Federal Reserve
BULLETIN
September 2014
Vol 100, No 4
Board of Governors of the Federal Reserve System
www.federalreserve.gov

Changes in U.S. Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances

Jesse Bricker, Lisa J. Dettling, Alice Henriques, Joanne W. Hsu, Kevin B. Moore, John Sabelhaus, Jeffrey Thompson, and Richard A. Windle of the Board's Division of Research and Statistics, prepared this article with assistance from Sebastian Devlin-Foltz and Jacob Krimmel.

The Federal Reserve Board's triennial Survey of Consumer Finances (SCF) collects information about family incomes, net worth, balance sheet components, credit use, and other financial outcomes.[1] The 2013 SCF reveals substantial disparities in the evolution of income and net worth since the previous time the survey was conducted, in 2010.[2]

During the three years between the beginning of the 2010 and 2013 surveys, real gross domestic product grew at an annual rate of 2.1 percent, the civilian unemployment rate fell from 9.9 percent to 7.5 percent, and the annual rate of change in the consumer price index (CPI) averaged 2.3 percent.[3] Although aggregate economic performance improved substantially relative to the period between the 2007 and 2010 surveys, the effect on incomes for different types of families was far from uniform. Several observations from the SCF about family incomes stand out:[4]

- Between 2010 and 2013, mean (overall average) family income rose 4 percent in real terms, but median income fell 5 percent, consistent with increasing income concentration during this period (figure 1).
- Some of the 2010 to 2013 growth differential reflected a return to trend, after the cyclical narrowing of the income distribution between 2007 and 2010, when large decreases in top incomes associated with the recent financial crisis reduced mean family income more than median family income.
- Families at the bottom of the income distribution saw continued substantial declines in average real incomes between 2010 and 2013, continuing the trend observed between the 2007 and 2010 surveys.[5]

[1] See box 1, "The Data Used in This Article," for a general description of the SCF data. The appendix to this article provides a summary of key technical aspects of the survey.

[2] For a detailed discussion of the 2010 survey as well as references to earlier surveys, see Jesse Bricker, Arthur B. Kennickell, Kevin B. Moore, and John Sabelhaus (2012), "Changes in U.S. Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin*, vol. 98, pp. A1–A80, www.federalreserve.gov/pubs/bulletin/2012/pdf/scf12.pdf.

[3] Changes in aggregate statistics reported here are measured from March to March or first quarter to first quarter of the respective survey years, just prior to the beginning of the field period for each survey.

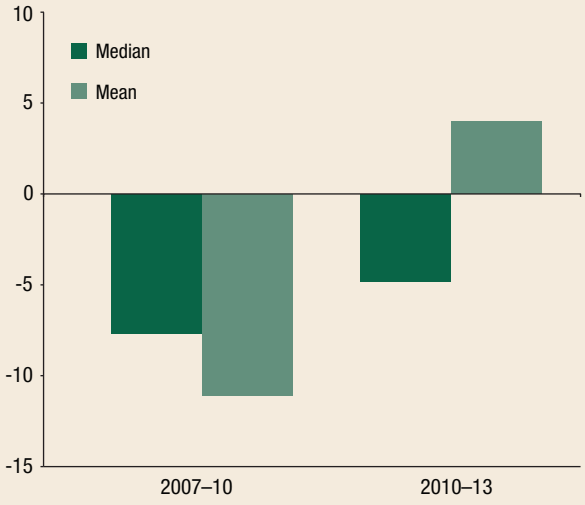
[4] Income is measured for the year prior to the survey.

[5] The income measure used to group families for distributional purposes here and throughout most of this article is based on the SCF concept of "usual" income. See box 2, "Usual versus Actual Income," for an explanation and example of why the usual income measure is preferable for grouping families.

Note: This article was republished on September 5, 2014. Please see the Errata page.

- Families in the middle to upper-middle parts (between the 40th and 90th percentiles) of the income distribution saw little change in average real incomes between 2010 and 2013 and thus have failed to recover the losses experienced between 2007 and 2010.
- Only families at the very top of the income distribution saw widespread income gains between 2010 and 2013, although mean and median incomes were still below 2007 levels.
- The differentials in average income growth between 2010 and 2013 are also observed for other family groupings in which large differences in income levels are observed, notably across education groups, by race and ethnicity, homeownership status, and levels of net worth.

Figure 1. Change in median and mean family incomes, 2007–13 surveys



Note: Changes are based on inflation-adjusted dollars.
Source: Federal Reserve Board, Survey of Consumer Finances.

The improvements in economic activity along with changes in house and corporate equity prices combined to effectively stabilize average and median family net worth (wealth) between 2010 and 2013 after both measures fell dramatically between 2007 and 2010. The CoreLogic national house price index increased at an annual rate of 2.0 percent between early 2010 and early 2013, just below the rate of consumer price inflation. The value of corporate equity holdings, as measured by major stock price indexes, grew at just over a 10 percent annual rate between the two surveys, leading to large inflation-adjusted increases in equity holdings.[6] These differential price trends had predictable effects on the distribution of changes in net worth across the population:

- Overall, between 2010 and 2013 there was little movement in median and mean net worth, as the median fell a modest 2 percent and the mean increased slightly (figure 2).
- Consistent with income trends and differential holdings of housing and corporate equities, families at the bottom of the income distribution saw continued substantial declines in real net worth between 2010 and 2013, while those in the top half saw, on average, modest gains.
- Ownership rates of housing and businesses fell substantially between 2010 and 2013.
- Retirement plan participation in 2013 continued on the downward trajectory observed between the 2007 and 2010 surveys for families in the bottom half of the income distribution. Participation rebounded slightly for upper-middle income families, but it did not move back to the levels observed in 2007.

