Including businesses, the richest one percent of all households owned 31.5% of all net worth; excluding businesses, the richest one percent owned 25.9

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[6] "Survey Shows Rich Gain Wider Slice of Income Pie," *Wall Street Journal*, October 4, 1984.

[7] Richard T. Curtin, F. Thomas Juster, and James N. Morgan, "Survey of Estimates of Wealth: An Assessment of Quality," in Robert E. Lipsey and Helen Stone Tice, eds., *The Measurement of Saving, Investment, and Wealth* (Chicago: The University of Chicago Press, 1989), p. 529.

[8] Kenneth H. Bacon, "The Rich Get Richer, but Congress Avoids Changing Inheritance Taxes," *Wall Street Journal*, August 15, 1986; David M. Gordon, "The New Class War: Rich Americans Get Richer, While the Rest of Us Pay Their Bills," *Washington Post*, October 26, 1986, pp. B1, B4.

[9] Joint Economic Committee, "The Concentration of Wealth in the United States: Trends in the Distribution of Wealth among American Families," United States Congress (July, 1986).

[10] Lowell Gallaway and Richard Vedder, "The Role of Wealth in American Society: A Study Prepared for the Joint Economic of Congress," *Joint Economic Committee*, August 19, 1986.

[11] Paul Blustein, "Richest in the U.S. Are Far Less Richer Than Was Indicated --- Congressional Report's Error Distorted the Increase In Wealth Concentration," *Wall Street Journal*, August 21, 1986; Paul Blustein, "Share of Wealth Held by U.S. Richest Rose Only Slightly, According to Revised Data," *Wall Street Journal*, August 22, 1986.

percent.[12] The 1977 SCC also reported the dollar values in brackets rather than to the dollar, which further limits comparability.[13] Moreover, of course, the years between 1977 and 1983 include two political Administrations – indeed, more years of the Carter Presidency than the Reagan Presidency – and two very different economic experiences: three years of accelerating inflation and economic expansion between 1977 and the beginning of 1980, followed abruptly by back-to-back recessions and unanticipated disinflation during the early 1980s.

Some early academic studies using the SCF also appeared to show increasing inequality. In a series of papers published in the *Review of Income and Wealth,* economist Edward Wolff reported a substantial increase in inequality between 1983 and 1989, the dates of the first two Surveys of Consumer Finances.[14] Wolff's results also attracted attention because the dates happened to bracket the economic expansion that occurred under President Reagan. He subsequently argued that the increase in wealth inequality during the 1980s was greater than at any time since the 1920s, and implied that the Great Depression was due to the earlier increase.[15] Research by other scholars demonstrated that Wolff's results for the 1980s depended on technical adjustments to the data: the choice of weights for the individual households in the sample, and whether (and how) the reported wealth holdings in the SCF were adjusted so that the totals were aligned with totals reported in other sources of financial data for the US economy. Alternative and equally plausible technical procedures yielded the conclusion that wealth inequality had not increased much (conceivably not at all) between 1983 and 1989, and further research showed that the increase during 1983-1989 was reversed during 1989-1992, a period that included a moderate recession.[16] Wolff's conclusions and policy recommendations, however – higher marginal income tax rates and a new federal tax on wealth, in order to reduce inequality – were popular among liberal policymakers and journalists, and his ominous comparison of the 1920s and 1980s complemented the view of some historians that inequality was a major cause of the Great Depression and contributed to concerns that a new Depression was imminent.[17]

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[12] Robert B. Avery, Gregory E. Elliehausen, and Arthur B. Kennickell, "Measuring Wealth with Survey Data: An Evaluation of the 1983 Survey of Consumer Finances," Board of Governors of the Federal Reserve System, December 1986 (Last Revision April 1988), Table 5, available at http://www.federalreserve.gov/econresdata/scf/scf_workingpapers.htm.

[13] Analysis of the 1983 SCF shows that the results are quite sensitive to whether the data are bracketed and what convention is used for the top bracket. See John C. Weicher, "Changes in the Distribution of Wealth: Increasing Inequality?," *Federal Reserve Bank of St. Louis Review*, Vol. 17, No. 1 (January/February, 1995), p. 6.

[14] Edward N. Wolff, "Trends in Household Wealth in the United States, 1962-83 and 1983-89," *Review of Income and Wealth*, Vol. 40 (June, 1994) pp. 143-174. See also Edward N. Wolff and Marcia Marley, "Long-Term Trends in U.S. Wealth Inequality: Methodological Issues and Results," in Lipsey and Tice, *The Measurement of Saving, Investment, and Wealth.*

[15] Edward N. Wolff, *Top Heavy: A Study of the Increasing Inequality of Wealth in America* (New York: Twentieth Century Fund Press, 1995).

[16] John C. Weicher, "Changes in the Distribution of Wealth: Increasing Inequality?," *Federal Reserve Bank of St. Louis Review*, Vol. 17, No. 1 (January/February, 1995), pp. 5-23; John C. Weicher, "Wealth and Its Distribution, 1983-1992: Secular Growth, Cyclical Stability," *Federal Reserve Bank of St. Louis Review*, Vol. 79, No. 1 (January/February, 1997), pp. 3-23.

[17] For a critique of the notion that the 1980s were the harbinger of a second Great Depression, with particular reference to the SCF, see Lawrence B. Lindsey, "Why the 1980s Were Not the 1920s," *Forbes*,

These analyses are not definitive, but they continue to set the tone for media reaction to each new SCF when the results are released every three years. A finding that inequality has not increased tends to be greeted with surprise, and even skepticism; a finding that inequality has increased appears to be much more consistent with prior expectations.[18]

October 19, 1992. At that time Lindsey was a member of the Board of Governors of the Federal Reserve System.

[18] Keith Bradsher, "Gap in Wealth In U.S. Called Widest in West," *New York Times*, April 17, 1995, p. A1, D4; "The Rich Get Richer Faster," *The New York Times*, April 18, 1995, p. A24 (Editorial); Daniel Gross, "When Sweet Statistics Clash With a Sour Mood," *The New York Times*, June 4, 2006, p. 3.

The Nature and Structure of the Study

This analysis reports in detail on the changes in the distribution of wealth between 1989 and 2013, using data for the last nine Surveys of Consumer Finances. These nine surveys are quite consistent in coverage and methodology. The analysis also looks back to the 1983-1989 period, despite the fact that there are various differences between the 1983 SCF and the later ones, because the 1980s remain controversial and matter for policy discussions.

The next chapter defines wealth and lists its major categories. It also explains the differences between wealth and income, and explains how the distributions of these two related economic measures can move in different directions. Income and wealth are certainly correlated; high income households usually are wealthy households. But the correlation is far from perfect; in the triennial SCF it falls between 0.4 and 0.6 in various years, certainly significantly different from zero but also significantly different from unity.

Chapter 3 reports on the total wealth of all American families over the last three decades, as background to the analysis of the distribution of that total, and Chapter 4 describes the changes in the composition of our wealth. The three major categories of our wealth have been and are: financial assets such as stocks and bonds; ownership of unincorporated and closely-held business, including proprietorships, professional practices, and most commercial real estate; and homeownership, the equity that Americans have in their homes. These three categories comprise about 60 to 75 percent of our wealth. Their relative importance has varied over the last three decades.

Chapter 5 presents the basis analysis of the changes in the distribution of wealth over time. I divide the 30 years into three periods: 1983-1992, the strong economic recovery after the back-to-back recessions of 1980 and 1981-1982, ending with the recession of 1990-1991; 1992-2007, two long economic booms separated by a moderate recession in 2001 (which owing to the timing of the SCF is not very prominent in the data); and finally 2007-2013, the Great Recession and the unusually weak recovery that followed, and indeed has persisted since 2013 and is now in its seventh year. (The period from the mid-1980s to the end of 2007 is frequently referred to as the "Great Moderation," during which the volatility of economic activity was significantly reduced, especially compared to the erratically increasing inflation that the U.S. experienced between about 1965 and 1982.[19]) Over these 30 years, the total wealth of Americans increased substantially, even adjusting for inflation and population growth.

The distribution of that wealth became slightly more unequal between 1983 and 1989, but that was reversed during the recessionary period from 1989 to 1992; total real wealth increased by about 25 percent. Over the next 15 years, the distribution became

[19] See for example Ben S. Bernanke, "The Great Moderation," speech at the meeting of the Eastern Economic Association, February 20, 2004, available at http://www.federalreserve.gov/BOARDDOCS/SPEECHES/2004/20040220/default.htm; Craig S. Hakkio, "The Great Moderation: A detailed essay on an important event in the history of the Federal Reserve: 1982-2007," available at http://www.federalreservehistory.org/Events/DetailView/65.

more unequal, but the change from one survey to the next was not statistically significant and total real wealth more than doubled.

During the Great Recession, however, the distribution of wealth became significantly more unequal and total real wealth fell by more than 10 percent. Accordingly, Chapter 6 discusses some of the reasons for those changes, with particular attention to important categories of assets and liabilities.

Chapter 7 focuses on the changes in wealth that occurred for families in the middle of the wealth distribution over the three decades. These families have attracted substantially less attention than "the rich," and less also than poor families have received.

The concluding chapter summarizes the changes between 1983 and 2013, and assesses their implications for the economic well-being of American families, and also for Americans' attitudes about our economy and our society. Our belief about the distribution of economic well-being is at the core of our self-image, and one reason for our exceptionalism; we have traditionally believed that "the sky's the limit," and we have usually been more concerned with economic opportunity than economic inequality. Changes in the distribution of wealth matter for our self-understanding, and can affect all sorts of economic and social policies.

The Survey of Consumer Finances

The data source for the analysis is the Federal Reserve Board's Survey of Consumer Finances (SCF). This is one of the few sources of information on household wealth that reports asset and liability holdings of individual households for a sample of the entire population on a consistent basis over time. As mentioned above, the survey was first conducted in 1983. Subsequent surveys have been conducted triennially, with the most recent in 2013. The data therefore cover a 30-year period, but the 1986 survey was not considered satisfactory and has seldom been included in analyses by either Federal Reserve Board staff or independent economists. There are also differences between the 1983 survey and the later ones in the techniques used to weight the sample observations to represent the universe of American households. Consistent weighting techniques were developed in 1997 for the surveys of 1989, l992, and 1995. They have been used for the later surveys, and are used in this analysis.[20] I also describe separately the distribution of wealth between 1983 and 1992, using weights that were constructed at the time those surveys were taken, because the distribution of wealth became a matter of particular public interest in the mid-1980s with the publication of the 1983 survey.

An important feature of the SCF is that it includes a special sample of high-income households that can be expected to have unusually large wealth holdings, as well as a cross-section chosen randomly to represent the entire population of households. Because wealth is concentrated among a relatively few households, a national sample of households will give little information about a large fraction of household wealth. The high-income sample has grown in importance from one survey to the next, reflecting an effort to give more equal sampling probabilities to all dollars of wealth, rather than all households.[21]

The only earlier survey with a similar methodology, including a sample of high-wealth households, is the Survey of Financial Characteristics of Consumers in 1962, also conducted by the Federal Reserve Board. [22] The long interval between the SFCC and the first SCF suggests caution in comparing the results in detail. The Federal Reserve also conducted a Survey of Consumer Credit in 1977, which has sometimes been used to compare the distribution of wealth with the 1983 SCF, but the SCC has much less information on wealth holdings than any of the later surveys, or the SFCC, and primarily reports on the credit experience of households. It omits some important wealth categories, such as the value of unincorporated or closely-held businesses, and reports holdings in brackets rather than to the dollar, with a top bracket of $200,000 or more. Analysis of the

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[20] Arthur B. Kennickell and R. Louise Woodburn, "Consistent Weight Design for the 1989, 1992 and 1995 SCFs, and the Distribution of Wealth," Federal Reserve Board of Governors Working Paper, August 1997.

[21] For more extensive descriptions of these surveys see Robert B. Avery, Gregory E. Elliehausen, Glenn B. Canner, and Thomas A. Gustafson, "Survey of Consumer Finances, 1983," *Federal Reserve Bulletin*, September 1984; Robert B. Avery and Gregory E. Elliehausen, "Financial Characteristics of High-Income Families," *Federal Reserve Bulletin*, March 1986; Kennickell and Shack-Marquez, "Changes in Family Finances from 1983 to 1989," *Federal Reserve Bulletin*, January 1992, Arthur B. Kennickell and R. Louise Woodburn , "Estimation of Household Net Worth Using Model-Based and Design-Based Weights," Federal Reserve Board Working Paper, April 1992; Kennickell and Woodburn, "Consistent Weight Design for the 1989, 1992 and 1995 SCFs."

[22] Dorothy S. Projector and Gertrude Weiss, *Survey of Financial Characteristics of Consumers* (Washington: Federal Reserve Board of Governors, 1966).

1983 SCF using these conventions shows that the results are quite sensitive to the way in which the data are reported.

Unless Otherwise Specified…

I have adopted two conventions throughout this paper, which the reader should keep in mind, especially when referring to any of the numerous tables that appear throughout the analysis.

The SCF financial data is publicly available in two forms: nominal dollars, and real dollars as of the year of the most recent survey (at this point, 2013). For convenience and consistency, I have reported nearly all dollar amounts in 2013 dollars. If a dollar amount is not in 2013 dollars. either in the text or the tables, the year to which it refers is specified.

Most of the data comes from the SCF, and most of the calculations have been performed by myself, working with one or more of the research assistants who have been very helpful on worked with me. I have not thought it useful to repeat "SOURCE: Calculated by the author from SCF data files," in table after table. If another source is used, it is cited.

2. Basic Concepts: Wealth and Income

The most useful starting point for this analysis is to make clear the distinction between *wealth* and *income*. Indeed, it is essential. The terms are often used interchangeably, and often used inaccurately even by people who write about them and make a living teaching about them. Since I first began writing on the distribution of wealth some 30 years ago, a number of economists have asked me from time to time for copies of my work on "the distribution of income," even though all of my research papers have *wealth* in the title, and none have *income*. If economists do not manage to keep the terminology straight, it is no wonder that the press and the public get them mixed up.

The basic distinction is that wealth is a stock and income is a flow. Wealth is the value of a stock of assets at a given point of time. For a particular household, wealth is the value of the total assets it owns, minus the total liabilities, the amount of its debts. Wealth is synonymous with net worth. Income is the money that households receive over a given period of time, reported most commonly for a calendar year.[23]

Wealth includes:

- the value of a home, minus the amount owed on the mortgage.
- the value of the cars owned by the household, minus the amount owed on any car loans.
- the value of any rental housing or commercial property owned by the household, minus the mortgages on those properties.
- the value of business owned directly by the household --proprietorships, partnerships, independent professional practices in law or medicine, farms, and stock in closely-held corporations which are not publicly traded -- minus any debts owed by the business.
- any stocks or bonds, and any mutual funds.
- the balances in checking account and savings accounts.
- the cash value of whole life insurance policies.
- the present value of IRAs and Keogh plans, and other retirement savings accounts.

On the liability side, net worth takes account of any installment debt, such as student loans, credit card balances or other consumer debt, as well as the mortgages on homes and other property, auto loans and business debt mentioned above.

There are a number of common exclusions from wealth measures, some of them quite important for a family's wellbeing. Wealth seldom includes the value of consumer durables, such as furniture or appliances, even though it includes the debt incurred to purchase them. Wealth also typically excludes the present value of any pension benefits or

[23] Most income takes the form of money, but it can also take other forms: the desirability of living in a particular place or a pleasant climate, for example – clearly worth something, but not easily measured and not counted in most practical discussions and measures of income.

Social Security payments that the household expects to receive in the future. These present values can certainly be quite large, but they are also difficult to quantify.[24]

Income information is collected by several federal agencies. The Bureau of Economic Analysis calculates total personal income as part of the National Income and Product Accounts. These are published in six broad categories and in 19 subcategories.[25] The broad categories are:

- Employee compensation
- Income of proprietors
- Rental income
- Income from assets
- Transfer payments
- Contributions to government social income programs (an offset to income received)[26]

Table 2-1 lists the components of net worth, both assets and liabilities, and their relative importance for American households between 1983 and 2013, calculated as averages from the data for the individual Surveys of Consumer Finances. By far the largest component is the value of owner-occupied homes, even taking account of the outstanding principal balances on home mortgages and home equity lines of credit. It has amounted to about 23 percent of net worth, on average, over the surveys between 1983 and 2013. Certainly, not all households are homeowners; the homeownership rate for the 10 survey years averaged about 66 percent. But home equity represents about 35 percent of the net worth of those households that do own homes. The value of unincorporated and closely-held business is the second largest category. The third largest is common stock, including directly owned stocks and stock held within mutual funds, trusts, or retirement accounts; the total value of stock held in any of these forms amounts to 17 percent of household wealth. Investment real estate, including both rental and commercial, consists of property owned directly by an individual or through a partnership, as opposed to stock holdings in corporations that invest in real estate.

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[24] The 1983 Survey of Consumer Finances calculated the present value of expected future Social Security benefits for households including workers who were at least 40 years old and not yet retired. This proved to be difficult, and the 1989 and later surveys did not report data for these categories. Private defined-benefit pensions were also included in the 1983 wealth calculations but excluded in the analyses of later surveys. See Arthur B. Kennickell and Janice Shack-Marquez, "Changes in Family Finances from 1983 to 1989: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, January 1992.

[25] The data are published in the National income and Product Accounts, Table 2.1, "Personal Income and its Disposition," available at: http://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=3&isuri=1&903=58.

[26] The Bureau of the Census collects information on income from a large sample of households, as part of the American Community Survey. A group of eight questions about income are asked of each person in a household. (These categories of income comprise question #47 on the American Community Survey, available at: http://www.census.gov/acs/www/Downloads/questionnaires/2015/Quest15.pdf.). The data for the American Community Survey are available year by year since the year 2000.

Table 2-1

Components of Household Wealth, 1983-2013

Category	Average Share of Total Household Wealth
Assets:	
Owner-occupied homes	35.0%
Automobiles and other vehicles	4.2
Investment real estate	12.8
Unincorporated business	20.6
Transaction accounts	5.6
Stocks (directly owned)	7.5
Retirement accounts	13.3
Mutual funds	5.4
Bonds	2.3
Trusts and other managed assets	3.2
CDs	2.0
Whole life insurance	2.0
Other assets	2.7
Liabilities:	
Mortgages/home equity loans	-12.2%
Automobile loans	- 1.1
Mortgages on investment real estate	- 1.4
Business debt	- 0.5
Consumer debt (including credit card balances)	- 0.6
Education debt	- 0.1
Miscellaneous liabilities	- 0.7
Exclusions:	
Consumer durables	not calculated
Present value of future pensions	not calculated
Present value of Social Security benefits	not calculated
Addendum::	
Equity in owner-occupied homes	22.8%
Equity in automobiles	3.1
Equity in non-residential real estate	11.4
Equity in businesses	20.5
Total stock owned, directly or indirectly*	17.3

*Includes stock owned within mutual funds, retirement accounts, and other managed accounts (e.g., trusts), as well as stock that is directly owned

The most widely held assets are automobiles and checking accounts. Consistently, about 85 percent of households owned one or the other, and most owned both. Although the values of individual accounts or automobiles are not large, in the aggregate they accounted for over 10 percent of net worth.

This is not the common perception about the composition of wealth. Journalists, businessmen, and citizens, in my experience, tend to equate "wealth" with "stocks and bonds." They think in terms of financial assets, and tend to dismiss real assets from consideration or minimize their significance. Some economic analysts also give primacy to financial assets in describing the distribution of wealth.[27] But financial assets amount to less than half of all household wealth, ranging from 33 to 47 percent in the individual surveys, with an average of 41 percent.

Different categories matter for wealth and for income. The largest component of income is income from employment – wages and salaries, etc. Over the 1983-2013 period, wages and salaries have amounted to 67 percent of all personal income, on average, as reported in the National income and Product Accounts and shown in Table 2-2.[28] There is no counterpart to this category in the wealth statistics. The same is true for transfer payments, which averaged 14 percent annually over the period.

Table 2-2

Components of Household Income, 1983-2013

Component	Average Share of Personal Income
Wages and salaries	66.7%
Transfer receipts	13.9
Proprietors' income (independent business)	8.2
Rent	1.9
Interest and Dividends	17.4
Contributions to Social Insurance	- 8.1

Source: Calculated from U.S. Bureau of Economic Analysis, National Income and Product Accounts, Table 2.1: Personal Income and Its Disposition, available at http://www.bea.gov/national/nipaweb/TableView.asp#Mid.