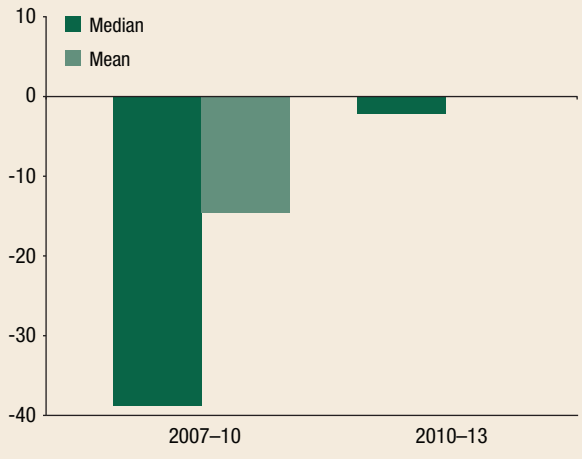
[6] In the year following the beginning of the 2013 survey, between March 2013 and March 2014, the CoreLogic national house price index surged 10.9 percent, greatly surpassing the rate of consumer price inflation. In the same period the Standard and Poor's S&P 500 stock price index increased more than 20 percent. These price changes emphasize the need to evaluate SCF findings in the appropriate time frame; both median and mean net worth rose substantially between the beginning of the 2013 survey and the publication of this report.

- The value of direct and indirect holdings of corporate equities increased between 2010 and 2013 though the ownership rate fell. The decrease in stock ownership rates was most pronounced for the bottom half of the income distribution.
- The decrease in ownership rates for housing and corporate equity holdings was concentrated in the bottom and upper-middle parts of the income distribution, though the decrease in business ownership was concentrated among higher-income families.

Between 2010 and 2013, interest rates fell on most types of consumer debt: Typical fixed-rate 30-year mortgage interest rates fell from 5.3 percent to 3.5 percent, new vehicle loan interest rates fell from 6.5 percent to 4.7 percent, and credit card interest rates fell from 14.3 percent to 11.9 percent. At the same time, debt holdings of families decreased, and many aspects of families' debt circumstances improved:

- Overall, debt obligations fell between 2010 and 2013: Median debt declined 20 percent, and mean debt decreased 13 percent for families with debt.
- For the median family with debt, debt burdens also fell between 2010 and 2013: Leverage ratios, debt-to-income ratios, and payment-to-income ratios all fell. The fraction of families with payment-to-income ratios greater than 40 percent declined below the level seen in 2001.
- Much of the decline in debt can be explained by a large decline in the fraction of families with home-secured debt, which fell from 47.0 percent to 42.9 percent, a decline that is only partly explained by the much smaller drop in homeownership.

Figure 2. Change in median and mean family net worth, 2007–13 surveys



Note: Changes are based on inflation-adjusted dollars.
Source: Federal Reserve Board, Survey of Consumer Finances.

- Between 2010 and 2013, the fraction of families with credit card debt also decreased. Median and mean balances for families with credit card debt fell 18 percent and 25 percent, respectively, and the fraction of families that pay off credit cards every month increased.
- The fraction of families considered credit constrained—those who reported being denied credit, as well as those who did not apply for credit for fear of being denied—declined slightly from 28.3 percent in 2010 to 27.6 percent in 2013.
- Although many measures of debt and debt obligations indicate that debt has fallen, education debt increased substantially between 2010 and 2013.

Income

Median and mean inflation-adjusted before-tax family incomes moved in different directions between 2010 and 2013.[7] Overall, median income fell 5 percent between 2010 and 2013, from $49,000 to $46,700 (table 1). Mean income increased 4 percent, from $84,100 to $87,200. The decline in median income coupled with the rise in mean income is consistent with a widening income distribution during this period.[8]

Over the preceding three-year period, 2007–10, median and mean income both fell sharply (8 percent and 11 percent, respectively). The changes for both the 2007–10 and 2010–13 periods stand in stark contrast to a pattern of substantial increases in both the median and the mean dating back to the early 1990s.[9]

Some predictable patterns in income levels across demographic groups are observed in the 2013 SCF, and those patterns are largely consistent with prior surveys.[10] Across age groups, median and mean incomes show a life-cycle pattern, rising to a peak in the middle age groups and then declining for groups that are older and increasingly more likely to be retired. Income also shows a strong positive association with education; in particular, incomes for families headed by a person who has a college degree tend to be substantially higher than for those with lower levels of schooling. Incomes of white non-Hispanic families are substantially higher than those of other families.[11] Income is also higher for homeowners than for other families, and income is systematically higher for groups with greater net worth.[12]

Changes in Income by Family Characteristics

Changes in median and mean incomes between 2010 and 2013 varied substantially across different types of families, whether grouped by economic characteristics such as income, wealth, and homeowner status, or by purely demographic variables such as age, education, or race and ethnicity. Patterns are generally consistent with the overall widening of the income distribution, as reflected in the differential growth of overall median and mean family income.