[27] For example, Edward N. Wolff, "Trends in Household Wealth in the United States, 1962-1983 and 1983-1989," *Review of Income and Wealth*, Vol. 40, No. 2 (June 1984), pp. 143-174.
[28] Calculated for the years 1983-2013 from Table 2.1 of the National Income and Product Accounts, "Personal Income and Its Disposition, annual data from 1969 to 2014," data published April 29, 2015.

The converse is true for home equity, the largest component of household wealth. There is no income generated by households' equity in their homes, and thus no counterpart to home equity in the income received by households. In addition, one of the mostly widely-held assets – automobiles, trucks, and other vehicles, owned by 86 percent of American households – also yields no income. The value of cars and other vehicles amounts to about 3 percent of household net worth, even after taking account of the principal balances owed on loans to purchase them.

It is possible to create measures of human capital, making use of wage, salary, and self-employment income, and economists have made such estimates for some purposes, such as serving as expert witnesses in wrongful death lawsuits, for example.

Similarly, it is possible to impute the annual rental value of owner-occupied homes, and such imputations are included in the Consumer Price Index (CPI) produced by the Bureau of Labor Statistics (BLS). "Imputed rent" is the rent which a homeowner would receive if he or she chose to move out of their home and rent it to someone else: "To see why imputed rent is a real form of income, consider two homeowners living in identical houses. Suppose they trade houses, each living in the other's. They now pay rent to each other because ...[each] is now the other's landlord. If they pay identical rent, it would appear that it all cancels out, except that each now has rental income to report on her taxes. In principle, that rental income is there even when one lives in one's own home."[29] The CPI calculates imputed rent by collecting information on the rents actually paid for rental housing, and using them to estimate the rental value of similar homes, which are in fact occupied by their owner. As stated by BLS, "The most efficient way to measure the price of the shelter service owner occupants receive from their homes is to estimate the rent that the residence would command."[30]

Imputed rent is also used in the National Income and Product Accounts produced by the Bureau of Economic Analysis, in discussions of "tax expenditures" in the federal budget each year, and in the major recurring reports on the budget published by the Congressional Budget Office.[31] A few countries include imputations in the definition of

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[29] Bruce Bartlett, "Taxing Homeowners as if They Were Landlords," September 13, 2013, available at http://economix.blogs.nytimes.com/2013/09/03/taxing-homeowners-as-if-they-were-landlords/.

[30] U.S. Bureau of Labor Statistics, "How the CPI measures price change of Owners' equivalent rent of primary residence (OER) and Rent of primary residence (Rent)," available at http://www.bls.gov/cpi/cpifacnewrent.pdf, accessed September 12, 2016; The document is not dated; the most recent information cited is for December 2008.

[31] U.S. Bureau of Economic Analysis, National Income and Product Accounts, Table 7.12, "Imputations in the National Income and Product Accounts," line 153, August 6, 2014, available at http://www.bea.gov/iTable/iTable.cfm?reqid=9&step=3&isuri=1&903=289#reqid=9&step=3&isuri=1&903=289; U.S. Government, Chapter 14, "Tax Expenditures," *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2016*, February 2, 2015, available at http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=BUDGET&browsePath=Fiscal+Year+2016&searchPath=Fiscal+Year+2016&leafLevelBrowse=false&isCollapsed=false&isOpen=false&packageid=BUDGET-2016-PER&ycord=309; U.S. Congressional Budget Office, *Options for Reducing the Deficit: 2015 to 2024*, available at http://www.cbo.gov/sites/default/files/cbofiles/attachments/49638-BudgetOptions.pdf. See also Larry Ozanne, "Taxation of Owner-Occupied and Rental Housing,"

taxable income in their tax codes, albeit at very low values for the imputed rents or very low tax rates.[32]

For that matter, it is also possible to impute the annual rental value of cars and other vehicles. But calculations of these imputed values of these economic concepts are not included in the statistics on household income produced by the Bureau of Economic Analysis and the statistics on household wealth in the Survey of Consumer Finances.

To summarize, four-fifths of the income people receive has no corresponding component in their wealth, and one-quarter of the wealth people own does not generate income. Rising house prices will increase the wealth of about two-thirds of American households, and possibly affect the distribution of wealth. They will not affect the distribution of income. Similarly, rising, stagnant, or falling wages are likely to affect wealth only gradually, as they affect household savings. It is therefore not automatic that the distributions of wealth and income will change in the same direction over time. This is especially plausible over short periods of time, such as the three years between consecutive Surveys of Consumer Finances, but it can occur over longer periods as well. Thus the increase in median household income between 2014 to 2015, recently reported by the Census Bureau, does not imply that household wealth increased as well – welcome news though it certainly is.[33]

The practical consequences of these differences in measurement will be evident in the remainder of this analysis. The basic points to keep in mind are, first, that income and wealth are different concepts and have different components, and second, that trends in the distributions of income and wealth can move in opposite directions.

Congressional Budget Office Working Paper 14-2012, November 2012, available at http://www.cbo.gov/sites/default/files/cbofiles/attachments/11-2-2012-Taxation_of_Housing.pdf.

[32] The Netherlands and Luxembourg impute very low values; Belgium taxes the imputation at a very low rate. See also Paul E. Merz, "Foreign Income Tax Treatment of the Imputed Rental Value of Owner-Occupied Housing: Synopsis and Commentary," *National Tax Journal*, vol. 30, no. 4 (December 1977), pp. 435-439.

[33] U.S. Bureau of the Census, *Income and Poverty in the United States: 2015*, September 13, 2016, Table A-1, available at https://www2.census.gov/programs-surveys/demo/tables/p60/256/table3.xls.

3. American Wealth over Three Decades

Growth and Recession, 1989-2013

Wealth in the United States increased rapidly, as the SCF reports – until the Great Recession. This is clearly shown in Table 3-1. Total wealth increased sixfold between 1983 and 2007; adjusted for inflation, total wealth tripled. The annual average rate of increase was about eight percent for nominal wealth, and close to five percent for wealth in real terms. The data for 1983 are not precisely comparable to the later years, but there is no question that both nominal and real total wealth, measured consistently, increased during the economic boom of the 1980s, as well as between 1989 and 2007.[34]

Average real wealth per family more than doubled from 1983 to 2007; median wealth per family increased by 70 percent.

The story is quite different since 2007. During the Great Recession and immediately afterwards, total wealth dropped by almost 15 percent, adjusted for inflation; average wealth per family by 15 percent; and median wealth per family by 40 percent – almost back to its level in 1983. Moreover, neither total, mean, nor median wealth has recovered any of these sharp declines since 2007; in terms of wealth, we remain at the depressed levels of the Great Recession. (Nominal wealth fell by 10 percent between 2007 and 2010, but has since recovered to its 2007 level.)

This experience is unlike the aftermath of other recent recessions. Before the Great Recession, there were more typical postwar recessions during 1990-1991 and during 2001 (March to November), each lasting only eight months. Real wealth declined between 1989 and 1992 by about 10 percent, very nearly the same as occurred between 2007 and 2010, while mean and especially median family wealth dropped by smaller percentages (12 percent and five percent, respectively). But from 1992 to 1995, total net worth rose to almost its 1989 level, median family net worth exceeded it, and mean family net worth regained about one-third of the loss, while between 2010 and 2013, total net worth regained about 20 percent of its previous decline and both mean and median family net worth continued to decline, albeit slightly.

The recovery after 2001 was similar to the recovery after 1992, but it is difficult to measure the changes over the economic cycle because the data collection period for the 2001 SCF almost perfectly coincides with the dates of the recession – May to December for the SCF interviews, March to November for the recession. Thus some households

[34]As described in the Introduction: Unless specifically stated otherwise, all wealth measures are reported in constant dollars, using the year 2013 as the base. The Federal Reserve uses either nominal or 2013 dollars in reporting the SCF, and since nominal prices nearly doubled between 1983 and 2013, it is certainly easier to keep track of what has been happening using constant dollars. Also, prices have not risen very much since 2013 – by 1.8 percent between the last half of 2013 and the last half of 2015 – so values in 2013 dollars are very close to current values. Wealth is more meaningfully calculated per family, rather than per individual, and therefore per-family values are reported, unless stated otherwise.

were interviewed just before or at the cyclical peak, while others were interviewed at or just after the cyclical trough.

Table 3-1

Total and Average Wealth of American Families, 1983-2013

Year	Total Wealth (nominal)	Total Wealth (real*)	Annual inflation rate since previous survey	Mean Family Wealth (real**)	Median Family Wealth (real**)
1983	$10.2	$23.8	Not Applicable	$280,000	$80,200
1989	$17.6	$33.1	3.7%	$356,000	$85,100
1992	$17.9	$29.9	4.2%	$312,000	$80,800
1995	$21.1	$32.4	2.8%	$327,000	$87,700
1998	$29.0	$41.6	2.3%	$406,000	$102,500
2001	$42.3	$55.9	2.8%	$524,000	$113,900
2004	$50.2	$62.1	2.2%	$554,000	$114,800
2007	$64.5	$72.6	3.1%	$625,000	$135,900
2010	$58.5	$62.4	1.7%	$530,000	$82,500
2013	$64.7	$64.7	2.2%	$528,000	$81,400

* measured in trillions of 2013 dollars
** measured in 2013 dollars

SOURCE: Calculated by the author from published SCF data files

Measuring Household Wealth, 1983-1995

As explained in Chapter 1, the SCF data for 1983 are not precisely comparable to the later years. The same is true for the weights originally constructed for each of the first three surveys. Consistent weighting techniques were developed in 1997 for the surveys of 1989, 1992, and 1995. These weights have been used for the subsequent surveys. The weighting techniques could not be used for 1983, however; the information needed for that purpose was no longer available by 1997.[35] Thus it is possible to describe the changes in the distribution of wealth on a consistent basis during 1989-2013, but not during 1983-2013. It is possible, however, to use the original weights for 1983, 1989, and 1992, in combination with the consistent weights for 1989, 1992, and 1995, to look at 1983-1992 separately, and then use the two overlapping periods to describe, at least in general terms, what happened over the full period 1983-2013.

There is, however, a further complication. Before the consistent weights were developed in 1997, there had been a period of active research into weighting issues, during which more than one set of weights had been constructed for each of the first three surveys. The results for 1983 to 1992 in particular depend on which sets of weights are chosen for the analysis. For the 1983 survey, weights were constructed separately by analysts at the Survey Research Center, which conducted the SCF, and by analysts at the Federal Reserve Board. The SRC weights were aligned on the basis of total households and the division between urban and rural location. The first set of FRB weights were aligned on the basis of the household totals for the four U.S. Census regions. Subsequently, the FRB analysts constructed a second set of weights when the individual income tax data for 1982 suggested that the high-income household sample might have been weighted too heavily.

There are differences of about seven percent in both total wealth and mean family wealth, depending on which set of weights is used. Calculating with the FRB weights, total wealth is about $23.8 trillion in 2013 dollars; calculating with the SRC weights, total wealth is about $25.5 trillion. Similarly, mean family net worth is about $280,000 in 2013 dollars with the FRB weights and $300,000 with the SRC weights.[36] Subsequent research by the Federal Reserve analysts typically used the FRB weights for comparison with later surveys.[37]

This difference does not materially affect most of the measures of net worth reported in Table 3-1. Nominal total wealth rose about sixfold between 1983 and 2013, and real

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[35] Arthur B. Kennickell and R. Louise Woodburn, "Consistent Weight Design for the 1989, 1992 and 1995 SCFs and the Distribution of Wealth," Federal Reserve Board Working Paper, Revision II, August 1997, p. 2, fn. 2.

[36] For more detailed discussion of these weighting issues, see John C. Weicher, "Wealth and Its Distribution, 1983-1992: Secular Growth, Cyclical Stability." *Review*, Vol. 79, No. 1 (January/February 1997), pp. 4-5.

[37] For example, Arthur B. Kennickell and Janice Shack-Marquez, "Changes in Family Finances from 1983 to 1989: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, Vol. 78 (January 1992), pp. 1-18; Kennickell and Woodburn, "Consistent Weight Design."

total family wealth by about 150 percent, using either set of 1983 weights. Mean real family wealth doubled over the three decades, using either set of weights.[38]

For the 1989 survey, two sets of weights were created and published as part of the database for the survey: preliminary weights used by the Federal Reserve analysts for comparing 1983 to 1989, and revised weights for comparing 1989 to 1992. The difference between them was not large. The preliminary weights produced net worth estimates about 2.25 percent above the revised weights.[39] The original *Federal Reserve Bulletin* article that reported the 1989 wealth calculations and compared them to 1983 employed the preliminary weights. Total net worth was calculated as $30.5 trillion and mean family net worth as $327,000 both in 2013 dollars).[40] This article was published in 1992.

Between 1992 and 1997, Federal Reserve analysts conducted a number of further studies in weighting, typically calculating mean family net worth in the range of $330,000 to $342,000 for 1989. This research culminated in a 1997 working paper and *Federal Reserve Bulletin* article, both of which created consistent weights for the 1989, 1992 and 1995 surveys to describe changes in net worth over that period. Most recently, the Federal Reserve Board has prepared tables reporting net worth for each of the surveys since 1989.

The results from these weights are shown in Table 3-2. There are some differences between the calculations for 1989, with a range of about six percent between the highest and lowest estimates for both total and mean family net worth, but the overall pattern is clear (see table 3-2).

There was a sharp decline between 1989 and 1992, and a partial recovery between 1992 and 1995. Also, when 1983 is included, it is clear that there was a substantial increase in wealth during the 1983-1989 boom, but much of that gain was lost during and immediately after the 1990-1991 recession. Using the values for 1983 in Table 3-1, about 20 percent to 35 percent of the 1983-1989 increase in total wealth, and about 50 to 67 percent of the corresponding increase in mean family wealth, was lost during the next three years. Despite the recession, however, net worth increased dramatically between

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[38] The original papers describing the 1983 SCF results calculated much lower values for net worth: $13.0 trillion for total net worth, $154,000 for mean family net worth, and $57,000 for median family net worth (all measured in 2013 dollars). See Robert B. Avery, Gregory E. Elliehausen, Glenn B. Canner, and Thomas A. Gustafson, "Survey of Consumer Finances 1983: A Second Report," *Federal Reserve Bulletin*, Vol. 70 (December 1984), pp. 857-868. The *Bulletin* article comparing 1983 with 1989 stated that, "The data reported here for 1983 may differ from the figures reported in the earlier articles because of revisions of the data and of the sample weights." See Kennickell and Shack-Marquez, "Changes in Family Finances from 1983 to 1989," pp. 2-3. The revisions did not result in different calculations for income; 1983 median family income as calculated in Kennickell and Shack-Marquez was within two percent of the value calculated in Avery et al.

[39] John C. Weicher, "Changes in the Distribution of Wealth: Increasing Inequality?" *Review*, Vol. 77, No. 1 (January/February 1995, pp. 1-23; see especially Table 1.

[40] Kennickell and Shack-Marquez, "Changes in Family Finances from 1983 to 1989," Table 1.

1989 and 2007. Total real wealth more than doubled, and mean real family wealth rose by 75 to 90 percent.[41]

Table 3-2

Household Net Worth during 1989-1995

Panel A. Total Net Worth (in trillions of 2013 dollars)

Source	1989	1992	1995
Kennickell, Starr-McCluer, and Sunden (1997)	$30.8	$29.4	$34.7
Kennickell and Woodburn (1997)	$32.7	$29.5	$31.4
SCF Tables (2013)	$31.8	$29.1	$32.1

Panel B. Mean Family Net Worth (in 2013 dollars)

Source	1989	1992	1995
Kennickell, Starr-McCluer, and Sunden (1997)	$331,000	$306,000	$318,000
Kennickell and Woodburn (1997)	$351,000	$300,800	$317,000
SCF Tables (2013)	$342,000	$304,000	$323,500

SOURCES: Arthur B. Kennickell, Martha Starr-McCluer and Annika E. Sunden, "Family Finances in the U.S.: Recent Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, vol. 83 (January 1997), pp. 1-24, available at http://www.federalreserve.gov/econresdata/scf/files/1995_bull0197.pdf;
Arthur B. Kennickell and R. Louise Woodburn, "Consistent Weight Design for the 1989, 1992 and 1995 SCFs, and the Distribution of Wealth," Revised August 1997, available at http://www.federalreserve.gov/econresdata/scf/files/wgt95.pdf;
Federal Reserve Board, "Historic Tables and Charts: Tables based on external and internal data, Excel based on public data, Estimates adjusted to 2013 dollars," available at http://www.federalreserve.gov/econresdata/scf/scfindex.htm.

[41] These figures are derived by comparing the values for 1989 in Tables 3-1 and 3-2 with those for 2007 in Table 3-1.

4. What We Own, and What We Owe: The Changing Composition of Household Wealth

The net worth of American households consists of their assets minus their debts – a broad range of assets, partially offset by debts for numerous purposes. The importance of these assets and debts varies over time; some categories have increased in importance over the last 30 years, while a few have diminished, and some have fluctuated. Chapter 2 enumerated the major asset categories, without much description; this chapter describes them more fully. The enumeration of assets has been quite consistent since 1989, but the questionnaire for the first SCF in 1983 differed in several respects from the later ones. Accordingly, this chapter parallels the discussion in Chapter 3, first describing the changes between 1989 and 2013 and then comparing 1983 and 1989. The differences between the surveys do not affect most of the basic patterns of change over the full 30 years.

Financial and Non-Financial Wealth

One convenient way to classify assets and debts is in terms of two broad groupings: financial and non-financial. This classification has been reported in the *Federal Reserve Bulletin* articles discussing each SCF and comparing it to its predecessor, and in most of the working papers subsequently written and available on the SCF website.[42] They are also used in the published tables comparing data on a historical basis for all of the SCFs since 1989.[43] The relative importance of financial and non-financial wealth is shown in Table 4-1.

Table 4-1

Financial and Nonfinancial Asset Shares of Net Worth

Year	Financial Share	Non-Financial Share
1983	28.2%	71.8%
1989	33.5%	66.5%
1992	35.1%	64.9%
1995	41.1%	58.9%
1998	45.3%	54.7%
2001	46.6%	53.4%
2004	40.4%	59.6%
2007	38.5%	61.5%
2010	43.0%	57.0%
2013	45.8%	54.2%

Two points stand out: the non-financial share of net worth has been declining over the three decades, except during 2001-2007, the last half of the homeownership boom; and non-financial wealth has been the larger half of household net worth throughout the three decades, belying the popular notion that wealth consists mostly of stocks and bonds.

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[42] Most recently, Jesse Bricker et al., "Changes in U.S. Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances, *Federal Reserve Bulletin*, Vol. 100, No. 4 (September 2014), especially pp. 15-20 and Table 3; Arthur B. Kennickell, "Ponds and Streams: Wealth and Income in the U.S., 1989 to 2007," FEDS Finance and Economics Discussion Series, No. 2009-13 (January 2009), especially pp. 6-11 and pp. 63-70, available at http://www.federalreserve.gov/pubs/feds/2009/200913/200913pap.pdf.

[43] Survey of Consumer Finances, "Historic Tables and Charts: Estimates based on public data inflation-adjusted to 2013 dollars," available at http://www.federalreserve.gov/econresdata/scf/scfindex.htm. The Federal Reserve publishes two sets of tables, one based on the internal data used by Fed analysts in their articles and working papers, and the other based on the publicly available data. I have used the latter in this analysis and in my previous articles, for consistency with the work of other outside analysts.

While the non-financial *share* of wealth has been declining, the total *value* of non-financial assets, in real terms, has generally been growing from one survey to the next. There are two exceptions: non-financial wealth declined by 12 percent between 1989 and 1992, and since 2007 non-financial wealth has fallen by 23 percent, with the end of the homeownership boom and the collapse of the housing finance system. Despite these abrupt changes, non-financial wealth has more than doubled since 1983.

Financial wealth has grown more rapidly. It has more than quadrupled in the last three decades, becoming a larger share of a larger stock of wealth. There are also two exceptions to this persistent trend, both small: total financial wealth declined by four percent from 2001 to 2004, and by one percent between 2007 and 2010. The magnitude of this latter, very modest decline partly stems from the timing of the surveys. Between October 2007 and October 2010 (about the midpoint of the SCF interviewing period for those surveys), both the Dow Jones Industrial Average and the S&P 500 declined by close to 25 percent, and the NASDAQ Composite declined by 10 percent; but as of the spring of 2009, halfway through the interval between the 2007 and 2010 SCFs, all three had lost more than half of their value over the previous 18 months.[44]

Tables 4-2 and 4-3 disaggregate assets and debts into categories, following the classifications in the Federal Reserve Bulletin articles and working papers. Table 4-2 reports the percentage of households holding various assets or owing various debts; table 4-3 reports the net worth for each category, expressed as the mean value across all U.S. households, including those who did not hold that type of asset.

The most widely held assets in 1989 were: transaction accounts (85.6 percent of all households), vehicles (83.8 percent), owner-occupied homes (63.9 percent), retirement accounts (37.2 percent), and cash value life insurance (35.5 percent). These were still the most widely held assets at the cyclical peak in 2007, in the same order; and for that matter the most widely held in 2013, after the Great Recession, also in the same order. Indeed, these were the five most widely owned assets, in that order, in each of the nine surveys.

The most widely incurred debts as of 1989 were credit card balances (39.7 percent), home mortgages (38.6 percent), and vehicle loans (34.7 percent). These remained the most common liabilities in all of the surveys through 2007 – not quite in the same order, because home mortgages were slightly more widely held than credit card debt by 2007. Both were held by about 46 percent of households.

Student loans became noticeably more common. Nine percent of households had one or more student loans outstanding in 1989; 15 percent did so in 2007.

[44] The S&P 500 peaked at 1,552 on July 13, 2007, and fell to a low of 735 on February 20, 2009. It then rose to 1,841 on December 30, 2013 (approximately the end of the interviewing period for the 2013 SCF) and has continued to rise since then (see the chart at http://us.spindices.com/indices/equity/sp-500/).

Table 4-2

Household Ownership of Assets and Liabilities, 1989-2013

(percent of households with specific asset or debt)

Year	1989	1992	1995	1998	2001	2004	2007	2010	2013
Financial Assets (any)									
Transaction accounts	85.6	86.9	87.4	90.6	91.4	91.3	92.1	92.5	93.2
Certificates of deposit	19.9	16.7	14.3	15.3	15.7	12.7	16.1	12.2	7.8
Savings bonds	23.9	22.3	22.8	19.3	16.7	17.6	14.9	12.0	10.0
Bonds	5.7	4.3	3.1	3.0	3.0	1.8	1.6	1.6	1.4
Stocks	16.9	17.0	15.2	19.2	21.3	20.7	17.9	15.1	13.8
Pooled investment funds	7.3	10.4	12.3	16.5	17.7	15.0	11.4	8.7	8.2
Retirement accounts	37.2	40.1	45.3	48.9	52.8	49.9	53.0	50.4	49.2
Cash value life insurance	35.5	34.9	32.0	29.6	28.0	24.2	23.0	19.7	19.2
Other managed assets	3.7	4.0	3.9	6.0	6.7	7.3	5.8	5.7	5.2
Other	14.5	11.1	11.8	9.8	9.7	10.2	9.5	8.5	7.7
Any financial asset	**88.9**	**90.3**	**91.2**	**93.1**	**93.4**	**93.8**	**93.9**	**94.1**	**94.5**
Equity in Stocks (direct and indirect)	**31.9**	**37.0**	**40.5**	**48.9**	**53.0**	**50.2**	**51.1**	**49.8**	**48.8**
Nonfinancial Assets									
Vehicles	83.8	86.1	84.1	82.8	84.8	86.3	87.0	86.7	86.3
Primary residence	63.9	63.9	64.7	66.3	67.7	69.1	68.6	67.3	65.2
Other residential property	13.2	12.7	11.8	13.0	11.4	12.6	13.6	14.4	13.3
Equity in nonresidential property	11.1	9.5	9.2	8.4	8.2	8.2	8.2	7.6	7.1
Business equity	13.3	14.4	12.8	12.7	13.6	13.3	13.6	13.2	11.7
Other	11.9	8.1	8.3	8.1	7.1	7.5	6.9	6.5	6.6
Any nonfinancial asset	89.3	90.8	90.9	89.9	90.7	92.5	92	91.3	91.0
Any asset	94.7	95.8	96.4	96.8	96.7	97.9	97.7	97.4	97.9
Debt									
Secured by primary residence: mortgage	38.6	38.5	40.4	42.0	43.4	46.0	46.3	45.2	41.5
Secured by primary residence: HELOC	3.1	4.3	2.9	4.5	4.8	8.6	8.5	7.2	5.0
Other residential debt	5.2	5.7	4.8	5.0	4.6	4.0	5.5	5.4	5.3
Credit card balances	39.7	43.7	47.3	44.1	44.4	46.2	46.1	39.4	38.1
Lines of credit not secured by residential property	3.2	2.4	1.9	2.3	1.6	1.6	1.7	2.1	1.9
Installment loan: education	8.9	10.7	11.9	11.3	11.5	13.4	15.2	19.1	19.9
Installment loan: vehicle	34.7	29.8	31.7	31.4	34.9	35.6	34.9	30.2	30.9
Installment loan: other	22.0	19.1	16.0	12.5	11.1	8.6	10.3	11.6	10.3
Other	6.7	8.4	8.5	8.8	7.2	7.6	6.8	6.4	6.6
Any debt	**72.3**	**73.2**	**74.5**	**74.0**	**75.1**	**76.4**	**77.0**	**74.9**	**74.5**

SOURCE: Survey of Consumer Finances, "Historic Tables and Charts: Estimates based on public data inflation-adjusted to 2013 dollars," Tables 6, 7, 9, and 13; available at http://www.federalreserve.gov/econresdata/scf/scfindex.htm.

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Changes in Asset Holdings and Debts, 1989-2007

By contrast, the value of many of these assets and debts in household portfolios changed substantially after 1989, as Table 4-3 shows. The value of owner-occupied homes nearly doubled between 1989 and 2007, although homeowners' equity increased to a lesser extent because mortgage debt more than doubled. The value of retirement assets more than tripled.

Indeed, the most fundamental change between 1989 and 2007 was the growing importance of stocks in household portfolios. This was very much the result of the creation of Individual Retirement Accounts in 1974, and their expansion to all workers in 1981. By 2001 more than half of all households had retirement accounts, although

Table 4-3

Mean Household Value of Assets and Liabilities, 1989-2013

(average across all households)

	1989	1992	1995	1998	2001	2004	2007	2010	2013
Net worth	**$ 355,000**	**$ 311,000**	**$ 326,000**	**$ 405,000**	**$ 522,000**	**$ 554,000**	**$ 625,000**	**$ 530,000**	**$ 528,000**
Financial Assets	**$ 126,000**	**$ 115,000**	**$ 140,000**	**$ 193,000**	**$ 252,000**	**$ 234,000**	**$ 251,000**	**$ 240,000**	**$ 253,000**
Transaction Accounts	$ 23,000	$ 20,000	$ 20,000	$ 22,000	$ 29,000	$ 28,000	$ 25,000	$ 29,000	$ 30,000
Certificates of Deposit	$ 12,000	$ 9,000	$ 8,000	$ 8,000	$ 8,000	$ 9,000	$ 10,000	$ 9,000	$ 5,000
Savings Bonds	$ 2,000	$ 1,000	$ 2,000	$ 1,000	$ 2,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Bonds	$ 12,000	$ 10,000	$ 9,000	$ 8,300	$ 11,000	$ 12,000	$ 10,000	$ 10,000	$ 8,000
Stocks	$ 19,000	$ 19,000	$ 22,000	$ 44,000	$ 54,000	$ 41,000	$ 44,000	$ 33,000	$ 39,000
Pooled-Investment Funds	$ 7,000	$ 9,000	$ 18,000	$ 24,000	$ 31,000	$ 34,000	$ 40,000	$ 36,000	$ 37,000
Retirement Assets	$ 26,000	$ 29,000	$ 39,000	$ 53,000	$ 71,000	$ 76,000	$ 88,000	$ 92,000	$ 99,000
Cash Value Life Insurance	$ 7,000	$ 7,000	$ 10,000	$ 12,000	$ 13,000	$ 7,000	$ 8,000	$ 6,000	$ 7,000
Other Managed Assets	$ 9,000	$ 6,000	$ 8,000	$ 17,000	$ 27,000	$ 19,000	$ 16,000	$ 15,000	$ 19,000
Other financial Assets	$ 8,000	$ 5,000	$ 4,000	$ 5,000	$ 5,000	$ 7,000	$ 9,000	$ 9,000	$ 8,000
Non-Financial Assets	**$ 278,000**	**$ 249,000**	**$ 241,000**	**$ 279,000**	**$ 342,000**	**$ 418,000**	**$ 483,000**	**$ 395,000**	**$ 366,000**
Vehicles	$ 15,000	$ 14,000	$ 17,000	$ 18,000	$ 21,000	$ 21,000	$ 22,000	$ 21,000	$ 19,000
Primary Residence	$ 127,000	$ 117,000	$ 114,000	$ 131,000	$ 162,000	$ 210,000	$ 233,000	$ 188,000	$ 171,000
Other Residential Property	$ 23,000	$ 21,000	$ 20,000	$ 24,000	$ 28,000	$ 43,000	$ 54,000	$ 45,000	$ 42,000
Non-Residential Property	$ 31,000	$ 27,000	$ 18,000	$ 21,000	$ 28,000	$ 30,000	$ 26,000	$ 26,000	$ 19,000
Business	$ 75,000	$ 66,000	$ 67,000	$ 80,000	$ 99,000	$ 108,000	$ 143,000	$ 111,000	$ 110,000
Other Non-Financial	$ 6,000	$ 4,000	$ 5,000	$ 4,000	$ 5,000	$ 6,000	$ 5,000	$ 4,000	$ 5,000
Liabilities	**$ 49,000**	**$ 53,000**	**$ 56,000**	**$ 67,000**	**$ 72,000**	**$ 98,000**	**$ 109,000**	**$ 105,000**	**$ 91,000**
Home Equity Lines of Credit	$ 2,000	$ 1,000	$ 1,000	$ 1,000	$ 2,000	$ 4,000	$ 4,000	$ 4,000	$ 2,000
Mortgages	$ 32,000	$ 36,000	$ 40,000	$ 47,000	$ 52,000	$ 69,000	$ 78,000	$ 63,000	$ 65,000
Other Residential Debt	$ 4,000	$ 5,000	$ 4,000	$ 5,000	$ 4,000	$ 8,000	$ 11,000	$ 10,000	$ 8,000
Credit Card Balance	$ 1,000	$ 2,000	$ 2,000	$ 3,000	$ 2,000	$ 3,000	$ 4,000	$ 3,000	$ 2,000
Other Lines of Credit	$ 1,000	*	*	*	*	$ 1,000	*	$ 1,000	$ 1,000
Installment Loans: Education	$ 1,000	$ 1,000	$ 1,000	$ 2,000	$ 2,000	$ 3,000	$ 4,000	$ 5,000	$ 6,000
Installment Loans: Vehicles	$ 5,000	$ 3,000	$ 4,000	$ 5,000	$ 5,000	$ 6,000	$ 6,000	$ 5,000	$ 6,000
Installment Loans: Other	$ 2,000	$ 1,000	$ 1,000	$ 2,000	$ 2,000	$ 2,000	$ 1,000	$ 2,000	$ 2,000
Other Debt	$ 1,000	$ 1,000	$ 2,000	$ 3,000	$ 2,000	$ 2,000	$ 1,000	$ 1,000	$ 1,000
Addendum									
Home equity	$ 93,600	$ 89,000	$ 74,400	$ 83,500	$ 107,800	$ 147,000	$ 151,800	$ 110,700	$ 103,900
Equity in other housing	$ 18,900	$ 15,700	$ 15,300	$ 19,300	$ 23,700	$ 34,000	$ 43,000	$ 34,300	$ 33,800
Stocks (direct and indirect)	$ 31,300	$ 33,300	$ 48,200	$ 89,100	$ 126,200	$ 107,700	$ 115,000	$ 93,800	$ 116,100

*less than $500

not all of these accounts included stock.[45] Investment in mutual funds also increased dramatically, although not all of these funds included stock either. The value of stocks directly owned by households more than doubled, and the value of other managed assets (such as trusts and annuities) also increased, although the proportion of households holding stocks directly began to decline after 2001, and the proportion with other managed assets was small.

The SCF reports the proportion of households owning stock directly or indirectly and the value of these holdings – "stocks" and "stocks (direct and indirect)." As of 1989, over 60 percent of the stock owned by households was owned directly, as shares. By 1995, less than half was directly owned; by 2001, less than 40 percent; by 2013, less than one-third.

Indirect holdings of stock are held in retirement accounts, mutual funds, trusts, annuities, and other managed accounts. The incidence of stock ownership rose from 32 percent in 1989 to 51 percent in 2007, parallel to the spread of retirement accounts, which rose from 37 percent to 53 percent. The value of stockholdings increased from $31,000 to $115,000, while the value of retirement accounts rose from $26,000 to $88,000. The growing importance of retirement accounts is evident in these data.

Some other categories of assets also showed noteworthy increases between 1989 and 2007. Both transaction accounts and vehicle ownership increased, from 86 percent to 92 percent and from 84 percent to 87 percent, respectively. As mentioned previously, these were the two most widely held assets through the period. Despite the fact that the vast majority of households owned a checking account and a car at the start of the period, ownership of both increased during the long economic expansion, and the value of these assets also increased.

Over the same period, there were noticeable declines in the ownership of assets that were fairly widely held in 1989. U.S. savings bonds were owned by about a quarter of all households in 1989; by 2007 only 15 percent held any. Ownership of certificates of deposit dropped from 20 percent of households to 16 percent. More than one-third of households owned cash value life insurance in 1989; 23 percent owned this sort of life insurance by 2007 – although it was still the fifth most widely held type of asset.

The growing importance of stock ownership is even more pronounced in Table 4-3. In 1989 there were two major household assets: owner-occupied homes and unincorporated or closely-held businesses. Together, they accounted for about half of the wealth of all households, even after subtracting mortgage debt. Stock ownership, direct and indirect, represented about eight percent of household wealth. By 2001, the value of stockholdings was larger than either home equity or unincorporated business, and represented almost a quarter of total family net worth. At the peak of the business cycle in late 2007, stock ownership had receded to a little less than 20 percent of total net worth, less than home equity or unincorporated business, but these three categories were about two-thirds of the total net worth of American households.

[45] Kennickell, "Ponds and Streams," pp. 55-62, 70.

Homeowners' equity declined by about 20 percent between 1989 and 1995, then rose sharply and steadily, doubling between 1995 and 2004, with a small further increase between 2004 and 2007.

On the liability side of the balance sheet, student loan debt increased steadily. The nine percent of households with student loans in1989 owed about $10,000, on average; the 15 percent with loans in 2007 owed $24,000. Student debt offset about one-half of one percent of households' total assets. Home equity lines of credit (HELOCs) became more common; they represented about four percent of mortgage debt for homeowners by 2001, and have remained at about that share or slightly lower.

The Great Recession and Its Aftermath

Between 1992 and 2007 real mean household wealth doubled, enjoying an annual average growth rate of about 4.5 percent. In the Great Recession, mean wealth dropped by 15 percent, with no recovery after 2010. The decline was almost across the board, in terms of asset categories. The only clear exception was transaction accounts – held by 92 percent of households in 2007 and 93 percent in 2013, and with a $5,000 increase in the mean balance. Ownership of "other residential real estate" increased between 2007 and 2010, but then dropped below the 2007 ownership rate by 2013. The values of assets by category also declined, with the exceptions of retirement assets and managed assets. In almost every asset category, fewer households held the asset and their holdings were less valuable. Possibly on a more positive note, debt holdings also fell, overall and by category, with the single exception of student loans. Between 2007 and 2013, the proportion of households carrying student loans rose from 15 percent to 20 percent, and their average loan balance from $24.000 to about $29,000. The total amount of student debt rose by 25 percent, as Table 4-3 shows, large enough to offset over one percent of household assets.

Despite the continued importance of retirement accounts, stockholders suffered between 2007 and 2010. The average value of their portfolios, including both direct and indirect ownership, declined by about 15 percent between 2007 and 2010 – and there were about one million fewer stockholders.[46] There were fewer households directly owning stocks, fewer with mutual fund holdings, and fewer with retirement accounts. The average value in retirement accounts, however, rose by about 10 percent, and there were many more households with retirement accounts than direct stock owners or households with mutual fund holdings, which helped to mitigate the decline in value for all stockholders. The stock market had recovered by 2013, and the number of households owning stock and the average value of their portfolios both rose after 2010,

Homeowners were less fortunate. The homeownership rate dropped from 68.6 percent in 2007 to 65.2 percent in 2013,[47] and for the first time, the SCF found that home equity was not the largest share of household net worth in 2013. It was a close second to equity in unincorporated business. The dramatic drop by more than one-quarter between 2007 and 2010, and the further decline to 2013, are clear from the "home equity" data in Table 4-3.

For homeowners, their situation was probably worse than the data in Tables 4-2 and 4-3 indicate. Of the 68.6 percent of households who were owners in 2007, 0.5 percent were "underwater," in their own judgment: the outstanding principal balance on their mortgage or mortgages was greater than their estimated value of their home. By 2010, 64.7 percent were homeowners, and 5.5 percent thought they were underwater. By

[46] These figures are calculated from Survey of Consumer Finances, "Historic Tables and Charts: Estimates based on public data inflation-adjusted to 2013 dollars," Table 7, available at http://www.federalreserve.gov/econresdata/scf/scfindex.htm.

[47] The homeownership rate has continued to fall; It was 63.7 percent in 2015, and 62.9 percent in the second quarter of 2016, the latest available information as of this writing.

2013, 65.2 percent were homeowners and 4.9 percent thought they were underwater. Altogether, 68.1 percent were owners with equity in their home in 2007; 59.2 percent were in 2010; 60.3 percent were in 2013. The average homeowning family lost over one-quarter of the equity in its home over those six years.

The validity of these figures depends on the ability of homeowners to estimate the current market value of their home. The principal balance on their mortgage is typically reported at least annually, along with the amount of mortgage interest paid during the previous year, which is tax-deductible. Other relevant data is available is available from private firms and government agencies. RealtyTrac, a real estate information company, publishes monthly and annual reports on the number of homes that are in the process of foreclosure, using information from county government records. These are homes whose owners are unable or perhaps unwilling to make their monthly mortgage payments. The annual "Year-End U.S. Foreclosure Market Report," contains the number of homes on which at least one foreclosure notice has been filed during the year.[48] In 2007, there were about 1.3 million homes (1.03 percent of the housing stock) on which at least one notice was filed – an 80 percent increase over 2006. In 2010, there were almost 2.9 million homes (2.23 percent of the stock); this was the peak year for foreclosure notices. By 2013, the number of homes was down to about 1.4 million (1.04 percent of the stock). These data do not directly measure the change in homeowners' equity from year to year, but they correlate with the changes reported in the SCF. Foreclosures and homes with negative equity (as judged by their owners) both increased sharply from 2007 to 2010, and then declined more modestly from 2010 to 2013.

[48] Annual information is published in "Year-End 2013 U.S. Foreclosure Market Report," available at http://www.realtytrac.com/content/foreclosure-market-report/2013-year-end-us-foreclosure-report-7963, and similarly for other years.

Changes in Household Assets and Debts, 1983-1992

The 1990-1991 recession interrupted some trends. Equity in owner-occupied homes rose by almost 25 percent between 1983 and 1989, but then dropped by over 10 percent through 1995; most of the decline occurred between 1989 and 1992. Similarly, transaction account balances rose by one-third, declined by about 15 percent through 1995, and then began rising again. The same pattern occurred for the values of unincorporated business and vehicles, and on the liability side, for loans to buy vehicles.

In general, however, the changes in assets and debts were not pronounced, either during the 1980s or during the 1989-1992 recessionary period – particularly in the light of what happened after 2007.

"Other" Assets and Debts

The SCF attempts to measure total household net worth, whatever form it may take. To this end, it asks questions about holdings of assets and debts which are held by a small number of households. These are combined in the published categories of "other" assets (separating financial and nonfinancial assets) and debts.

Other Financial Assets. The SCF analysts define "other financial assets" as "a heterogeneous category including such items as oil and gas leases, futures contracts, royalties, proceeds from lawsuits or estates in settlement, and loans made to others."[49]

"Other financial assets" as a whole were consistently less than $10,000. In 1989 they amounted to six percent of financial assets and 1.7 percent of net worth. There were the high water marks. By 2013 they amounted to 1.7 percent of financial assets (the lowest value in any survey) and less than one percent of net worth.