For a given family, income at a particular time may not be indicative of its "usual" income. Unemployment, a bonus, a capital loss or gain, or other factors may cause income to

---

[7] To measure income, the interviewers request information on the family's cash income, before taxes, for the full calendar year preceding the survey. The components of income in the SCF are wages, self-employment and business income, taxable and tax-exempt interest, dividends, realized capital gains, food stamps and other related support programs provided by government, pensions and withdrawals from retirement accounts, Social Security, alimony and other support payments, and miscellaneous sources of income for all members of the primary economic unit in the household.

[8] Box 3, "Recent Trends in the Distribution of Income and Wealth," discusses trends in income and wealth shares, as measured by the SCF, since 1989.

[9] Between 1992 and 2007, mean and median income generally increased between survey waves. Mean income increased, on average, 8.0 percent between survey waves, and median income increased, on average, 4.2 percent between survey waves. The 2001–04 period is the only exception, when mean income fell modestly.

[10] Tabulated data from the survey beyond that presented in this article are available at www.federalreserve.gov/econresdata/scf/scfindex.htm. This information includes some alternative versions of the tables in this article, including tables that match the structure used in earlier versions of this publication. For those who wish to make further alternative calculations, this website provides a variety of data files as well as access to online tabulation software that may be used to create customized tables based on the variables analyzed in this article.

[11] See the appendix for a discussion of racial and ethnic identification in the SCF.

[12] In this article, a family is considered a homeowner if at least one person in the family owns at least some part of the family's primary residence.

Box 1. The Data Used in This Article

Data from the Survey of Consumer Finances (SCF) are the basis of the analysis presented in this article. The SCF is a triennial interview survey of U.S. families sponsored by the Board of Governors of the Federal Reserve System with the cooperation of the U.S. Department of the Treasury. Since 1992, data for the SCF have been collected by NORC, a research organization at the University of Chicago, roughly between May and December of each survey year.

The majority of statistics included in this article are related to characteristics of "families." As used here, this term is more comparable with the U.S. Census Bureau definition of "households" than with its use of "families," which excludes the possibility of one-person families. The appendix provides full definitions of "family" for the SCF and the associated family "head."

The survey collects information on families' total income before taxes for the calendar year preceding the survey. But the bulk of the data cover the status of families as of the time of the interview, including detailed information on their balance sheets and use of financial services as well as on their pensions, labor force participation, and demographic characteristics. Except in a small number of instances (see the appendix and the main text for details), the survey questionnaire has changed in only minor ways relevant to this article since 1989, and every effort has been made to ensure the maximum degree of comparability of the data over time.

The need to measure financial characteristics imposes special requirements on the sample design for the survey. The SCF is expected to provide reliable information both on attributes that are broadly distributed in the population (such as homeownership) and on those that are highly concentrated in a relatively small part of the population (such as closely held businesses). To address this requirement, the SCF employs a sample design, essentially unchanged since 1989, consisting of two parts: a standard, geographically based random sample and a special oversample of relatively wealthy families. Weights are used to combine information from the two samples to make estimates for the full population. In the 2013 survey, 6,026 families were interviewed, and in the 2010 survey, 6,492 were interviewed.

This article draws principally upon the final data from the 2013 and 2010 surveys. To provide a larger context, some information is also included from the final versions of earlier surveys.[1] Differences between estimates from earlier surveys as reported here and as reported in earlier *Federal Reserve Bulletin* articles are attributable to additional statistical processing, correction of minor data errors, revisions to the survey weights, conceptual changes in the definitions of variables used in the articles, and adjustments for inflation. In this article, all dollar amounts from the SCF are adjusted to 2013 dollars using the "current methods" version of the consumer price index for all urban consumers (CPIURS). The appendix provides additional detail on the adjustments.

The principal detailed tables (tables 1 through 4) describing income, net worth, and asset and debt holdings focus on the percentage of various groups that have such items and/or the median and mean holding for those who have them.[2] Generally, when one deals with data that exhibit very large values for a relatively small part of the population—as is the case for many of the items considered in this article—estimates of the median are often statistically less sensitive to such outliers than are estimates of the mean. At the same time, means are generally more useful for comparing across population subgroups because every member of the group contributes equally to the overall average.

One liability of using the median as a descriptive device is that medians are not additive—that is, the sum of the medians of two items for the same population is not generally equal to the median of the sum (for example, median assets less median liabilities does not equal median net worth). In contrast, means for a common population are additive. Where a comparable median and mean are given, the gain or loss of the mean relative to the median may usually be taken as indicative of the relative change at the top of the distribution; for example, when the mean decreases more rapidly than the median, it is typically

continued on next page

Box 1. The Data Used in This Article—*continued*

taken to indicate that the values in the upper part of the distribution fell more than those in the lower part of the distribution.