Other Nonfinancial Assets. The SCF analysts define "other nonfinancial assets" as "a broad category of tangible assets including artwork, jewelry, precious metals, and antiques."[50] Some other nonfinancial assets are included. As a onetime philatelist, I have noticed that postage stamps are part of the survey, for example, and are in the category of "other." The same is true of coins. As with "other financial assets," this category has declined in importance, from 2.2 percent of nonfinancial assets in 1989 to 1.3 percent in 2013, and from 1.5 percent of net worth in 1989 to 0.8 percent in 2013.[51]

Other Debt. The SCF analysts define "other debt" as "loans on insurance policies, loans against pension accounts, borrowings on a margin account, and other unclassified loans."[52] "Other debt" so defined accounted for 2.3 percent of total debt in 1989 and just over one percent in 2013.[53]

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[49]Arthur B. Kennickell, Martha Starr-McCluer, and Annika E. Sunden, "Family Finances in the U.S.: Recent Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, Vol. 83, No. 1 (January 1997), p. 11, available at http://www.federalreserve.gov/econresdata/scf/files/1995_bull0197.pdf. The same language appears in the *Bulletin* articles about each of the surveys.

[50] Kennickell, Starr-McCluer, and Sunden, "Family Finances in the U.S.," p. 13.

[51] Survey of Consumer Finances, "Historic Tables and Charts."

[52] Kennickell, Starr-McCluer, and Sunden, "Family Finances in the U.S.," p. 17.

[53] Survey of Consumer Finances, "Historic Tables and Charts."

Table 4.4

Share of Households Owning Specific Assets or Debts, 1983-1989

	1983	1989
Financial assets		
Checking accounts	78.6	75.4
Savings accounts	61.7	43.5
Money market mutual funds	15.0	22.2
Certificates of deposit	20.1	19.6
Retirement accounts	24.2	33.3
Stocks (directly and in mutual funds)	30.4	19.0
Bonds	3.0	4.4
Municipal bonds	2.1	4.4
Trusts	4.0	3.4
Other financial assets	4.4	47.7
Any financial asset	87.8	87.5
Nonfinancial assets		
Home	64.4	64.7
Vehicles	84.4	84.0
Business	14.2	11.5
Investment real estate	20.9	20.4
Other nonfinancial assets	7.4	22.1
Any nonfinancial asset	90.3	90.2
Debt		
Home mortgages	36.9	38.7
Home equity lines of credit (HELOCs)	0.5	3.3
Loans on investment real estate	7.6	7.0
Car loans	28.7	35.1
Credit card balances	37.0	39.9
Other lines of credit	11.2	3.3
Other debt	29.6	32.3
Any debt	69.6	72.7

Table 4.5

Mean Value of Assets and Debts among All Households, 1983-1989

(in 2013 dollars)

	1983	1989
Mean across all households	$285,000	$345,000
Transaction accounts	$16,400	$21,200
Stocks (directly held & mutual fund holdings)	$29,000	$20,400
Retirement Accounts	$8,900	$25,000
Trusts	$8,600	$8,000
Bonds (including non-taxable)	$10,300	$17,600
Certificates of deposit	$10,800	$11,300
Other financial	$8,700	$9,200
Owner-occupied homes	$105,900	$130,500
Investment real estate	$49,700	$61,600
Unincorporated business	$63,700	$72,200
Vehicles	$11,100	$15,800
Other non-financial	$3,100	$13,500
Mortgages and HELOCs	$24,300	$34,300
Loans on investment real estate	$8,500	$15,500
Vehicle loans	$2,500	$4,900
Other debt	$6,100	$7,000

5. Changes in the Distribution of Wealth, 1983-2013

Measures of Distribution

The distribution of economic well-being is commonly measured in two different ways: measures describing the entire distribution, and measures describing the concentration at one end of the distribution, typically the high end. Each type of measure has strengths and limitations.

The Gini Coefficient

The most common quantitative measure of the entire distribution is the Gini coefficient. It is regularly reported as a measure of the distribution of income in the U.S.; the Census Bureau publishes a Gini coefficient for the distributions of household income and family income each year as part of an annual report on income and poverty, and has been since 1967.[54]

In calculating a Gini coefficient, households or individuals are ranked from the lowest income or wealth to the highest. The cumulative share of total income or wealth is measured against the cumulative share of the population. Figure 5-1 illustrates this ranking. The cumulative share of population is measured along the horizontal axis; the corresponding cumulative share of total income or wealth is measured along the vertical axis.[55] The Gini coefficient is measured as the ratio of the area between the diagonal line – indicating a perfectly equal distribution - and the Lorenz curve to the total area under the diagonal line.

The Gini coefficient has a range of 0 to 1. If the distribution of wealth is perfectly equal, the coefficient is zero; if all the wealth in the society is owned by one single household, the coefficient is unity. The greater the concentration of wealth, the closer the Gini coefficient is to unity.

The advantage of the Gini coefficient is that it takes into account changes that occur in any part of the distribution. Its main drawback is that it has no intuitive interpretation, except at the extreme points. A Gini coefficient of 0.5, for example, does not necessarily mean that the society is "halfway between" a perfectly equal and perfectly unequal distribution of wealth, and indeed it is not clear what such a statement means. A coefficient of 0.5, or any other value between the theoretical limits, is consistent with a number of different distributions. Nor is it possible to explain the meaning of a Gini coefficient in terms of any other measure. All that can be said is that higher coefficients indicate greater inequality.[56]

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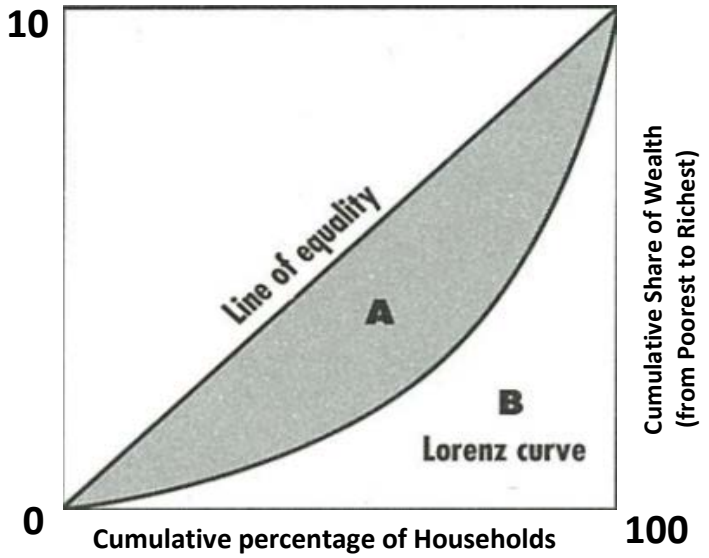
[54] Carmen DeNavas-Walt and Bernadette D. Proctor, *Income and Poverty in the United States: 2014*, U.S. Bureau of the Census, Current Population Reports No. P60-252, September 2015. The data are collected as part of the Current Population Survey in March of the next year. The Census Bureau has been including Gini coefficients in the publication since 1967, and has calculated them back to 1947.
[55] The Lorenz Curve was first calculated by M. O. Lorenz, "Methods of Measuring the Concentration of Wealth," *Quarterly Publications of the American Statistical Association, New Series*, No. 70 (June 1905).
[56] For a more detailed explanation of the Gini coefficient, see James N. Morgan, "The Anatomy of Income Distribution," *Review of Economics and Statistics*, Vol. 44, No. 3 (August 1962). A very useful recent discussion is Evelyn Lamb, "Ask Gini: How to Measure Inequality," November 12, 2012, on the *Scientific American* website, http://www.scientificamerican.com/article/ask-gini/, which includes a balanced

Figure 5-1

The Gini Coefficient and the Lorenz Curve



$$\text{Gini Coefficient} = \frac{\text{Area between the Lorenz Curve and the Line of Equality}}{\text{Total Area Under the Line of Equality}} = \frac{A}{A+B}$$

Concentration Ratios

Measures of concentration have become more common in recent years, for several reasons. The ownership of wealth is highly skewed, compared to income or other measures of economic well-being, so the shares held by the richest one percent or ten percent of all households attract attention. Such concentration ratios are easy to calculate and intuitively easy to understand.

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discussion of strengths and limitations of the Gini coefficient, with examples. Peter Rosenmai, "Lorenz Curve Graphing Tool and Gini Coefficient Calculator," July 27, 2012, available at http://www.peterrosenmai.com/lorenz-curve-graphing-tool-and-gini-coefficient-calculator, allows users to create and modify their own small data sets and calculate the Gini coefficients, and perhaps to develop some intuitive sense of how to interpret Gini coefficients. A more elaborate and realistic example illustrating in detail the process of calculating a Gini coefficient, using real data from the field of team sports, has been posted by Stacey L Brook, a lecturer in the department of economics at the State University of Iowa; available at http://teamsportsanalysis.blogspot.com/2012/12/guide-to-calculating-gini-coefficient.html. Brook uses actual data to measure how unequal are the payouts to universities by different football bowl games. The original source is Corrado Gini, "Measure of Inequality and Incomes," *Economic Journal*, Vol. 31, No. X (1921).

The main limitation of concentration ratios is that they only describe part of the distribution of wealth. Changes in net worth for "the wealthy" may not correspond to changes in the opposite direction for any other particular subset of the population (for example, "the poor"), and conversely changes may occur for these groups without any corresponding changes among the rich. Nor is there anything inherently significant in any particular concentration ratio: the highest one percent, five percent, ten percent, or any other share.

The SCF provides information about all households, not only about the wealthy. It can therefore be used to measure both the overall distribution of wealth and the share held by "rich" or "poor" (however defined) American households.

Gini

Changes in the Distribution of Wealth, 1989-2013

Table 5-1 reports the changes in the overall distribution of wealth and in the share held by the richest households between 1989 and 2013. The Gini coefficient declined slightly from 1989 to 1992, then increased in each three-year period through 2013. The table also shows the standard errors for the coefficients. The largest and most statistically significant increase occurred between 2007 and 2010 – covering the onset of the Great Recession through the first stages of the subsequent recovery. There were also statistically significant – but much smaller – increases in 1995-1998, 1998-2001, and 2010-2013. Otherwise, the change in inequality was smaller and not significant from one survey to the next. Over longer periods, however, the changes were significant.[57]

The table also shows the concentration of wealth among the richest households, by several criteria: the richest one percent, the richest five percent, and the richest 10 percent, and also for the households between these cutoffs: between one percent and five percent, and between five percent and 10 percent. These all show little or no increase from 1989 to 1992. After 1992 the shares for the richest one percent, five percent, and 10 percent generally increased, with the largest increase for the richest one percent occurring between 1992 and 1995. Through 2007, the share of the richest one percent tended to increase more than the shares of those between one percent and 10 percent, and for that matter more than the share of the rest of the population. But around the end of in the Great Recession, between July and December 2009, the Federal Reserve conducted a follow-up survey of those households that had been interviewed in 2007. In a report on the changes between 2007 and 2009, Kennickell noted that "the share of the wealthiest one percent of households has shown no significant change since 1995," in comparison to 2007; and added that between 2007 and 2009 the share of total wealth owned by the richest one percent of households had declined by four percentage points, from 33 percent of total wealth to 29 percent.[58]

The richer got richer between 1992 and 2007, but the poor did not get poorer. In 1992, the total real wealth for the lower half of U.S. families was about $860 billion; in 2007, their total real wealth was about $1.6 trillion.[59] Real mean wealth per family increased from about $18,000 to about $28,000. Their *share* did not increase, rather the reverse – they held 3.3 percent of total net worth in 1992, compared to 2.5 percent in 2007 – but their *actual wealth* did.

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[57] Arthur Kennickell has calculated that the change in the Gini coefficient was not statistically significant from one survey to the next between 1989 and 2007, but the cumulative increase between 1992 and 2007 was such that there was a statistically significant increase between each of the first four surveys (1989, 1992, 1995, and 1998) and the 2007 survey. Arthur B. Kennickell, "Ponds and Streams: Wealth and Income in the U.S., 1989 to 2007," Federal Reserve Board, Finance and Economics Discussion Series (FEDS) N. 2009-13, Table 3.

[58] Arthur B. Kennickell, "Tossed and Turned: Wealth Dynamics of U.S. Households 2007-2009, *FEDS Finance and Economics Discussion Series*, No. 2011-51 (May 2012), pp. 13-15, http://www.federalreserve.gov/pubs/feds/2011/201151/201151pap.pdf.

[59] Kennickell, "Ponds and Streams," Figures A3a (2007) and A3F (1992).

Table 5-1

The Distribution of Wealth, 1989-2013

Panel A: Gini Coefficients

	1989	1992	1995	1998	2001	2004	2007	2010	2013
Gini coefficient	0.787	0.781	0.785	0.794	0.803	0.805	0.812	0.833	0.838
(Standard error)	*.0033*	*.0025*	*.0026*	*.0026*	*.0023*	*.0023*	*.0023*	*.0021*	*.0017*

Panel B: Concentration Ratios

Richest 1%	29.9%	30.0%	34.7%	33.6%	32.1%	33.2%	33.5%	33.9%	35.3%
Richest 5%	54.1%	54.3%	55.9%	57.0%	57.4%	57.2%	60.2%	60.5%	62.5%
Richest 10%	66.8%	66.8%	67.7%	68.3%	69.5%	69.3%	71.2%	73.9%	74.5%
Between 1% & 5%	24.2%	24.3%	21.2%	23.4%	25.3%	24.0%	26.7%	26.6%	27.2%
Between 5% & 10%	12.7%	12.5%	11.8%	11.3%	12.1%	12.1%	11.1%	13.4%	12.0%

Panel C: Net Worth

(Measured in trillions of 2013 dollars)

Richest 1%	$ 9.9	$ 9.0	$11.1	$14.0	$17.8	$20.6	$25.0	$21.8	$23.5
Between 1% and 5%	$ 8.0	$ 7.3	$ 6.8	$ 9.7	$14.1	$13.3	$19.9	$17.1	$18.1
Between 5% and 10%	$ 4.2	$ 3.7	$ 3.8	$ 4.7	$ 6.7	$ 6.7	$ 8.3	$ 8.6	$ 8.0

Between 2007 and 2013, this pattern changed. The poor became poorer, but so did the rich and the people in between. The rich were less affected, however. The top 10 percent lost a smaller share of their 2007 wealth than the remainder of the population. The richest 10 percent of households lost about seven percent of their net worth – $3.6 trillion out of $52.2 trillion. The remaining 90 percent of households lost about 22 percent of their net worth – $4.3 trillion out of $19.4 trillion. Indeed, as these figures show, the top 10 percent lost a smaller *amount*, not just a smaller *share*, than the remaining 90 percent.[60] As of 2010, the share of wealth owned by the richest one percent had risen to 34 percent. share of the richest 1% show that two of the four 1983-1989 increases and one of the two 1989-1992 decreases were statistically significant. For the full period, one comparison shows an insignificant increase in concentration and the other shows a decrease that is almost significant.[61]

[60] The Gini coefficients in Table 5-1 are positively correlated with each the three concentration ratios over the period 1989-2013; the correlation coefficients are at least 0.6. With only nine observations, however, there is no point to measuring the significance of the relationships.
[61] Ibid., Table 4.

Changes in the Distribution of Wealth, 1983-1992

It is not possible to construct measures of the distribution of wealth for 1983 that are fully consistent with measures for 1989 and later surveys, for the same reasons that it is not possible to construct consistent measures of net worth over that period. The weights developed in the mid-1990s could be utilized for the surveys from 1989 onward, but the relevant information was not available for 1983.[62] There is still of course the further complication that more than one set of weights was constructed for the 1983 and 1989 surveys, when those survey results were first reported and the data files were made public.[63] Comparisons can be made for 1983 to 1992, using the original weights, which if used in conjunction with comparisons using the consistent weights for 1989 and the later years can provide a description of the changes in the distribution over the full 30 year period, paralleling the discussion of total net worth in Chapter 3.

Table 5-2 summarizes the 1983-1992 results using the different weights. As the table shows, the results are quite sensitive to the choice of weights, even to the point of the direction of the change during both 1983-1989 and the full 1983-1992 period. Three of the four comparisons for 1983 to 1989 indicate that the distribution of wealth became more unequal and more concentrated during that period; both comparisons for 1989 to 1992 show that the distribution became more equal and less concentrated during that period; and the two comparisons over the full period 1983-1992 show opposite results. Only one of the Gini coefficient comparisons is statistically significant: the increase from .778 in 1983 to .805 in 1989. It should be noted that the 1989 weights in this comparison are those intended to be comparable to 1992, rather than to 1983. The other two comparisons using the 1983 Federal Reserve Board weights come close to statistical significance. Similar significance tests for the share of the richest 1% show that two of the four 1983-1989 increases and one of the two 1989-1992 decreases were statistically significant. For the full period, one comparison shows an insignificant increase in concentration and the other shows a decrease that is almost significant.[64]

The reason for these conflicting results is that the measured changes in inequality and concentration are small. By contrast, there were substantial increases in total wealth and average household wealth between 1983 and 1992, no matter which weights are used.

It may also be worth noting that the revised weights for 1989 and 1992 – the weights consistent with those for 1995 and later surveys (shown in Table 5-1) – result in much lower Gini coefficients than any of the original weights (shown in Table 5-2). This invites speculation that a revised 1983 weight would also produce a lower Gini coefficient, but that can only be speculation.

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[62] Arthur B. Kennickell and R. Louise Woodburn, "Consistent Weight Design for the 1989, 1992 and 1995 SCFs and the Distribution of Wealth," Federal Reserve Board Working Paper, Revision II, August 1997, p. 2, fn. 2.

[63] For more detailed discussion of the weighting issues, see John C. Weicher, "Wealth and Its Distribution, 1983-1992: Secular Growth, Cyclical Stability." *Review*, Vol. 79, No. 1 (January/February 1997).

[64] Ibid., Table 4.

Table 5-2

The Distribution of Wealth, 1983-1992

	1983	1989	1992
Gini Coefficient	.778 or .795	.793 or .805	.787
(standard error)	*(.008)*	*(.008)*	*(.006)*
Share of Top 1%	31.5% or 35.8%	35.3% or 36.5%	32.6%

SOURCE: John C. Weicher, "The Distribution of Wealth, 1983-1992: Secular Growth, Cyclical Stability," *Review of the Federal Reserve Bank of St. Louis*, Vol. 79, No. 1 (January/February 1997), pp. 3-23; Tables 6 and 7.

Wealth Inequality and Income Inequality

As described earlier, the SCF collects information on household income as well as household wealth. The distribution of income as reported in the SCF has followed a somewhat similar path to the distribution of wealth, but the path for income has been more erratic. The Gini coefficient for income declined sharply for three periods: between 1988 and 1991, between 1997 and 2000, and between 2006 and 2009 (Table 5-3; the income data collected in the SCF is for the calendar year before the survey year). There are also three sharp increases: between 1997 and 2000, between 2003 and 2006, and between 2009 and 2012. Nearly all of the changes in income between survey years are statistically significant, which is not the case for the changes in wealth.[65] Overall, the Gini coefficient for income is quite a bit higher in 2012 than it was in 1988.

Table 5-3

Gini Coefficients for Household Wealth and Household Income, 1988-2012

Year	Wealth	Income (SCF)	Income (CPS)
1988	.787	.540	.426
1991	.781	.501	.428
1994	.785	.515	.456
1997	.794	.530	.459
2000	.803	.562	.462
2003	.805	.540	.464
2006	.812	.572	.470
2009	.833	.547	.468
2012	.838	.573	,477

SOURCES: Wealth and Income (SCF): Calculated from SCF data files. Income (CPS): U.S. Bureau of the Census, "Income and Poverty in the United States: 2015," Report Number P60-256, September 13, 2016; Table A-2: Selected Measures of Household Income Dispersion: 1967 to 2015 (line 84); available at https://www.census.gov/library/publications/2016/demo/p60-256.html.

[65] Kennickell reports that all survey-to-survey changes in income Gini coefficients between 1988 and 2006 are statistically significant except for 1988-1991 (Kennickell, "Ponds and Streams" Table 3).

Unlike wealth, there is separate information on household income, on an annual basis, from the Current Population Survey (CPS) conducted by the Census Bureau; Gini coefficients and other measures of income distribution have been published for each year since 1947. The Gini coefficient declined steadily from 1947 to 1967; since then it has increased steadily.[66] Between 1988 and 2012, the Gini coefficient for income calculated from the Current Population Survey rose substantially more than the coefficient calculated from the SCF – by .051 compared to .033. Technical differences explain part of this difference. The CPS population controls are updated after each decennial Census, and in those years the change in the Gini coefficient reflects changes in the characteristics of the population as well as changes in the assets and debts of households. The difference between 1992 and 1993, for instance, is .021 – an increase from .433 to .454. There are also recurring changes in the CPS sample design, and occasional increases or reductions in the sample size. The Gini coefficients calculated from the SCF are consistently higher than those from the CPS. One factor contributing to these differences is the definition of "income." The SCF definition of income includes realized capital gains, while the CPS does not. Capital gains are, by definition, increases in the value of particular assets, and they are also correlated with income.[67]

Most notably, the Gini coefficient for net worth is consistently much higher than the coefficient for income.[68] Between 1989 and 2013, the coefficient for household net worth was never below .781 and the coefficient for household income in the SCF never above .573. Over these years, the Gini coefficient for household income published annually by the Census Bureau from the Current Population Survey was never above .482.[69]

The most important reason for this difference is the relationship between age and income or wealth. Figure 5-2 shows the pattern over the life of the household head for each SCF. The data for households are calculated for three-year age cohorts, corresponding to the time between successive SCF surveys. A young household does not typically start with much income or wealth. As the household head ages, both income and wealth tend to increase. Wealth increases much faster than income, however, and over a longer period of time, as the figure shows. Median incomes are generally highest for households whose head is in his or her late 40s to late 50s; median wealth is generally highest for households whose head is about 10 years older. Further, median incomes tend to peak at $75,000 to $85,000; median wealth at $225,000 to $300,000.

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[66] U.S. Bureau of the Census, *Income and Poverty in the United States: 2014*, Table A-2, Selected Measures of Household Income Dispersion: 1967 to 2014; available at U.S. Bureau of the Census, "Historical Income Tables: Income Inequality," Table 1E-1, https://www.census.gov/hhes/www/income/data/historical/inequality/.

[67] There are terminological differences between the CPS and SCF that can be confusing, but have no effect on the reported income distributions. The SCF definition of "family" is essentially the same as the CPS definition of "household;" and the number of families per the SCF is the same as the number of households per the CPS. Single individuals are counted as "families," in the SCF, but as "households" in the CPS.

[68] As with the measures of wealth in Table 5-1, there is a positive correlation between the Gini coefficients for wealth and those for income in Table 5-3, but the nine observations is too small to draw conclusions about the statistical significance of the relationships.

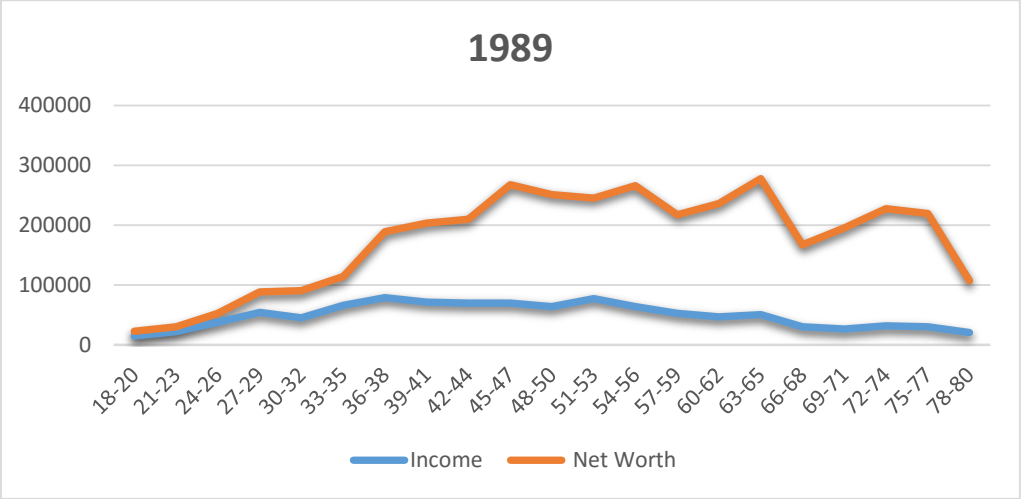
[69] U.S. Bureau of the Census, "Historical Income Tables: Income Inequality" Table 1E-1.

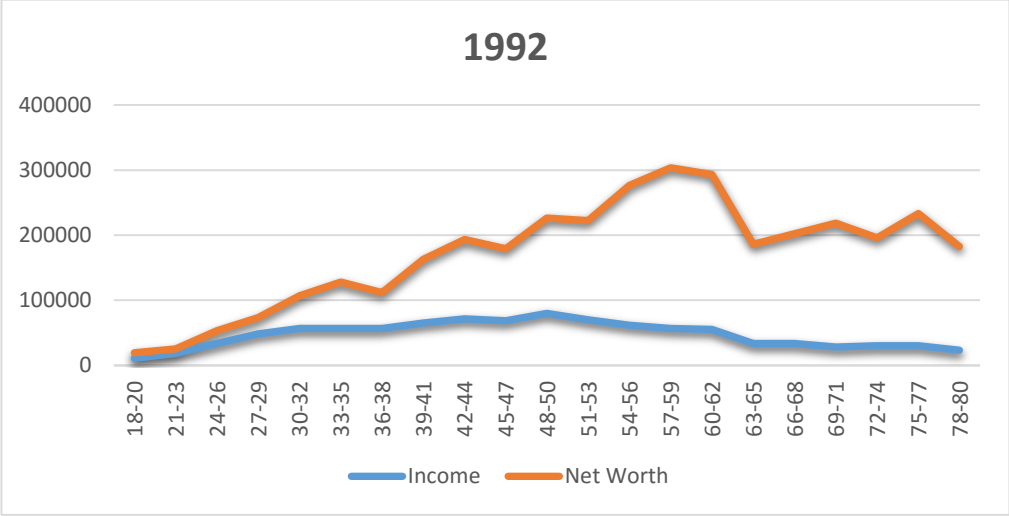
For much of a typical household's life, wealth is several times as much as income. This continues into retirement, up to the point where households start to draw on their wealth for living expenses. Past the age of 80, median wealth tends to fluctuate, sometimes sharply, perhaps at least partly because the SCF samples are smaller for these households. For that reason, the charts are truncated at age 78-80.

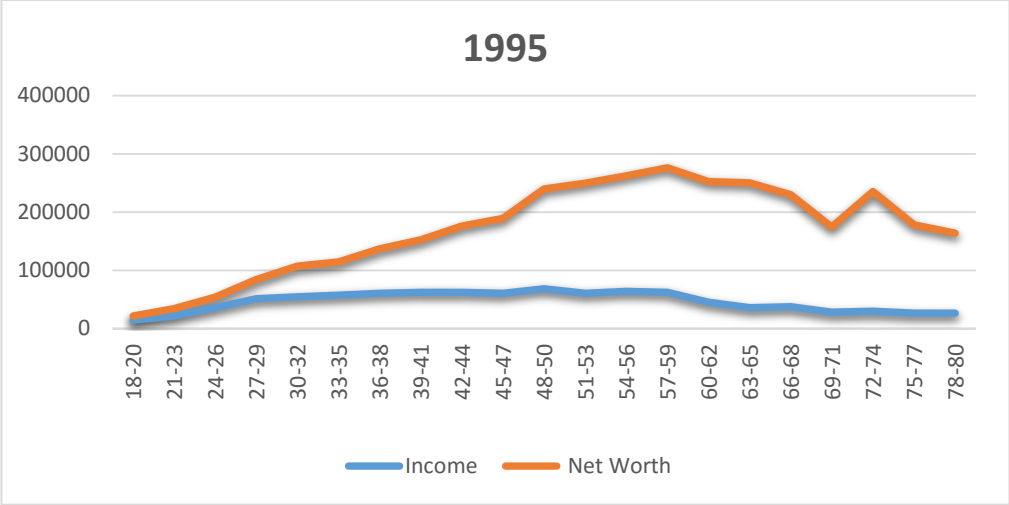
With these age-related differences, it is no wonder that wealth is much more unequally distributed than income. The data in Figure 5-2 are median values. There is of course a great deal of variability around these values for each age cohort. But even if every household in each age cohort had the median value for wealth and income for that cohort, there would be a substantial difference in the Gini coefficients. The coefficient for wealth would be about .350, the coefficient for income about .190. Certainly there is still quite a bit of variability within each cohort, but no other factor is as important for understanding the distribution of wealth.

Figure 5-2

Median Wealth and Median Income by Age, 1989-2013



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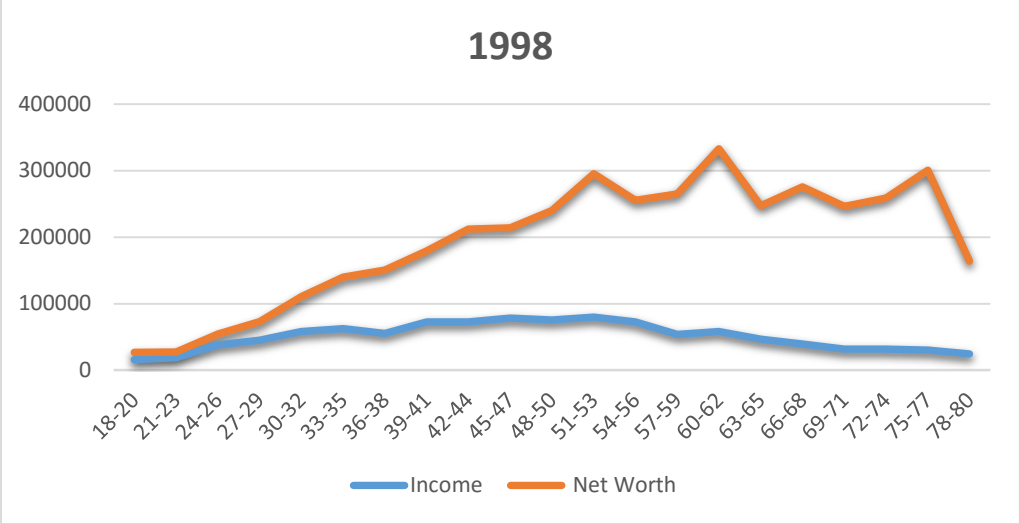
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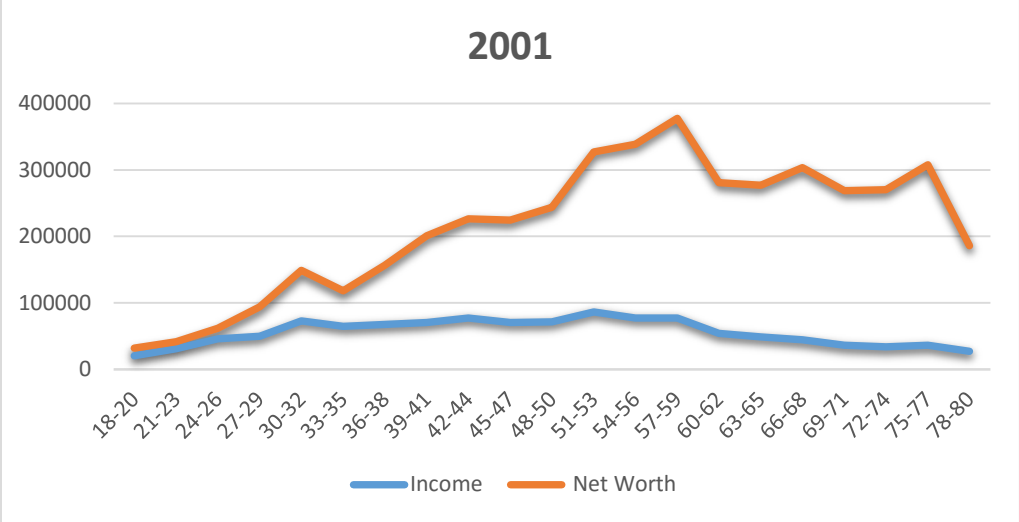
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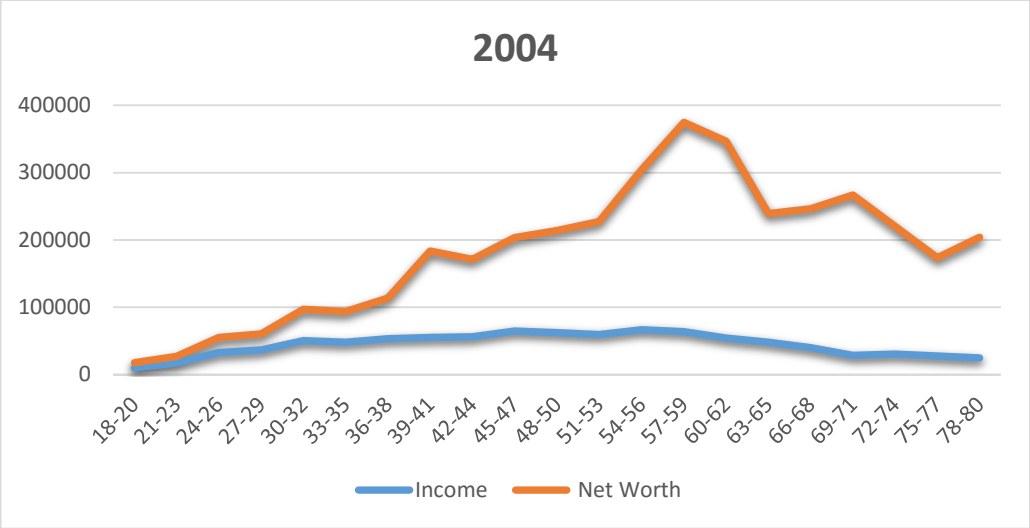
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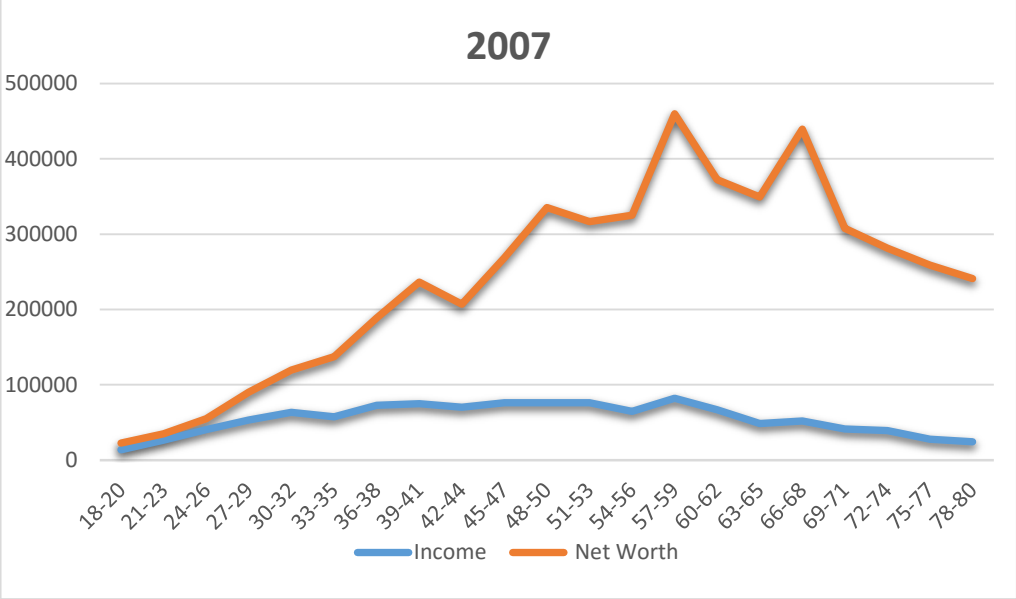
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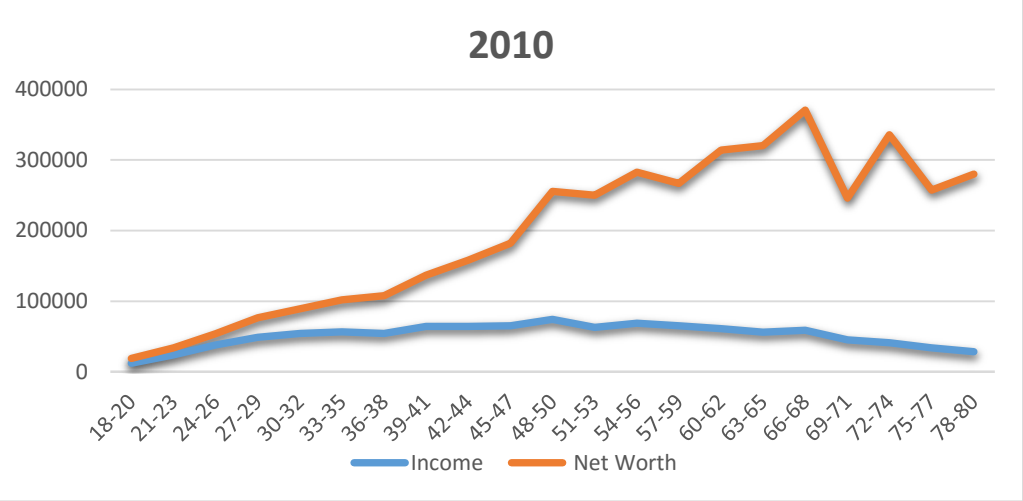
Net Worth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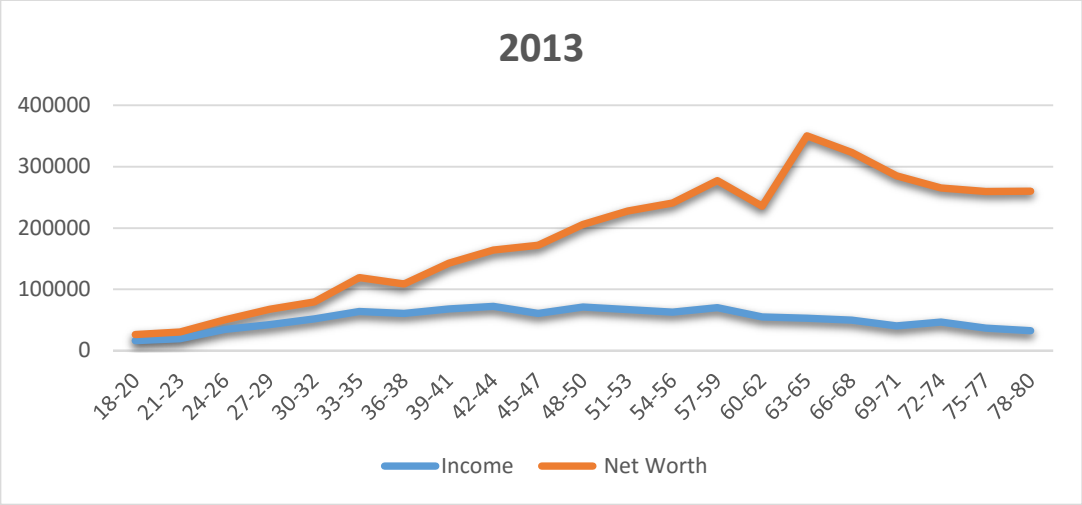
Income
Net Worth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Income
Net Worth

6. *How Come?*

The years since 2007 are unusual in two respects: the drop in total wealth – especially sharp during and immediately after the Great Recession, during 2007-2010 – and the large increase in inequality. The only other period between surveys when total wealth declined was 1989-1992, but in that recessionary period there was a decrease in inequality. (As discussed in earlier chapters, there was also a recession between March and November of 2001, coinciding with the survey period (May through December); some respondents were reporting their assets and debts near the peak of the economic upturn that started in March 1991, while others were reporting at or just after the trough of the recession.[70]) What might account for these cyclical differences?

[70]Ana M. Aizcorbe, Arthur B. Kennickell, and Kevin B. Moore**, "**Recent Changes in U.S. Family Finances: Evidence from the 1998 and 2001 Survey of Consumer Finances," *Federal Reserve Bulletin*, vol. 89 (January 2003), pp. 1-32; the survey dates are specified on p. 30.

Homeownership

The most striking difference in the distribution of wealth occurs with respect to owner-occupied homes. During the unprecedented peacetime inflation between 1965 and 1982, prices nearly tripled, and the average annual rate of increase was almost seven percent; the homeownership rate rose from 62.9 percent to a then-record 65.6 percent, a very large increase by historical standards. There was a flight from financial assets; the real value of common stocks fell by half, and there was an even larger drop in the prices of fixed-income assets, such as bonds.[71] At the same time, the prices of real assets generally rose at least as fast as inflation.

This is the case for owner-occupied homes, although the data before 1975 are less reliable than the data since.[72] Among assets which offered some protection against inflation, a home was the easiest for most households to buy; collectibles and *objets d'art* typically require specialized knowledge, and the markets for them are often thin. Then, as the inflation rate dropped to a range of three to five percent between 1982 and 1989, the homeownership rate decreased to 63.9 percent. This of course is essentially the time period between the first and second SCF surveys. Between the 1989 and 1992 surveys, the rate was stable, consistently about 64 percent.