To provide a measure of the significance of the developments discussed in this article, standard errors caused by sampling and imputation for missing data are given for selected estimates. Space limits prevent the inclusion of the standard errors for all estimates. Although the statistical significance of the results is not directly addressed, the article highlights findings that are significant or are interesting in a broader context.

[1] Additional information about the survey is available on the Board's public website at www.federalreserve.gov/econresdata/scf/scfindex.htm.

[2] The median of a distribution is defined as the value at which equal parts of the population considered have values that are larger or smaller.

deviate temporarily from the usual amount.[13] Across the distribution of families grouped by usual income, all but the highest quintile saw declines in median income between 2010 and 2013, with second and third quintiles seeing the largest declines (7 percent and 6 percent, respectively).[14] Median income increased 2 percent for the top income decile. Mean income declined strongly for the bottom two quintiles and barely budged for those between the 40th and 90th percentiles, whereas the mean income of the top decile increased 10 percent between 2010 and 2013.

Nearly all age groups experienced declines in median income, with the exception of families headed by those age 35 to 44 (6 percent increase) and age 65 to 74 (no change). Mean incomes increased 18 percent for ages 35 to 44 and 22 percent for ages 65 to 74. Unlike for median incomes, the mean income of the oldest households increased about 7 percent. For every age group, mean incomes declined by less than median incomes or rose by more than median incomes.

Between 2010 and 2013, both median and mean income changes were positively associated with educational attainment. The median income of households with a high school diploma or less fell between 6 and 9 percent, whereas the mean income of those without a high school diploma fell much more than that of those who graduated from high school (a 17 percent decline versus a 2 percent decline). The median income of those with some college decreased 11 percent, whereas the median income of those with a college degree *increased* 1 percent. Mean income for those with a college degree increased 5 percent.

Over the 2010–13 period, median income for white non-Hispanic families decreased modestly, 1 percent, whereas their mean income increased 8 percent. Their incomes in both years were much higher than non-white or Hispanic families, who saw declines in median income of 9 percent and declines in mean income of 11 percent.

For homeowners, median income fell 1 percent between 2010 and 2013, while mean income increased 7 percent during this period. Median and mean incomes for renters and other families declined very modestly, 1 percent for both measures.

By percentile of net worth measured concurrently in the SCF, both mean and median income fell for those in the bottom three quartiles, while both measures rose for the top

[13] Box 2, "Usual versus Actual Income," discusses income variability and the implications of categorizing families by the two income measures.

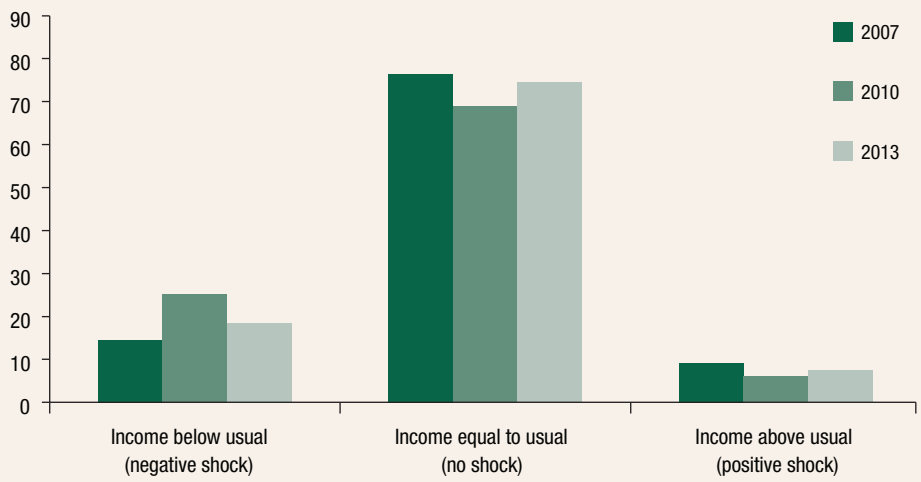
[14] Each quintile represents 20 percent of the population. See the appendix for information about distribution group cutoffs.

Box 2. Usual versus Actual Income

The income classifier used throughout this report is the Survey of Consumer Finances respondent-reported measure of "usual" income. This classifier is designed to capture a version of household income with transitory fluctuations smoothed away in order to approximate the economic concept of "permanent" income. Usual income differs from actual income when the respondent reports that the family experienced a negative or positive income "shock" that is transitory in nature, say from a temporary unemployment spell or an unexpected salary bonus. Usual income is measured in the survey after actual income has been reported, when respondents were given the option to report their usual income if they believe they experienced a temporary deviation.[1]

The fraction of families with actual income deviating from usual income varies over the business cycle, and grouping families by actual income can bias estimates of changes in economic outcomes across groups, particularly in volatile periods. In 2007, 14.4 percent of families reported that their actual income was temporarily below their usual income (figure A). The fraction reporting unusually low income surged to 25.2 percent in 2010 and then fell back to 18.4 percent in 2013.

Figure A. Families with positive and negative income shocks, 2007–13 surveys



The potential for bias arises because average net worth, portfolio composition, borrowing, and spending behavior for wealthy families with temporarily low incomes are all very different from families whose income is usually lower. Consider, for example, the first quintile of families sorted by actual income. This actual income group includes some families whose income is usually low and some families whose income is temporarily low. In 2007, the fraction of families in the bottom actual income quintile whose usual income would put them in a higher group was 23.5 percent (table B). That fraction surged to 38.8 percent in 2010 before falling back to 31.2 percent in the most recent survey, 2013.