The pattern was essentially the opposite before and during the Great Recession. The homeownership rate rose from 63.8 percent in 1994 to a peak of 69.1 percent at the beginning of 2005. House prices rose at an annual rate of 5.7 percent over this period; they continued to rise until mid-2007 (coincidentally, the beginning of the 2007 SCF data collection process). From then on, homeownership and home prices began dropping steadily. By the middle of 2013, the homeownership rate was down to 65 percent, and home prices were more than 12 percent lower than in 2007, though they had bottomed out in mid-2012 and begun to rise. In addition to the decline in homeownership, a larger number of homeowners were "under water:" their home was worth less than they owed on their mortgage. In 2007, about 750,000 homeowners said they were under water; in 2013, over four million did.[73]

To summarize: During the 1980s, homeownership decreased and home prices rose more slowly than the inflation rate; then from 1989 to 1992, homeownership was stable while real prices continued to decline slightly. During 1994-2005, homeownership increased very rapidly, and real house prices rose; since 2007, both have fallen.

The broad middle class has been most affected by these changes, because home equity is by far their most important asset. Table 6-1 shows how important homeownership is to

[71] The value of stocks is measured by the S&P 500 composite stock index.
[72] The most extensive data set is the Home Price Index (HPI) calculated by the Federal Housing Finance Agency, using loans purchased by the government-sponsored entities, Fannie Mae and Freddie Mac. FHFA publishes a monthly index for home purchase loans only, beginning in 1991, and a quarterly index including refinances as well as home purchases, beginning in 1975. From 1975 through 1982, the quarterly HPI rose at an annual rate of about 9.4 percent, compared to a rate of 8.7 percent for the Consumer Price Index (CPI-U).
[73] Calculated by the author from SCF data files.

these households. The homeownership rate was higher than 90 percent for households in each of the five highest deciles in 2007, and it did not change much for the highest four of them by 2013. But there was a dramatic drop in the 4th decile (households with

Table 6-1

The Importance of Homeownership to Net Worth, 2007-2013

(dollar values in thousands of 2013 dollars)

	Decile									
	1st	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**Top**
Panel A: Homeownership Rate										
2007	13%	10%	34%	73%	85%	93%	92%	95%	96%	97%
2013	30%	9%	28%	52%	77%	85%	92%	93%	94%	97%
Panel B: Home Equity (average across all households in the decile)										
2007	$ 1.8	$ 0.7	$ 4.2	$ 27	$ 56	$ 97	$145	$195	$294	$697
2013	**(**$ 7.6)	$ 0.2	$ 1.1	$ 9	$ 29	$ 55	$ 93	$136	$201	$523
% Change	-----	-69%	-73%	-67%	-48%	-43%	-36%	-30%	-33%	-25%
Panel C: Net Worth (average across all households in the decile)										
2007	($14)	$ 3.6	$ 17	$ 50	$102	$176	$276	$427	$750	$4,463
2013	($37)	$ 1.1	$ 9	$ 25	$ 59	$111	$193	$324	$635	$3,962
% Change	____	-70%	-53%	-49%	-43%	-35%	-36%	-24%	-15%	-11%

NOTE: Percent changes calculated from unrounded data. Dollar values in parentheses are negative numbers.

net worth around $50,000), and notable declines for the 3rd and 5th deciles – households in the lower half of the wealth distribution. Home equity declined for

households within each decile, but the percentage decline was highest in the least wealthy decile, and lowest in the most wealthy. In between, the decline was steadily less important among richer households. Households in the third decile did not have much home equity, on average, but they lost nearly all of it. Households in the middle lost almost half of their home equity; the richest households lost about one-third. The same pattern holds for net worth. Those in the least wealthy decile – of whom only about 10 percent were homeowners - lost almost half of their net worth; those in the middle, about one-third; those at the top – for whom home equity was about 20 percent of their net worth - lost about 10 percent. The more important home equity was, as a share of a household's net worth as of 2007, the more that household was hurt by 2013.

The pattern was very different during 1989-1992 (Table 6-2). The decade of the 1980s saw many actions to resolve the problems of the savings and loan industry (the main source of home mortgage financing since the 1930s). These problems arose from the inflation of the 1970s and the creation of financial instruments that competed with time deposits, such as money market mutual funds. The decade culminated in the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) of 1989. The Resolution Trust Corporation, established by FIRREA, closed one quarter of the savings and loan associations then in existence, because they had become insolvent; this required taking title to the assets of these S&Ls and disposing of them. By 1995, about half of all S&Ls had been closed; by 1999, when the RTC completed the resolution process, the cost to the federal government was calculated at about $130 billion.[74]

This situation was not propitious for home mortgage borrowers and lenders, and might be expected to discourage homeownership. In fact, however, the homeownership rate rose slightly between 1989 and 1992, from 63.9 percent of all households to 64.1 percent. Perhaps even more surprisingly, the homeownership rate increased for households in the lower half of the wealth distribution, and declined for households in the upper half.

As shown in Table 6-2, home equity, and net worth, increased for the less wealthy 40 percent of households, declined for the wealthier 60 percent, and by and large decreased most for those who were wealthiest. The change in home equity accounted for most of the increase, or decrease, in net worth for all but the richest and poorest households.

[74] Timothy Curry and Lynn Shibut, "The Cost of the Savings and Loan Crisis: Truth and Consequences," *FDIC Banking Review*, Vol. 3, No. 3 (December. 2000), pp. 26–34, available at https://www.fdic.gov/bank/analytical/banking/2000dec/brv13n2_2.pdf.

Table 6-2

The Importance of Homeownership to Net Worth, 1989-1992

(dollar values in thousands of 2013 dollars)

	Decile									
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	Top
Panel A: Homeownership Rate										
1989	9%	3%	31%	55%	76%	91%	93%	93%	95%	92%
1992	9%	8%	28%	64%	79%	84%	89%	90%	94%	94%
Panel B: Home Equity (average among all households in the decile)										
1989	($0.2)	$ 0.2	$ 3.4	$ 15	$ 35	$ 68	$ 98	$135	$192	$358
1992	$ 1.2	$ 0.6	$ 4.2	$ 15	$ 35	$ 59	$ 84	$111	$160	$306
% Change	-----	31%	24%	6%	1%	-14%	-17%	-18%	-17%	-14%
Panel C: Net Worth (average among all households in the decile)										
1989	($6)	$ 1.7	$ 11	$ 33	$ 68	$116	$182	$281	$485	$2,397
1992	($9)	$ 2.3	$ 17	$ 33	$ 64	$105	$163	$248	$408	$2,086
% Change	-----	37%	17%	1%	-6%	-9%	-11%	-12%	-16%	-13%

NOTE: Percent changes calculated from unrounded data. Dollar values in parentheses are negative numbers.

Vacation Homes

In addition to collecting information about owner-occupied housing, the SCF asks about other property owned by the family, including second homes or vacation homes.[75] Vacation homes are difficult to define precisely. The Census Bureau reports them either as "seasonal" or as "occasional use/usual residence elsewhere."[76] The basic distinction between "seasonal" and "occasional use" is between units which are intended for occupancy only during part of a year, such as a beach cottage in the northeastern U.S. which is not insulated, and units which can be lived in during any season of the year. These units are classified as vacant, whether or not people are currently occupying them, because the occupants have a usual residence elsewhere.

Because they are difficult to define, vacation homes are also difficult to count. In 2004, economists at HUD published a paper on the subject, entitled "How Many Second Homes Are There?" Reviewing the major surveys of households and housing during 1995-2001, they found a wide range of answers, between 2.8 and 8.0 million, depending on the data source and the definition, and concluded, "The number of second homes seems to depend on what classification is being measured."[77] A further complication is that some families own more than one vacation home, and some vacation homes are owned by more than one family.

In the SCF, vacation homes are included in a broader category of "Investment Real Estate and Vacation Properties."[78] The household was asked detailed questions about the three most valuable such properties from 1989 through 2007, and the two most valuable in 2010 and 2013. Some 25 types of property are identified in the survey, but 18 of them have been combined in the public data into six categories since 1995; vacation homes are combined with time shares, for example. The data are published separately for each of the two or three most valuable properties; in addition, there is a further category of summary information if the family owns additional properties.[79] The SCF also asks vacation homeowners if they are the only owner of the home; if not, the respondent is asked what share of the home the family does own. Both multiple

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[75] A more detailed discussion of this topic is John C. Weicher and Jacqueline Dorothea Seufurt, "Vacation Homes and Vacation Homeowners," *Review of the Center for Real Estate Studies*, Vol. 4, No. 1 (Fall 2016).

[76] See for example the discussion of "vacancy, seasonality," in U.S. Bureau of the Census and U.S. Department of Housing and Urban Development, *American Housing Survey for the United States: 2005*, Current Housing Reports H150/05, August 2006, pp. A29-A30. The same discussion appears in AHS reports for other years.

[77] "How Many Second Homes Are There?" U.S. Department of Housing and Urban Development, Office of Policy Development and Research, U.S. Housing Market Conditions, Spring 2004, pp. 5-10; available at https://www.huduser.gov/periodicals/ushmc/spring2004/article_USHMC-04Q1.pdf. The quotation is on p. 10.

[78] In the articles published in the *Federal Reserve Bulletin* and the working papers by Federal Reserve Board analysts, information on vacation homes is combined with information on small rental housing properties (those with one to four units) as "Other residential property." Other properties are combined into a category of "Nonresidential property." See for example Jesse Bricker et al., "Changes in U.S. Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, Vol. 100. No. 4 (September 2014), Table 3, or Arthur B. Kennickell, "Ponds and Streams: Wealth and Income in the U.S., 1989 to 2007," Federal Reserve Board, Finance and Economics Discussion Series (FEDS), No. 2009-13, January 7, 2009.

ownership of a single home and sole ownership of multiple homes are covered in the survey.

As Table 6-3 shows, there has been a substantial increase in the number of vacation homeowners since 1995 – about three million owners, an increase of over 80 percent – and a corresponding increase in the number of vacation homes, of 3.2 million, over 75 percent. Perhaps unexpectedly, both have continued to rise since the beginning of the Great Recession in 2007. Indeed, Table 6-3 understates the cent growth, because the data for 2010 and 2013 concern only the two most valuable properties.[80] Part of the increase since 1995 can be attributed to the growing population; there were over 20 million more households in 2013 than in 1995, an increase of almost 25 percent. But the share of U.S. households who owned vacation homes rose by 50 percent.

Table 6-3

Vacation Homeowners and Vacation Homes, 1995-2013

(Number of Homeowners and Homes in Millions)

Year	Number of Owners	Share of US Households	Number of Homes per Owner			Total Number of Homes
			1	2	3	
1995	3.598	3.6%	3.207	0.301	0.090	4.079
1998	4.042	3.9%	3.554	0.436	0.052	4.583
2001	4.954	4.7%	4.496	0.432	0.025	5.436
2004	5.715	5.1%	5.126	0.534	0.055	6.360
2007	5.704	4.9%	5.216	0.419	0.070	6.264
2010	5.515	4.7%	5.173	0.341	*	5.856
2013	6.582	5.4%	5.868	0.714	*	7.296

*Not reported

It can be complicated to keep track of the number of vacation homeowners and the number of vacation homes. Population surveys are likely to focus on the number of homeowners, housing surveys on the number of homes. Fortunately, there is one simple generalization about vacation housing: over 80 percent of vacation homeowners are the sole owners of a single vacation home. Most of the others are either the sole owners of two homes, or they share ownership of a home with one or two other families, in equal shares.

The total value of these vacation homes was about $1.4 trillion in 2007, an average of $220,000. In 2013, the value was over $2 trillion, an average of over $275,000 (Table 6-4). Perhaps surprisingly, the overall debt-to-value ratio has consistently been less than 20 percent since 1995. Only 26 percent of vacation homes were mortgaged in 2013. In that year they were about as large a component of household wealth as

[80] If the data for 2004 and 2007 were limited to two properties, there would be about 200,000 fewer vacation homeowners, and about 400,000 fewer vacation homes in each year.

managed assets such as trusts, or as automobiles and other vehicles, which are owned by about 90 percent of American families. One might expect that the LTV would be higher, given the deductibility of mortgage interest on a second home, but that does not seem to be the case for owners of vacation homes. Vacation homeowners are better off than most families; after all, they own more than one home, and that home is worth about $275,000. Their income has consistently been at least twice the income of the typical family (Table 6-5); their net worth four to seven times, with a greater disparity over time. Compared to the overall population, the typical vacation homeowner was older and more likely to be white, and the household was more likely to be a married couple.

Table 6-4

Wealth in Vacation Homes, 1995-2013

(dollar values in millions of 2013 dollars)

Year	Value	Debt	Net Worth	Debt/Value Ratio	% of Total Net Worth of All U.S. Households
1995	$ 363	$ 42	$ 321	11.6%	1.0%
1998	$ 402	$ 34	$ 368	8.5%	0.9%
2001	$ 773	$109	$ 664	14.1%	1.2%
2004	$ 1,261	$223	$1,038	17.7%	1.7%
2007	$ 1,381	$203	$1,178	14.7%	1.6%
2010	$ 1,348	$198	$1,150	14.7%	1.8%
2013	$ 2,034	$208	$1,826	10.2%	2.8%

Their economic well-being was certainly affected by the recession. Their median household income fell by 20 percent between 2007 and 2010, recovering about half of that loss by 2013. Their wealth dropped by 15 percent from 2007 to 2010, and kept on falling during the weak economic recovery; they had lost over 20 percent of their net worth between 2007 and 2013. The typical household, as discussed in Chapter 4, had lost 40 percent.

The SCF asks owners of vacation property whether they received any income from renting out their property during the previous year. The owners of about 650,000 vacation homes in 2013 reported that their homes were rented out during part of the year. Properties in this situation can be classified as either rental housing or vacation homes, or as both; the distinction between the categories is blurred, creating problems for both the economic analyst and the Internal Revenue Service.[81]

[81] The Internal Revenue Service considers rental property to be a personal residence if it is occupied by the owner for 14 days during a year, or one-tenth as many days when as it is rented, whichever is greater. Rental property owners are able to deduct various expenses which the owner of a vacation home cannot deduct.

Table 6-5

Characteristics of Vacation Homeowners, 1995-2013

(dollar values in 2013 dollars)

Panel A: Demographics of Household Heads

Year	Median Age	% Under 40	% Married	%Minority
1995	52	14%	85%	12%
1998	54	14%	83%	10%
2001	53	12%	78%	15%
2004	53	14%	75%	15%
2007	54	15%	83%	14%
2010	57	5%	87%	10%
2013	58	12%	82%	12%

Panel B: Economic Status

	Median Income		Median Net Worth	
	Vacation Homeowners	All Households	Vacation Homeowners	All Households
1995	$ 99,000	$ 47,000	$400.000	$ 88,000
1998	$ 96,000	$ 48,000	$450,000	$102,000
2001	$108,000	$ 53,000	$570,000	$114,000
2004	$117,000	$ 53,000	$670,000	$115,000
2007	$125,000	$ 53,000	$725,000	$136,000
2010	$ 99,000	$49,000	$620,000	$ 83,000
2013	$115,000	$47,000	$575,000	$ 81,000

Automobiles and Other Vehicles

"Vehicles" are one of the two most widely held assets (the other being transaction accounts), with consistently around 85 percent of households reporting that they own one or more; and vehicle loans are the third most common form of debt, with 30 to 35 percent of households reporting that they have households reporting that they have outstanding loans on at least one vehicle. It is natural to think of "automobiles" as synonymous with "vehicles." In fact, however, the SCF category of "vehicles" includes quite a bit more than automobiles, or for that matter quite a bit more than four-wheeled land vehicles. The SCF also asks about RVs, campers, tractors, off-road vehicles, snowmobiles, golf carts, buses, horse trailers, motorcycles, and (since 2007) horse-and-buggies; and also about boats, airplanes, and gliders. Some of these are fairly widely held, and some are not especially valuable – "boats" includes rowboats and canoes, for example. But automobiles predominate, and it is worthwhile to describe briefly their importance in the assets and liabilities of households.

As an example, the 2004 SCF reports that 96 million households owned one or more cars, as shown in Table 6-6. This is 85.6 percent of all households in that year (112.1 million). The survey also reports that about 6.6 million households (about 5.9 percent of all households) owned one or more "other" vehicles – mostly boats or planes. Nearly all of these households also owned one or more cars – only about 350,000 households had a boat and/or plane but not a car. The remaining 15.8 million households owned no vehicle.

Table 6-6

Ownership of Cars and Other Vehicles, 2004

(Dollar figures in 2013 dollars)

Vehicles Owned	Households Owning	Value
Automobiles	96.0 million	$1.60 trillion
Other Vehicles	6.6 million	$ 160 billion
Both	6.3 million	$ 150 billion
Neither	15.8 million	------
Automobiles only	89.7 million	$1.45 trillion
Other vehicles only	0.4 million	$ 111 billion

The total value of these vehicles was about $1.7 trillion. Automobiles accounted for all but about $125 billion of this amount. Ownership of automobiles is much more evenly distributed than ownership of boats and planes. In 2004, the Gini coefficient for automobiles was .516, while the coefficient for other vehicles was .956. The overall Gini coefficient for vehicles was .557. This is a typical value; throughout the period, as Table 6-7 shows, the Gini coefficient for vehicles has consistently been between 0.53 and 0.59 – far below the coefficients for net worth and for most other categories of assets. The Gini coefficient for vehicles has declined very slightly since the beginning of the Great Recession.

Table 6-7

Gini Coefficients for Vehicle Ownership

	1989	1992	1995	1998	2001	2004	2007	2010	2013
Gini coefficient	0.585	0.563	0.548	0.569	0.538	0.557	0.555	0.554	0.544

Thus, the distinction between cars and other owned vehicles is relevant to the distribution of wealth. Nearly everybody owns at least one car; a small number of households own other types of vehicles, with a wide range of values – from $100 to $32.7 million. Widespread automobile ownership contributes to a slightly more equal distribution of wealth.[82]

[82] Edward Wolff has argued that automobiles should not be included in household wealth, on the ground that "consumer durables such as automobiles, televisions, furniture, household appliances, and the like...are not easily marketed or their resale value typically far understates the value of their consumption services to the household." (Edward N. Wolff, "Changes in Household Wealth in the 1980s and 1990s in the U.S.," April 27, 2004 draft," p. 5, available at http://www.econ.nyu.edu/user/wolffe/WolffWealthTrendsApril2004.pdf.) Kennickell, however, includes them, arguing that there are well-developed markets for used cars and their values can be readily obtained in those markets, that the argument with respect to consumption services applies more forcibly to houses, which are generally included in net worth without question, and that the asset value should be included if the car loan is included as a liability. (Kennickell, "Ponds and Streams," pp. 10-11.) I share Kennickell's opinion.

Student Debt

Student debt increased dramatically between 1989 and 2013, especially after the start of the Great Recession. The data are shown in Table 6-8. In 1989, the SCF reported that fewer than nine percent of American households owed money on loans they had taken out to attend college. These 8.3 million households owed a total of $82 billion. The typical debtor owed around $5,000, while the average outstanding balance was just under $10,000. In each succeeding SCF, with the partial exception of 1998, there were increases in the number of households and the share of US households with student debt, the mean and median outstanding loan balance among these households, and the total amount of student debt outstanding. By 2013, over 24 million households – about 20 percent of all households – owed almost $30,000 on average, a total of $710 billion. Almost three times as many households as in 1989 had outstanding student loans, and they owed about three times as much per household; the total owed had increased almost ninefold. In 2010, the total amount of outstanding student debt exceeded the total for car loans, and the total amount of credit card debt, both for the first time.[83]

Table 6-8

The Growth of Student Debt, 1989-2013

Year	Debtor Households		Debt Outstanding		
	Number	% of Households	Median	Mean	Total
1989	8.3 million	8.9%	$5,400	$ 9,900	$ 82 billion
1992	10.3 million	10.7%	$5,400	$11,500	$118 billion
1995	11.8 million	11.9%	$10,300	$12,100	$143 billion
1998	11.6 million	11.3%	$10,000	$18,600	$216 billion
2001	12.2 million	11.5%	$11,500	$18,200	$222 billion
2004	15.0 million	13.4%	$11,300	$20,700	$310 billion
2007	17.6 million	15.2%	$13,500	$24,200	$426 billion
2010	22.5 million	19.1%	$13,900	$27,700	$623 billion
2013	24.2 million	19.9%	$17,000	$29,100	$710 billion

[83] U.S. Domestic Policy Council and U.S. Council of Economic Advisors, "Taking Action: Higher Education and Student Debt," June 2014, pp. 7-8, Figure 5.

Most student debt is owed by households that are not especially well-to-do, for the good reason that they are relatively young. They have not had many years in the labor force, either to build up their assets and pay down their debts or to move from entry-level jobs into better-paying ones. Consistently, about one-third of households in which at least one member has a student loan are in the upper half of the wealth distribution, and their loans amount to 25 to 35 percent of all outstanding student debt. Most households with student loans were in the lower half of the distribution, and their student debt was one contributing factor to that position.

At the same time, there are certainly households who are in a stronger financial position. A calculation by the Center for Responsive Politics for 2011 found that there were 46 members of Congress with outstanding student loans – five Senators and 41 Representatives. As with other Americans, the number of members with student debt had been increasing.[84] During his recent Presidential campaign, Sen. Marco Rubio stated that he had finished law school with $150,000 in student loan debt, and had taken 16 years to pay it off.[85]

Some characteristics of households with student debt are summarized in Table 6-9. Panel A reports on all households with student debt; Panel B on those households with negative net worth, whose net worth is negative because their student loan balances are larger than the sum of all their assets and their other liabilities combined. The years chosen compare the position and attributes of households with student debt before and after the recessions of 1990-1991 and 2007-2009. The typical head of the household was about 35 years old – slightly younger in the earlier years, slightly older in the later period. The household was also typically in the lower half of the income distribution by a few thousand dollars, with the exception of 2007 when it was in the upper half by a few thousand dollars. The typical household was consistently well below the median household wealth – indeed, below half the median, even in 2007. (Not shown in the table is the education level of households with student debt, because there has been little variation. The median years of college for households with student debt (Panel A of Table 6-10) was three, in each survey except 2010, when the median was two. The median years of college for households whose student debt exceeded their value of their assets (Panel B of Table 6-9) was three in each survey.)

[84] Russ Choma, "Members of Congress Feel Student Loan Pain Firsthand," February 7, 2013; available at http://www.opensecrets.org/news/2013/02/members-of-congress-feel-student-lo/. In 2008, there were 30 members of Congress with student debt – 3 Senators and 27 Representatives.
[85] Rob Wile, "It took Marco Rubio 16 years and a book deal to pay off his student loans," April 13, 2015, available at: http://fusion.net/story/118943/it-took-marco-rubio-16-years-and-a-book-deal-to-pay-off-his-student-loans/.

Table 6-9

Characteristics of Households with Student Debt

Panel A:

All Households with Student Debt

Year	Age	Income	Net Worth	Race/Ethnicity			Married
				White	Black	Hispanic	
1989	34	$45,000	$28,000	70%	18%	9%	50%
1992	32	$47,000	$17,000	76%	15%	6%	47%
2007	35	$62,000	$43,000	65%	21%	9%	65%
2010	36	$59,000	$19,000	71%	18%	9%	65%
2013	36	$49,000	$15,000	64%	23%	8%	62%

Panel B:

Households with Negative Net Worth Because of Student Debt

Year	Share of all Households With Student Debt	Age	Income	Race/Ethnicity			Married
				White	Black	Hispanic	
1989	21% (1.8 million)	28	$23,000	70%	10%	5%	30%
1992	18% (1.9 million)	27	$25,000	62%	23%	15%	50%
2007	21% (3.7 million)	28	$39,000	63%	25%	7%	50%
2010	25% (5.6 million)	33	$35,000	66%	20%	11%	45%
2013	29% (7.0 million)	32	$31,000	57%	31%	31%	44%

NOTE: Data for the share of households with debt, race/ethnicity, and marital status are proportions; data for the amount of student debt, age, income and net worth are medians.

By 2007, the typical household with student debt enjoyed an income that was about one-third greater than the similar household in 1992, and had a net worth that was two and one-half times its value 15 years earlier. But in the course of the Great Recession and its aftermath, real incomes and net worth dropped; by 2013, the median income was only about 10 percent greater than it had been in 1989, and only five percent greater than in 1992; and the median net worth was the lowest of any year during the period. Measured over the quarter-century, the typical household was a little bit older and deeper in debt – quite a bit deeper.

Over a quarter of the households with student debt had negative net worth as a result of their debt by 2013. These households were younger and less well off than was typical of all households with student debt, and their position was worse in 2007-2013 than it had been for their counterparts in 1989-1992. The number of such households almost tripled between 1989 and 2013, and the median outstanding balance on their loans was more than seven times as high.

These are not the same households in 2007-2013 and in 1989-1992. If the typical household in 1989, with a household head age 34, was headed by the same person in 2013, that household head would have been 58 years old in 2013. There were 2.3 million households with a head aged 58 or more in 2013, about 10 percent of all households with student debt. At the other end of the age distribution, there were 2.4 million households with a head aged 24 or younger in 2013; these household heads had not yet been born in 1989. In many respects the characteristics of households with student debt were similar over time; in some respects there were notable differences. A larger share of indebted households were members of minority groups in 2007-2013, for instance, and a larger share consisted of married couples.

These differences all suggest that student indebtedness is a temporary situation for most of the households that incur education debt, which is certainly to the good from the standpoint of both the students themselves and the U.S. economy and society. But in the short run, the *increase* in indebtedness tends to generate a more unequal distribution of wealth. This effect is probably stronger during the weak economic recovery since the end of the Great Recession in 2009.

There is also some recent research on the relationship between student debt and homeownership, which indicates that households with student debt tend to delay buying a home. The estimated magnitude of this effect varies, ranging from "very modest" to "quite meaningful,"[86] as characterized by the authors. This body of research raises the

[86] Respectively: Jason Houle and Lawrence Berger, "Is Student Loan Debt Discouraging Home Buying Among Young Adults?" n.d., available at http://www.appam.org/assets/1/7/Is_Student_Loan_Debt_Discouraging_Home_Buying_Among_Young_Adults.pdf (quotation, "very modest," on p. 18); Daniel Cooper and J. Christina Wang," Student Loan Debt and Economic Outcomes," Federal Reserve Bank of Boston Currently Policy Perspectives No. 14-7, October 2014 (quotation, "quite meaningful," on p. 19). See also Alvaro Mezza, et al., "On the Effect of Student Loans on Access to Homeownership," Finance and Economics Discussion Series 2016-010. Washington: Board of Governors of the Federal Reserve System, http://dx.doi.org/10.17016/FEDS.2016.010. Mezza et al. refer to the two papers cited above in the same terms: "These studies found only very small negative effects." P. 1. They find that "a 10 percent increase in

possibility that there is a secondary effect of student debt on household net worth through an indirect effect of postponing homeownership.

student loan debt causes a 1 to 2 percentage point drop in the homeownership rate of student loan borrowers for the first five years after exiting school" (p. 32).

What about the Stock Market?

The dramatic growth of retirement accounts such as IRAs, Keoghs, and 401(k)s between 1983 and 2007 might suggest that the distribution of wealth would have become more equal during and after the Great Recession. By 1989, retirement assets had become the fourth most commonly held asset among U.S. households, as noted in Chapter 4, and they have maintained that position ever since. By 1998, nearly half of all households owned retirement accounts, and that share fluctuated around 50 percent from then until 2013.

Classification of Stocks in the SCF

Measuring the importance of stocks in household portfolios is complicated, because households can own stock in several ways. In the SCF, stocks can be classified under five categories of financial assets: direct holdings; retirement accounts; non-money-market mutual funds (identified as "pooled investment funds" in the *Federal Reserve Bulletin* articles and the working papers written by Federal Reserve staff); other managed investment accounts (including trusts and annuities) and thrift-type retirement accounts. The last four are all indirect methods of owning stocks.

The category of "stocks" consists entirely of stockholdings; the other four include other financial assets as well as stocks. A retirement account may hold other assets, such as bonds, for example. With respect to mutual funds, the SCF asks whether a fund is a stock fund, a bond fund, or a "balanced" fund. With respect to retirement accounts and annuities, the SCF asks how much consists of stocks. Prior to 2004, the SCF categorized a percentage of the assets as stocks, depending on the qualitative response of the interviewee – if "mostly head in stocks," for example, the full value of the account was counted as equity. Beginning in 2004, households have been asked what percentage of their account or fund consists of stock. These responses are combined with direct holdings of stocks and holdings in stock or balanced mutual funds to create an inclusive variable named "Equity."[87]

Stockholdings in Household Portfolios since 1989

Stock ownership has been an important share of net worth, and a growing share as well, thanks largely to the growth of retirement accounts such as IRAs, Keoghs, and 401(k)s, as shown in Table 6-10. In 1989, about 32 percent of U.S. households owned stock in

[87]"Equity" is defined as "Total value of financial assets held by household that are invested in stock, 2013 dollars - Includes: 1. directly-held stock 2. stock **mutual** funds: full value if described as stock **mutual fund**, 1/2 value of combination **mutual** funds 3. IRAs/Keoghs invested in stock: full value if mostly invested in stock, 1/2 value if split between stocks/bonds or stocks/money market, 1/3 value if split between stocks/bonds/money market 4. other managed assets w/equity interest (annuities, trusts, MIAs): full value if mostly invested in stock, 1/2 value if split between stocks/MFs & bonds/CDs, or "mixed/diversified," 1/3 value if "other" 5. thrift-type retirement accounts invested in stock full value if mostly invested in stock 1/2 value if split between stocks and interest earning assets.'" In 2004 the SCF asked directly for percentages of stock in IRAs/Keoghs, other managed assets, and thrift-type retirement accounts. Computer-assisted Survey Methods Program (CSM) at the University of California, Berkeley, "SCF Combined Extract Data," at http://sda.berkeley.edu/data/scfcomb2013/Doc/hcbk0002.htm.

any form (directly, or in the various indirect forms of ownership), and their holdings were 10 percent of total household net worth. By 1998, almost half of households owned stock, and the proportion has remained at that level or higher, ever since. In 2013, almost a quarter of total household net worth took the form of stockholdings.

Table 6-10

Stocks and Retirement Accounts, 1989-2013

(dollar values in thousands of 2013 dollars)

	1989	1992	1995	1998	2001	2004	2007	2010	2013
Panel A: Direct and Indirect Stock Ownership									
HHs owning stock directly or indirectly	31.9%	37.0%	40.5%	48.9%	53.0%	50.3%	53.2%	49.8%	48.8%
Median value of their stockholdings	$16.3	$17.9	$ 22.0	$ 35.7	$ 46.0	$ 40.5	$ 38.2	$ 31.1	$ 36.0
Mean value of their stockholdings	$107.7	$102.8	$138.4	$212.4	$270.5	$238.2	$253.7	$225.5	$265.7
Share of total net worth	10.0%	12.4%	17.2%	25.6%	26.9%	21.5%	21.2%	21.3%	24.6%
Panel B: Direct Stock Ownership									
HHs owning stock directly	16.9%	17.0%	15.2%	19.2%	21.3%	20.7%	17.9%	15.1%	13.8%
Median value of their stockholdings	$14.5	$13.0	$13.7	$ 25.7	$ 26.3	$ 18.5	$ 19.1	$ 21.4	$ 27.0
Mean value of their stockholdings	$108.9	$10.5	$142.8	$227.2	$252.4	$197.1	$247.5	$217.9	$284.4
Share of total net worth	5.2%	5.9%	6.6%	10.8%	10.2%	7.4%	7.1%	6.2%	7.4%
Panel C: Retirement Accounts									
HHs with retirement accounts	37.2%	40.1%	45.3%	48.9%	52.8%	49.9%	53.0%	50.4%	49.2%
Median value for HHs with accounts	$ 19.9	$ 22.7	$ 25.8	$ 34.3	$ 38.6	$ 43.4	$ 50.5	$ 47.2	$ 59.0
Mean value for HHs with accounts	$ 68.8	$ 72.3	$ 87.0	$109.0	$137.7	$151.8	$165.4	$183.1	$201.1
Share of total net worth	7.4%	9.4%	12.1%	13.0%	13.8%	13.4%	13.8%	17.3%	18.5%

SOURCE: Board of Governors of the Federal Reserve System, "Surveys of Consumer Finances: Historic Tables and Charts," Tables 4-7, available at http://www.federalreserve.gov/econresdata/scf/scfindex.htm.

Much the same can be said about retirement accounts. They were owned by 37 percent of households in 1989 and 49 percent in 2013, and the assets in these accounts had increased from seven percent of total net worth to 18 percent. Clearly, the growth of retirement accounts and the growth in direct and indirect stock ownership combined proceeded apace. They are certainly correlated. Both increased steadily from 1989 to 2001, dipped in 2004, rose again to a slightly higher peak in 2007, and then declined during the Great Recession and its aftermath. The connection between stockholding and retirement accounts can also be seen in how families held stock. Among families who held stock in 2013, 87 percent did so through their retirement accounts; 28 percent owned stocks directly, 16 percent owned stock through mutual funds, and eight percent held stocks through managed investment accounts.[88]

Direct stock ownership shows a different pattern. The percentage of households holding stocks directly rose from 16.9 percent in 1989 to 21.3 percent in 2001, then dropped sharply, to 13.8 percent in
2013. While the value of their stock portfolios increased, for those who still owed them, during and since the Great Recession, they never amounted to more than 11 percent of total wealth.

Over this same period, there was a decline in the percentage of households holding stocks directly (16.9 percent in 1989 to 13.8 percent in 2013), but an increase in the percentage of households who held stock indirectly: in retirement accounts (from 37.2 percent to 49.2 percent), in managed investment accounts (from 3.7 percent to 5.2 percent), and in mutual funds (from 7.3 percent to 8.2 percent).

These are percentages of a growing population. Over this period, the total number of households in the U.S. increased from 93 million to 122 million. Both the number of households with retirement accounts and the number with managed accounts nearly doubled; the number owning mutual funds rose by over 40 percent. The number directly owning stocks rose by about eight percent (Table 6-11).

Stocks, Retirement Accounts, and Inequality

With the number of households with retirement accounts nearly doubling between 1989 and 2013, one might expect the growth in retirement assets to contribute to a more equal distribution of wealth. If there is a relationship, however, it is not immediately obvious. As the proportion of households with retirement accounts increased between 1992 and 2007, the distribution of wealth became more unequal; as the proportion with retirement accounts decreased from 2007 to 2013, the distribution of wealth became still more unequal.

[88] Jesse Bricker et al., "Changes in U.S. Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances," Vol. 100, No. 4 (September 2014).

Table 6-11

Direct and Indirect Stock Ownership, 1989 to 2013

(millions of households)

Type of Asset	Households with Type of Asset							
	Total 1989	With Stock 1989	Total 2004	With Stock 2004	Total 2007	With Stock 2007	Total 2013	With Stock 2013
Direct Ownership	15.7	15.7	19.8	19.8	20.8	20.8	16.9	16.9
Retirement Accounts	34.6	22.7	57.7	45.5	61.7	52.5	60.3	52.0
Mutual Funds	6.8	6.4	17.4	16.3	13.3	12.5	10.0	9.6
Managed Accounts	3.4	2.8	8.5	5.3	6.8	4.8	6.4	4.9

SOURCES: 1989, calculated by the author from SCF 1989 data file; 2004, calculated from Bucks, Kennickell, Mach, and Moore, 2007, "Changes in U.S. Family Finances from 2004 to 2007," Tables 7 and 7.1; 2007, calculated from Bricker, Kennickell, Moore, and Sabelhaus, "Changes in U.S. Family Finances from 2007 to 2010," Tables 7 and 7.1; 2013, calculated from Bricker et al., "Changes in U.S. Family Finances from 2010 to 2013," Table 3 and Box 7.

One hypothesis which suggests itself during dramatic changes in the economy is that households do not respond actively to changes in the value of their portfolios. In the 2009 follow-up re-survey of households interviewed in 2007, the Federal Reserve analysts concluded that "the large majority of families passively accepted changes in portfolio shares driven by changes in asset prices."[89] This seems less likely in view of the substantial increase in the concentration of wealth between 2007 and 2010 that became evident when the 2010 survey was conducted, although the 2010 survey was conducted with a new sample of households, following the same practice as previous surveys dating back to 1992. It also is not consistent with the changes between 1989 and 1992 in holdings of financial assets, although these surveys were conducted with different samples and the changes in stockholdings could only be inferred from changes in the broad stock market indices, rather than actual behavior.[90]

Table 6-12 suggests at least a partial alternative explanation. From 2007 to 2013, the richest households – notably, the top 10 percent – owned a larger share of both stocks and retirement account assets than they held in 2004 or earlier. Their share of retirement assets in the latter two surveys exceeded their share in any earlier year.

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[89] Jesse Bricker, Brian Bucks, Arthur Kennickell, Traci Mach, and Kevin Moore, "Surveying the Aftermath of the Storm: Changes in Family Finances from 2007 to 2009," FEDS Finance and Economics Discussion Series, No. 2011-17 (March 2011),
https://www.federalreserve.gov/pubs/feds/2011/201117/201117pap.pdf.

[90] John C. Weicher, "Wealth and Its Distribution, 1983-1992: Secular Growth, Cyclical Stability." *Review of the Federal Reserve Bank of St. Louis*, Vol. 79, No. 1 (January/February 1997).

Their share of equity in 2013 was higher than in any previous year. In 2007, total retirement assets for all households amounted to about $10.2 trillion, which was about 14 percent of total wealth, and the richest 10 percent owned around 6.1 trillion. In 2013, total retirement assets were about 12.1 trillion, about 19 percent of total wealth, and the richest 10 percent owned about 7.9 trillion. They held a larger share of a larger total value. They also held over three-quarters of the additional retirement assets that all American families had been able to accumulate during and since the Great Recession.

Something similar but less extreme occurred for the top one percent. Their shares of equity and retirement account assets increased between 2004 and 2013, but were not quite as high as they had been in one or two earlier surveys – 1998 in the case of retirement assets, and both 1995 and 1998 in the case of stocks. Their holdings of retirement account assets increased between 2007 and 2013, from $1.5 trillion to $2.2 trillion, also a larger share of a larger total value. Equity holdings rose by a smaller amount, from $13.4 trillion to $14.2 trillion, and here slightly more than the entire increase accrued to the richest 10 percent.

Consistently over 24 years, the richest households have held a smaller chare of retirement assets than they did of all wealth; other assets amount to a larger share of their net worth. They were more heavily invested in their own businesses, in particular. Retirement accounts have been an important asset for middle-wealth families. At the same time, equity in stocks has consistently represented a larger share of their net worth, although as Table 6-12 shows, the extent to which they invest in stock more than in other assets has been diminishing.

Retirement accounts have mattered much less to the richest households than stockholdings, direct and indirect. But between 2007 and 2013, their share of retirement assets increased, and the dollar value of their retirement assets rose while total wealth declined sharply. In the Great Recession, they were nonetheless able to put funds into retirement accounts, when most other households were not.

Table 6-12

Stock and Retirement Assets Held by the Richest Households

(percent of total assets held by all households)

Top 10 Percent

	1989	1992	1995	1998	2001	2004	2007	2010	2013
Share of Equity	77.7%	77.4%	79.9%	77.9%	76.8%	76.7%	78.9%	79.7%	80.4%
Share of Retirement Assets	56.2%	61.1%	61.3%	58.9%	60.2%	58.4%	59.4%	65.5%	65.1%
Share of Total U.S. Wealth	67.2%	67.1%	67.8%	68.6%	69.8%	69.5%	71.5%	74.4%	75.0%

Top 1 Percent

	1989	1992	1995	1998	2001	2004	2007	2010	2013
Share of Equity	36.2%	35.4%	37.9%	38.8%	33.5%	34.8%	36.0%	34.0%	36.5%
Share of Retirement Assets	14.8%	14.3%	15.8%	17.9%	13.7%	13.6%	14.5%	15.3%	17.8%
Share of Total U.S. Wealth	30.1%	30.2%	34.6%	33.9%	32.7%	33.4%	33.8%	34.1%	35.5%

7. The Families in the Middle

How did these changes in total wealth and its components play out in the lives of typical American families? This question has attracted relatively little attention among analysts. More often, research has focused on "the rich," defined in various ways: the top one percent or top 10 percent, for example;[91] or the other end of the distribution, the bottom 10 percent or the bottom quintile or those with negative net worth,[92] or occasionally both ends of the distribution at the same time.[93] There is relatively little research focused on the middle class.[94]

This chapter discusses the "middle 10 percent" of the U.S. wealth distribution between 1983 and 2013. These are the households between the 45th percentile and 55th percentile of the wealth distribution. The median of the overall distribution (the 50th percentile) is also the median among the middle 10 percent. It happens that the families in the middle of the wealth distribution had about the same net worth in the earliest and the latest years of the SCF. The median household wealth was $80,200 in 1983 and $81,400 in 2013. The wealth *range* for the families in the middle was also similar: between $62,000 and $98,000 in 1983, and between $59,000 and $111,000 in 2013. Table 7-1 reproduces the medians from Table 3-1, and also includes the range of wealth that defines the families in the middle in each survey.