Table B. Effect of grouping by actual income on average net worth for bottom 20 percent, 2007–13 surveys

Thousands of 2013 dollars except as noted

	2007	2010	2013
Percent of families in "usually higher" income group	23.5	38.8	31.2
Average net worth of…			
All families, bottom 20 percent by actual income	118.2	125.1	86.1
Families usually in bottom 20 percent	101.6	81.8	64.6
Families with income usually above bottom 20 percent	232.0	318.6	216.4

continued on next page

Box 2. Usual versus Actual Income—*continued*

If families had been grouped by actual income, instead of usual income, the estimates of average net worth would have been severely biased. Looking at all families in the bottom 20 percent by actual income, one would come away with the impression that average net worth increased between 2007 and 2010, from $118,200 to $125,100, before falling to $86,300 in 2013. Among those families in the bottom quintile whose income is usually low, average net worth fell from $101,600 to $81,800 between 2007 and 2010, and then fell further, to $64,600 in 2013. Grouping families by usual income provides a much more accurate representation of the changes in net worth experienced across income groups.

[1] Specifically, after the data on actual income are collected, respondents were asked, "Is this income unusually high or low compared to what you would expect in a 'normal' year, or is it normal?" If the respondent answered that income was unusually high or low, the follow-up question is, "About what would your total income have been if it had been a normal year?"

quartile. For households in the lowest quartile of net worth, median income declined 7 percent and mean income fell 10 percent. Households in the second and third quartile saw smaller declines in income (5 percent for both groups for median income, and 3 to 4 percent for mean income, for both groups). However, both mean and median income increased for the top quartile. For those households in the 75th to 90th percentile of net worth, median income rose 10 percent, while it rose 5 percent for the top decile. The largest increase was in mean income for the top decile of net worth, an increase of 13 percent.

Net Worth

Median and mean inflation-adjusted net worth—the difference between families' gross assets and their liabilities—were both little changed between 2010 and 2013 (table 2). Overall, the median net worth of all families fell a modest 2 percent to $81,200, while mean net worth was effectively unchanged at $534,600. In contrast, the 2010 SCF showed dramatic *decreases* in median and mean net worth in the 2007–10 period, while the 2007 survey showed substantial *increases* relative to 2004.[15] These patterns in net worth over the past decade were largely driven by the boom and bust in house and other asset prices. The bust, in particular, had a disproportionate effect on families in the middle of the net worth distribution, whose wealth portfolio is dominated by housing. Divergent trends in median and mean net worth over the past few surveys suggest substantial heterogeneity in wealth changes across families.[16]

The median and mean values of wealth rise systematically with usual income, a relationship reflecting a higher level of saving among higher-income families, and the feedback effect of higher incomes from the accumulated assets.[17] Median and mean family net worth generally increase with age, with a plateau or modest decreases for the oldest age groups relative to the near-retirement age groups. This pattern reflects both life-cycle saving behavior and a historical pattern of long-run growth in inflation-adjusted wages, as younger cohorts have generally had higher lifetime earnings than preceding cohorts. Wealth shows strong differentials across groups defined in terms of education, racial or ethnic background, and housing status; these differentials generally mirror those for income, but the wealth differences are larger.

[15] Between the 2004 and 2007 surveys, mean net worth increased 13.0 percent and median net worth increased 17.9 percent.

[16] Box 3, "Recent Trends in the Distribution of Income and Wealth," discusses shares of income and wealth, as measured by the SCF, since 1989.

[17] See box 4, "Saving Behavior," for a discussion of patterns of saving by usual income, and box 5, "Shopping for Financial Services," for a discussion of the resources that families use when making investment and borrowing decisions.

Table 1. Before-tax median and mean family income, by selected characteristics of families, 2010 and 2013 surveys

Thousands of 2013 dollars except as noted

Family characteristic	Median income			Mean income		
	2010	2013	Percent change 2010–13	2010	2013	Percent change 2010–13
All families	**49.0**	**46.7**	**-5**	**84.1**	**87.2**	**4**
	(.6)	(.6)		(1.2)	(1.5)	
Percentile of usual income						
Less than 20	15.8	15.2	-4	16.5	15.2	-8
20–39.9	32.7	30.4	-7	32.4	30.5	-6
40–59.9	51.8	48.7	-6	49.9	49.6	-1
60–79.9	79.5	77.9	-2	78.9	80.0	1
80–89.9	125.3	121.7	-3	124.3	123.5	-1
90–100	217.9	223.2	2	361.5	397.5	10
Age of head (years)						
Less than 35	37.6	35.3	-6	51.1	48.7	-5
35–44	57.7	60.9	6	86.8	102.0	18
45–54	65.4	60.9	-7	109.5	103.8	-5
55–64	59.0	55.1	-7	113.4	110.1	-3
65–74	45.8	45.9	0	81.2	98.8	22
75 or more	31.2	28.5	-9	49.4	53.1	7
Education of head						
No high school diploma	24.6	22.3	-9	36.1	30.0	-17
High school diploma	39.2	37.0	-6	51.6	50.7	-2
Some college	46.0	40.9	-11	63.0	61.3	-3
College degree	79.1	80.0	1	138.1	145.4	5
Race or ethnicity of respondent						
White non-Hispanic	56.6	55.8	-1	96.6	104.5	8
Nonwhite or Hispanic	37.1	33.6	-9	58.3	51.6	-11
Housing status						
Owner	63.8	63.4	-1	105.3	112.4	7
Renter or other	28.0	27.8	-1	40.6	40.1	-1
Percentile of net worth						
Less than 25	25.4	23.7	-7	35.0	31.4	-10
25–49.9	40.6	38.6	-5	48.8	46.9	-4
50–74.9	58.8	55.8	-5	67.8	65.8	-3
75–89.9	79.9	87.5	10	95.4	100.0	5
90–100	174.9	183.4	5	319.2	361.2	13