Looking over these three decades, it appears that the families in the middle were no better off in 2013 than they were in 1983. Indeed, they were in about the same position in 2010 as in 1983. Their loss of wealth was horrendous during and immediately after the Great Recession, and there were few signs of improvement by 2013.

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[91] See for example, Edward N. Wolff, *TOP HEAVY: A Study of Increasing Inequality of Wealth in America* (New York: The Twentieth Century Fund Press, 1995), and "Household Wealth trends in the United States, 1962-2013: What Happened over the Great Recession?" See also NBER Working Paper No. 20733, December 2014; Congressional Budget Office, "Trends in Family Wealth, 1989 to 2013," August 18, 2016, available at https://www.cbo.gov/publication/51846.

[92] For example, Adam Carasso and Signe-Mary McKernan, "The Balance Sheets of Low-Income Households: What We know about Their Assets and Liabilities" (Washington, DC: The Urban Institute, 2008), available at http://www.urban.org/research/publication/balance-sheets-low-income-households.

[93] John C. Weicher, "The Rich and the Poor: Demographics of the U.S. Wealth Distribution, *Review of the Federal Reserve Bank of St. Louis* (Vol. 79, No. 4 July/August 1997), pp. 25-37.

[94] But see for example Edward N. Wolff, "The Middle Class: Losing Ground, Losing Wealth," in John R. Logan, editor, *Diversity and Disparities: America Enters a New Century,* New York: Russell Sage Foundation, 2014, pp. 60-104. The statements in the text should not be interpreted as meaning there is little or no research on the middle class, but rather that there is much more research on the top and the bottom of the distribution of wealth.

Table 7-1

The Wealth of the Families in the Middle, 1983 to 2013

Year	Median	Range for the Middle 10 Percent of Families
1983	$ 80,000	$ 62,000 to $ 98,000
1989	$ 85,100	$ 65,000 to $110,000
1992	$ 80,600	$ 62,000 to $101,000
1995	$ 87,700	$ 69,000 to $108,000
1998	$102,500	$ 77,000 to $122,000
2001	$113,900	$ 89,000 to $145,000
2004	$114,800	$ 87,000 to $153,000
2007	$135,900	$105,000 to $175,000
2010	$ 82,500	$ 61,000 to $112,000
2013	$ 81,400	$ 59,000 to $111,000

The Families in the Middle Over Three Decades

The families in the middle in 1983 had the same net worth as the families in the middle in 2013. Were they the same people? If not, were they similar in other respects?

Table 7-2 reports some of the demographic and economic characteristics of the families in the middle for these years: and also for the two surveys immediately after 1983 and the two immediately before 2013. These are certainly not the same people over the three decades. For one thing, there were almost 40 million more American families in 2013, almost a 50 percent increase. The middle 10 percent consisted of 8.39 million families in 1983 and 12.25 million in 2013. For another, the families in the middle were not 30 years older in 2013. The median age among the heads of these households rose from 43 in 1983 to 51 in 2013. The median year of birth for the families that were in the middle as of 1983 was 1940, at the end of the Great Depression when birth rates were low. In 2013 the heads of those households would have been at least 73 years old. There were about 1.2 million such families – about 12 percent of all families that were in the middle in 2013. Similarly, among those in the middle in 2013, the median year of birth was 1962, toward the end of the postwar baby boom (generally defined as the years from 1946 to 1964). In 1983, only about 150,000 middle-wealth families were headed by someone born in 1961 or later, out of a total of about 8.4 million – less than two percent of all families that were in the middle in 1983.

While the families in the middle had very nearly the same wealth in 1983 and 2013, the difference in median age indicates that they were probably better off in 1983. With a median age of 43, those families had probably 20 to 25 working years remaining until retirement. For the families in 2013, they had about 12 to 17 working years – much less time to rebuild their wealth. They might have chosen to work longer, or to save more, or for that matter to take more financial risks, but each option carried its own costs.

Although they were not the same families, in many respects the families in the middle were the same *kinds* of families in both 1983 and 2013, and indeed in the surveys in between: mostly middle-aged, mostly married couples, and if married mostly with children living at home (Table 7-2). The proportion of families with the head between 30 and 54 varied between a little less than half to a little less than 60 percent. In each year, the Census Bureau reports a slightly smaller proportion of households with the head within this age range than such households constitute among the families in the middle reported in the SCF.[95] The same is true for married couples: their share of the families in the middle is consistently somewhat higher than their share of all U.S. households.[96] The proportions of married couples in the entire population, and of families with children as a share of married couples, declined over the course of the three decades in both the SCF and the Census surveys, reflecting both the aging of the families in the middle and the changes in individual behavior.

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[95] U.S. Bureau of the Census, 'Families and Living Arrangements," Households, Table HH3 http://www.census.gov/hhes/families/data/households.html.

[96] U.S. Bureau of the Census, "Families and Living Arrangements," Living Arrangements of Children, Table CH1 http://www.census.gov/hhes/families/data/children.html.

Table 7-2

The Families in the Middle During Recessions

	1983	1989	1992	2007	2010	2013
Net Worth						
Median	$80,200	$85,100	$80,600	$135,900	$82,400	$81,400
Mean	$79,100	$86,600	$80,900	$136,200	$83,900	$82,300
Age of Household Head						
Median	43	49	46	49	48	51
Under 30	13.0%	10.6%	13.5%	5.9%	8.5%	9.1%
30-54	56.0%	48.4%	51.8%	56.2%	52.8%	49.2%
55-64	14.8%	16.1%	11.8%	12.5%	15.5%	17.6%
65 and older	16.3%	25.0%	22.8%	25.3%	23.2%	24.1%
	100.1%	100.1%	99.9%	99.9%	100.0%	100.0%
Race and Ethnicity						
White	NA	75.0%	76.1%	78.5%	70.0%	70.9%
Black	NA	13.9%	13.8%	8.8%	13.7%	14.2%
Hispanic	NA	6.6%	5.5%	7.7%	11.5%	10.3%
Other	NA	4.6%	4.6%	5.0%	4.8%	4.6%
Household Composition						
Married	64.4%	67.2%	61.8%	63.2%	57.5%	54.5%
With Children	89.6%	70.1%	61.9%	54.1%	62.5%	58.0%
Income						
Median	$47,700	$50,900	$48,300	$54,300	$51,200	$45,700
Mean	$52,400	$55,600	$53,300	$63,600	$57,500	$54,300

Homeownership						
Percent Owning	85.2%	86.0%	79.9%	88.6%	84.3%	81.9%
Median Value*	$61,000	$61,000	$57,000	$92,000	$54,000	$51,000
Mean Value*	$59,000	$59,000	$55,000	$88,000	$49,000	$50,000
Share of Total Wealth	63.6%	58.4%	54.7%	57.2%	49.2%	49.6%
Retirement Assets						
Percent Having Any	13.3%	36.8%	39.4%	55.5%	52.9%	47.1%
Median Value*	$13,000	$9,000	$11,000	$28,000	$24,000	$25,000
Mean Value*	$8,000	$16,000	$18,000	$40,000	31,000	$32,000
Share of Total Wealth	1.2%	6.8%	8.8%	16.4%	19.8%	18.5%

NOTE: Percentages may not add to 100% because of rounding
NA – Not reported on the same basis as subsequent surveys.
* - Among households holding any of the asset

Between 70 and 80 percent of the families in the middle are considered to be "white," and about 14 percent to be "black."[97] Both of these are higher than their corresponding share of all households as reported by the Census Bureau,[98] but the SCF has not been completely consistent in its classification system over these three decades.[99]

The incomes of the families in the middle have followed the same pattern over time as their wealth. In 1982, median family income was about $48,000; after rising by about six percent during the 1983-1989 expansion, it fell back to about $48,000 in 1991. It rose by about 12 percent through 2006, but then fell to $46,000 by 2012 – the lowest

[97] The 2007 classification appears to be an aberration.
[98] U.S. Bureau of the Census, "Families and Living Arrangements," Historical Tables, Table HH2 http://www.census.gov/hhes/families/data/households.html.
[99] The SCF has made several changes. In 1983, respondents were not asked about their race or ethnicity; instead, the person conducting the interview made his or her own judgment and recorded it on the questionnaire. In 1989, the survey respondent was asked about his or her own race. (Kennickell and Shack-Marquez, "Changes in Family Finances from 1983 to 1989," Federal Reserve Bulletin January 1992, p. 4) Beginning in 1998, respondents could report more than one race; respondents were asked to report their "strongest racial identification first." (Bucks et al., "Changes in U.S. Family Finances from 2004 to 2007," Federal Reserve Bulletin February 2009, pp. A53-54) In 2004, respondents were first asked if they considered themselves Hispanic, and then asked about race. The SCF continues to report racial identification on the same basis as in 1989 for comparability across surveys, but classifies respondents reporting more than one identification as "nonwhite or Hispanic." (Ibid.)

level in any survey.[100] Mean income followed a similar but less dramatic path. It should be remembered that the "families in the middle" are defined in terms of wealth, and there is no particular reason that the incomes of these families should follow the same trajectory as their wealth.

One reason for the decline in income during and after the Great Recession is that fewer were working and more were looking for work. In 2007, about five percent of those under 65 were unemployed; in 2013, about 10 percent were.

Mean and median net worth are quite close in all six surveys. This should not be surprising; the families in the middle are defined by their net worth, which falls within a fairly narrow range, as shown in Table 7-1. The mean net worth of these families is also necessarily within this range.

[100] The SCF asks households about their income for the year before the survey; hence the dates reported in the text.

The Impact of the Great Recession

The years in which median family net worth was about $80,000 are all years just after recessions. The families in the middle were not gaining ground in the course of a business cycle, in terms of net worth. Whatever increases they enjoyed during the economic expansions were lost during the subsequent recessions.[101]

This experience has not received much public attention. Since the first SCF appeared in the mid-1980s, the focus has been on inequality, rather than total or average or median wealth. When the 1995 survey results were published in the *Federal Reserve Bulletin*, a newspaper reporter called me with a number of questions. The reporter was not particularly interested in the growth in wealth since 1992 – neither the increase in mean family real wealth (4.8 percent) nor median family real wealth (8.5 percent, to a level higher than any of the three previous surveys), or the fact that the increase in the Gini coefficient was not statistically significant.[102] As the interview was concluding after more than half an hour, the reporter said, with a sigh, "my editor would be happier if wealth was more unequal." That was certainly the tenor of most media coverage at the time.

Nor was it particularly noticeable to the public that typical families in 2013 were no wealthier than typical families in 1983 or 1992. There were 40 million more families in 2013, compared to 1983, and the families in the middle of the distribution were clearly not the same families, as Table 7-2 demonstrates. Indeed, even if the families in the middle in 2013 were the children of families in the middle in 1983, or had other older relatives or close friends or neighbors who were in the middle then, it would not have been obvious to them that they were no better off than their parents. For one thing, prices more than doubled over those three decades; $82,000 in 2013 was the equivalent of $35,000 in 1983. The SCF data are readily available in inflation-adjusted dollars, which is very useful for economists and other analysts, bur the information about prices that families see every day is not. Also, the largest asset in the portfolios of most middle-wealth families – their home – is not bought or sold very frequently, and not many families live in the homes, or the neighborhoods, in which they grew up. The value of their home must be estimated, for most owners. It is not easy to compare prices, and quality, for different homes, in different neighborhoods, at different times.

But the sharp decline in wealth between 2007 and 2010 was certainly noticeable, and noticed. The families in the middle lost about 40 percent of their wealth in three years, and saw no rebound between 2010 and 2013. By far their most important assets were their homes. Almost 90 percent owned a home in 2007, and the equity they had in their homes was almost 60 percent of their total wealth. By 2010, only about 85 percent owned a home, and their home equity had been cut almost by half, from $92,000 to

[101] This is the case for the 1982-1990 expansion, and for the period 1991-2007, which included two expansions and the moderate recession from March to November of 2001. The SCF does not show any decline in median wealth during the surveys from 1992 through 2007, perhaps because the 2001 survey almost coincides perfectly with the recession, as discussed earlier in this chapter.

[102] See Table 3-1 for real median and median net worth; Kennickell, "Ponds and Streams," Table 3, reports the Gini coefficients and the statistical significance of the changes between surveys, from 1989 through 2007.

$52,000. That drop in their home equity accounted for about 85 percent of the decline in their wealth. Their situation did not improve during the next three years. Only 82 percent owned a home in 2013, and their equity in that home was about the same as in 2010, even though the economy was in the recovery stage of the cycle. [103]

Something similar, on a smaller scale, happened to their retirement accounts. In 2007 about 55 percent had retirement accounts, with an average value of $40,000. In 2013, only 47 percent had accounts, and the assets in their accounts averaged $32,000 – 20 percent less than the 2007 value. Their average value dropped by 22 percent between 2007 and 2010, and declined a little more by 2013, accounting for about 13 percent of their loss in total wealth. Table 7-2 shows these unhappy changes.

Not too many of these families owned their own business at any time, but fewer did after the Great Recession that before. In 2007, about 10 percent of the families in the middle owned a business; in 2013 about seven percent did. These were small businesses, typically with one or two employees including the owner and members of his or her family – quintessential "mom and pop" stores. They were smaller businesses in 2013, with a value of about $30,000; in 2007 the average value was $40,000.

[103] It is important to keep in mind that the actual households interviewed were not the same in 2013 as in 2007. A new sample of households is drawn for each SCF. The households actually interviewed have similar characteristics, and it is reasonable to think about them on the assumption that those interviewed in 2013 are much like those interviewed in 2007.

The Rich, the Poor, and the Families in the Middle

The impact of the Great Recession was certainly not limited to the families in the middle. The SCF shows that in every financial bracket, Americans have been hurt by the Great Recession. But the depth of that hurt has been particularly severe for the middle. They might have chosen to work longer, or to save more, or for that matter to take more financial risks, but each option carried its own costs.

Table 7-3

Changes in Wealth by Decile, 2007-2013

Decile	Percentage Change	Dollar Change
First (lowest net worth)	***	-$ 22,000
Second	-70%	-$ 2,500
Third	-47%	-$ 8,000
Fourth	-49%	-$ 24,000
Fifth	-43%	-$ 43,000
Families in the Middle	-40%	-$ 57,000
Sixth	-37%	-$ 65,000
Seventh	-30%	-$ 92,000
Eighth	-24%	-$103,000
Ninth	-15%	-$116,000
Tenth (highest net worth)	-11%	-$501,000

***These households had negative net worth in 2007, averaging about $15,000

Families in the top 10 percent saw their average wealth fall from $4.5 million to $4 million, a decline of about 11 percent. That cannot have been very pleasant for them. But the families in the middle watched their wealth drop by 40 percent — that decline from an average of $140,000 to $83,000. Over the same period, their incomes fell by 15 percent, making saving and replenishing harder.

As a result, today the top 10 percent of Americans control the largest share of the nation's total household wealth since the SCF began collecting the data: 75 percent versus 71 percent back in 2007. For the families in the middle, their share of our wealth has fallen from 2.1 percent to 1.6 percent. As a nation, we are less wealthy than we were before the Great Recession, and our smaller total wealth is distributed more unequally.

The families in the middle are part of a broadly defined middle half of the wealth distribution. Table 7-3 reports the decline in net worth between 2007 and 2013 by deciles of the wealth distribution, from the poorest 10 percent to the richest 10 percent. The households in the fourth to the eighth have several things in common: the equity in their home and the assets in their retirement accounts together represented more than half of their net worth in both 2007 and 2013, and the decline in their net worth from 2007 to 2013 was between one-quarter and one-half of their net worth in 2007. Not every household in any of these deciles, in either survey, owned either of these assets, let alone both. But these two asset categories totaled at least 50 percent of net worth for each decile in each survey. Their net worth was between $30,000 and $560,000 in 2007, and between $15,000 and $450,000 in 2013 – a very large range. The households with less net worth experienced large percentage declines but small dollar changes, and while some of these households owned a home or had a retirement account, or both, in the aggregate their most important assets were their car or cars and their checking account. For the wealthiest households, home equity and retirement accounts were a substantial part of their net worth, but they also had substantial holdings of other assets. Between one-quarter and one-half owned stocks, either directly or in mutual funds, as well as retirement accounts; between one-quarter and one-half owned other residential property – vacation homes and small apartment buildings; between one-quarter and one-half owned one or more businesses. As Table 7-3 shows, they generally experienced a marked decline in the value of their assets during and after the Great Recession, but to a much smaller extent than the broadly defined middle wealth class.

Implications and Consequences

The families in the middle have been hurt badly by the Great Recession, both relatively and absolutely, and have not seen much improvement during the weak recovery. They are back to where the families in the middle were in 1983 – arguably worse off. This is true whether "the middle" is defined as the exact middle 10 percent of all families who have a net worth between $60,000 and $110,000, or the 50 percent whose net worth falls within the wide range of $15,000 to $450,000.

They have lost a larger share of their net worth than the richest 10 percent during the Great Recession, and now have a smaller share of the total wealth of American households than they did before the Great Recession, while the richest 10 percent have three-quarters of the total net worth of all households, the largest share they have enjoyed over at least three decades.

The financial collapse that occurred in the summer and fall of 2008 severely shook the American public. Opinion polls reported the largest decline in consumer sentiment or household financial well-being in the history of the polls, covering periods of 30 to 50 years. Seven years later (and after six years of economic recovery), public opinion was modestly more positive, but hardly bullish: only eight percent characterized their personal finances as "excellent," and 35 percent as "good." Thirty percent felt that their income was "more than enough so that they can save and buy some extras," possibly adding to their wealth in the process, while 51 percent said they could meet their bills, but with nothing to spare. Summarizing public attitudes on these and related questions on the economy as of mid-2015, public opinion analysts Karlyn H. Bowman and Heather Sims concluded: "The events of fall 2008 and the public's response were unique. The deep anxiety from that time has yet to be washed away."[104]

More than a year later, that statement appears to be still valid. A common public opinion question is whether the country is moving in the right direction or is on the wrong track. Since January 2009, "on the wrong track" has consistently been the public's answer – a large majority. There has never been a plurality saying that we are "moving in the right direction." (In mid-June 2009, the public was, briefly, split evenly.) In October 2016, "wrong track" has been favored, on average, by a margin of two to one – about 63 percent to about 30 percent of respondents. Since May, the beginning of the interview period for the SCF, the margin for "wrong track" has ranged from 33 percent to 47 percent. There have been similar margins during the interview periods for the 2013 and 2010 surveys: between 26 and 58 percent in 2013, between 20 and 33 percent in 2010.[105] This year appears to be better than 2013, but worse than 2010, consistent with public opinion on the economy.

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[104] Karlyn H. Bowman and Heather Sims, "Still Feeling the Crash," *U.S. News and World Report*, September 30, 2015 (http://www.usnews.com/opinion/economic-intelligence/2015/09/30/americans-still-arent-over-the-2008-financial-crisis.)

[105] These margins are calculated from RealClearPolitics, "Polls: Direction of Country," accessed October 31, 2016. http://www.realclearpolitics.com/epolls/other/direction_of_country-902.html#polls.

Traditionally, public opinion has agreed that it is possible to start out poor and become rich,[106] and that our economy produces a high standard of living, in general.[107] But at the same time, we have just experienced the most severe economic downturn since the Great Recession of the 1930s, and we are still experiencing the weakest economic recovery since World War II. The brunt of these events has been borne particularly by the families in the middle.

The families in the middle have real reason to be concerned about their economic well-being, now and in the future, and perhaps a real reason to be angry.

[106] Kathleen Weldon, "If I Were a Rich Man: Public Attitudes About Wealth and Taxes" (The Huffington Post, February 4, 2015), reporting responses to the question, "Is it still possible in this country to start out poor, work hard, and get rich?" from 1983 to 2015. Polls consistently show that about two-thirds of the population agrees. Weldon is the Director of Communications for the Roper Center for Public Opinion Research at Cornell University. (http://www.huffingtonpost.com/kathleen-weldon/wealth-taxes-public-opinion-polls_b_6613264.html)

[107] Peter H. Schuck has characterized this view as one of the central tenets of American Exceptionalism: "Our uniquely competitive, flexible, and decentralized economy has produced a high standard of living for a long time, even though it now generates greater inequality." The statement dates from a conference in April 2008, about four months after the onset of the Great Recession, but eight months before the National Bureau of Economic Research determined that there was in fact a recession that had started at the end of 2007. (Karlyn Bowman, "Understanding American Exceptionalism," April 28, 2008. http://www.aei.org/publication/understanding-american-exceptionalism-2/print/)

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