Note: Income is measured for the year prior to the survey. See the appendix for details on standard errors (shown in parentheses below the first row of data for the means and medians).

Changes in Net Worth by Family Characteristics

Families with higher levels of usual income reported greater levels of net worth, but changes in net worth varied substantially across the usual income distribution. Median net worth decreased between 2010 and 2013 for most usual income groups, falling between 10 and 17 percent, with the exception of the fourth quintile. Those in the lowest usual income quintile saw small decreases in median net worth (12 percent, from $7,300 to $6,400), but they also saw the largest proportional decrease in mean net worth (21 percent, from $81,800 to $64,600). Households in the second and third quintile of usual income saw large declines in median net worth (10 percent and 17 percent, respectively), as well as mean

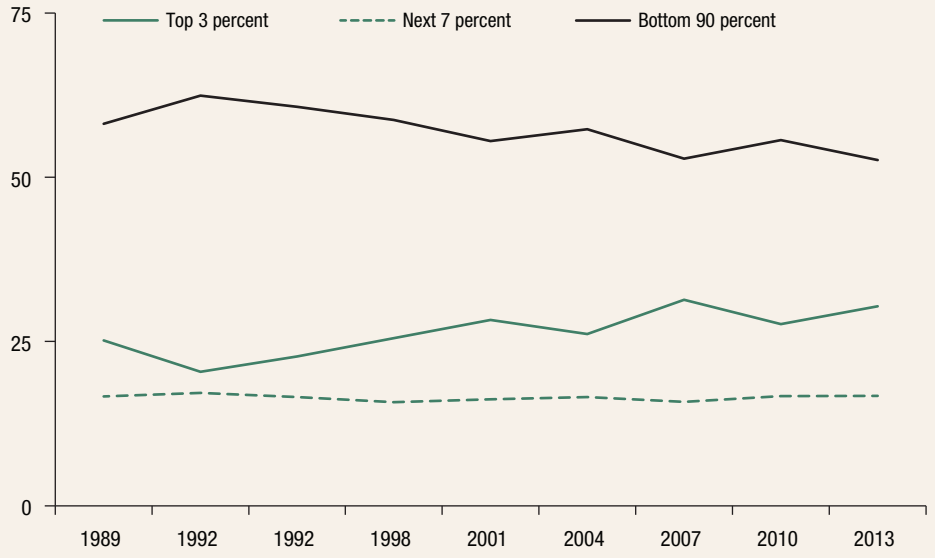
Box 3. Recent Trends in the Distribution of Income and Wealth

Income inequality, particularly the share of income received by the top 1 percent of the income distribution, has received increased attention in recent years.[1] The Survey of Consumer Finances (SCF) is uniquely capable of contributing to our understanding of trends in income and wealth inequality because the survey collects data on net worth in addition to income, and it also effectively samples affluent families.[2]

Data from the 2013 SCF confirm that the shares of income and wealth held by affluent families are at modern historically high levels. Also, the gains in income and wealth shares have been concentrated among the top few percentiles of the distribution. Contrary to some analysis of Internal Revenue Service data indicating wealth gains are isolated to the top 1 percent, or even 0.5 percent, data from the SCF show that the top few percent of families have experienced rising shares of income and wealth.

The share of income received by the top 3 percent of families was 31.4 percent in 2007 but fell to 27.7 percent in 2010 as business and asset income declined particularly sharply in the recession and financial crisis (figure A). Since that time, the income share of the top 3 percent has rebounded, climbing to 30.5 percent in 2013. The share of income received by the next highest 7 percent of the distribution (percentiles 90 through 97) has not changed over the past quarter of a century, sitting slightly below 17 percent in 1989 and 2013. Correspondingly, the rising income share of the top 3 percent mirrors the declining income share of the bottom 90 percent of the distribution, which fell to 52.7 percent in 2013.

Figure A. Income shares by income percentile, 1989–2013 surveys

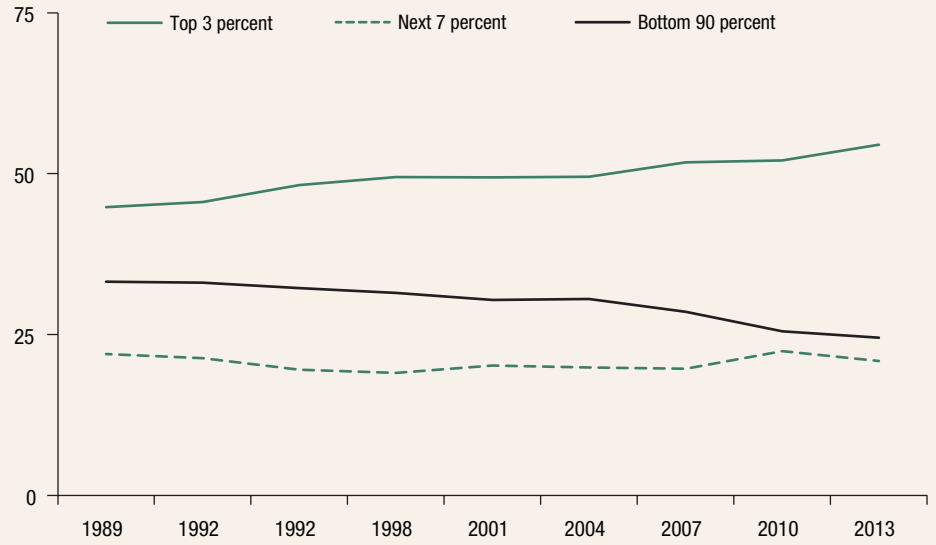


Changes in the shares of wealth held by different segments of the wealth distribution have been less cyclical than income. The wealth share of the top 3 percent climbed from 44.8 percent in 1989 to 51.8 percent in 2007 and 54.4 percent in 2013 (figure B). As with income, the shares of wealth held by the next 7 highest percent of families changed very little, hovering between 19 and 22 percent over the past 25 years, and registering 20.9 percent in 2013. Similar to the situation with income, the rising wealth share of the top 3 percent of families is mirrored by the declining share of wealth held by the bottom 90 percent. The share of wealth held by the bottom 90 percent fell from 33.2 percent in 1989 to 24.7 percent in 2013.

continued on next page

Box 3. Recent Trends in the Distribution of Income and Wealth—*continued*

Figure B. Wealth shares by wealth percentile, 1989–2013 surveys



[1] See, for example, Facundo Alvaredo, Anthony B. Atkinson, Thomas Piketty, and Emmanuel Saez (2013), "The Top 1 Percent in International and Historical Perspective," *Journal of Economic Perspectives*, vol. 27 (Summer), pp. 3–20.

[2] See the sampling techniques section of the appendix for further discussion of the SCF's ability to capture affluent families.

net worth (16 percent and 13 percent). The fourth income quintile was the only group that experienced increases in both median and mean net worth: 16 percent for median net worth and 14 percent for mean net worth. Those at the top of the income distribution experienced decreases in median net worth, while mean net worth was little changed.

Different age groups experienced very different trends in net worth between 2010 and 2013. Both mean and median net worth increased for those under age 45, decreased for those between age 45 and 64, increased for those between age 65 and 74, and decreased for the oldest group. Increases were generally larger for mean net worth than for median net worth, while declines were similar in magnitude for the two measures. Gains in median net worth ranged between 3 and 5 percent, while declines ranged between 14 and 17 percent.

From 2010 to 2013, net worth followed different patterns for different education groups. Those without a high school diploma saw no change in median net worth between 2010 and 2013, but their mean net worth fell 9 percent. Those with high school diplomas or some college both saw 14 percent declines in median net worth; the former saw a 15 percent decline in mean net worth, while those with some college had 9 percent higher mean net worth in 2013. Median net worth increased 5 percent for those with college degrees, while their mean net worth declined 2 percent.

Mean and median net worth of non-Hispanic white families changed similarly, a 1 percent mean increase and 2 percent median increase, with median net worth reaching $142,000 and mean net worth reaching $705,900 in 2013. However, the median net worth of non-white or Hispanic families fell 17 percent to $18,100, and mean net worth fell 2 percent to $183,900.

Table 2. Family median and mean net worth, by selected characteristics of families, 2010 and 2013 surveys

Thousands of 2013 dollars except as noted

Family characteristic	Median net worth			Mean net worth		
	2010	2013	Percent change 2010–13	2010	2013	Percent change 2010–13
All families	**82.8**	**81.2**	**-2**	**534.5**	**534.6**	**0**
	(2.6)	(2.8)		(10.0)	(9.3)	
Percentile of usual income						
Less than 20	7.3	6.4	-12	81.8	64.6	-21
20–39.9	31.0	27.9	-10	134.7	113.1	-16
40–59.9	66.6	55.4	-17	189.5	164.8	-13
60–79.9	138.6	161.3	16	306.8	350.9	14
80–89.9	321.7	287.9	-11	645.0	631.4	-2
90–100	1,275.7	1,125.9	-12	3,274.6	3,327.3	2
Age of head (years)						
Less than 35	10.0	10.4	4	70.0	75.5	8
35–44	45.2	46.7	3	233.0	347.2	49
45–54	126.3	105.3	-17	614.1	530.1	-14
55–64	192.3	165.9	-14	943.6	798.4	-15
65–74	221.5	232.1	5	909.2	1,057.0	16
75 or more	232.3	194.8	-16	726.5	645.2	-11
Education of head						
No high school diploma	17.2	17.2	0	118.6	108.3	-9
High school diploma	60.7	52.5	-14	233.8	199.6	-15
Some college	54.5	46.9	-14	291.7	317.9	9
College degree	209.2	219.4	5	1,047.8	1,031.6	-2
Race or ethnicity of respondent						
White non-Hispanic	139.9	142.0	2	701.4	705.9	1
Nonwhite or Hispanic	21.9	18.1	-17	188.5	183.9	-2
Housing status						
Owner	187.0	195.4	4	764.6	783.0	2
Renter or other	5.4	5.4	0	61.3	70.3	15
Percentile of net worth						
Less than 25	†	†	…	–13.7	–13.4	2
25–49.9	34.5	31.3	-9	38.2	35.9	-6
50–74.9	168.5	168.1	0	181.0	177.7	-2
75–89.9	517.3	505.8	-2	565.7	546.2	-3
90–100	1,997.8	1,871.8	-6	3,982.8	4,024.8	1

† Less than 0.05 ($50).

... Not applicable.

Note: Net worth is the difference between families' gross assets and their liabilities. See the appendix for definitions of asset and liability categories used in the SCF, as well as details on standard errors (shown in parentheses below the first row of data for the means and medians).

The median net worth of homeowners increased 4 percent between 2010 and 2013, whereas that of renters or other non-homeowners did not change. The mean net worth of homeowners increased 2 percent compared with the 15 percent increase for renters.

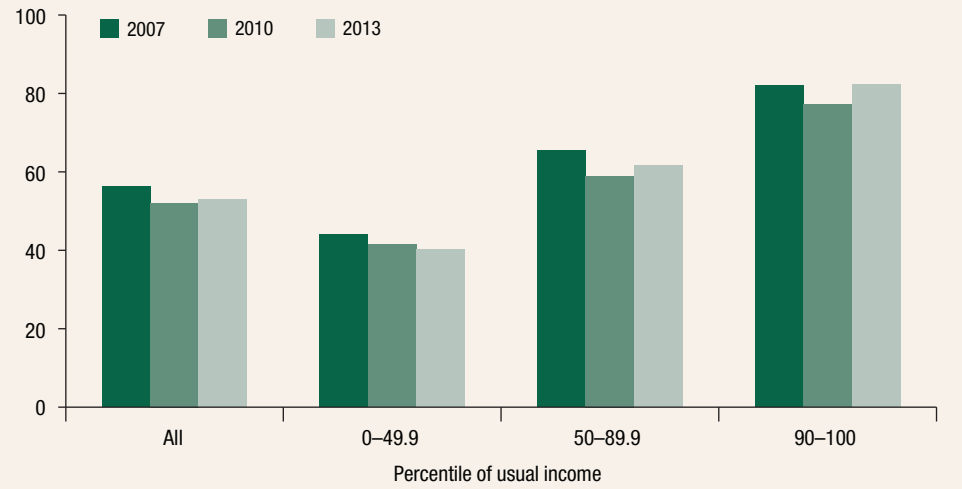
Median net worth fell for all percentile groups of the distribution of net worth, with the largest decreases in proportional terms being for the second quartile (9 percent decline) and the top decile (6 percent) of the net worth distribution. For the lowest quartile, median net worth was less than $50 in both 2010 and 2013, while mean net worth increased 2 percent

Box 4. Saving Behavior

Because saving out of current income is an important determinant of family net worth, the Survey of Consumer Finances (SCF) asks respondents whether, over the preceding year, the family's spending was less than, more than, or about equal to its income. Though only qualitative, the answers are a useful indicator of whether families are saving.

Between 2010 and 2013, the proportion of all families that saved remained basically constant, rising only slightly from 52.0 percent to 53.0 percent (figure A). The fraction of families who reported saving in the 2013 SCF is still lower than it was in the 2007 survey, when the fraction of families that saved was 56.4 percent.

Figure A. Families that saved by usual income, 2007–13 surveys



Across families grouped by usual income there are large differences in the fraction of families who save, and the fraction saving increases with usual income (figure A).[1] In fact, in 2013, the fraction of families in the top income group that saved was 82.4 percent. This percentage was more than double the 40.2 percent that saved in the lowest income group.

Between 2007 and 2010, the fraction of families that saved fell in each of the three groupings of usual income, while between 2010 and 2013, the fraction of families that saved fell for the lowest income group, but rose for the other two groups. The fraction of families who saved in the bottom 50 percent and the next 40 percent of the income distribution have yet to regain the level of savings found in the 2007 survey, and for those families in the top 10 percent of the income distribution, the fraction saving now exceeds that found in 2007.

[1] For a description of the usual income measure, see box 2, "Usual versus Actual Income."

from negative $13,700 to negative $13,400. While the second quartile experienced the largest declines in mean and median net worth, median net worth of the third quartile was virtually unchanged between 2010 and 2013 at approximately $168,100 and mean net worth declined 2 percent to $177,700. Families between the 75th and 90th percentile of net worth saw a 2 percent decline in median net worth, reaching $505,800 in 2013, and a 3 percent decline in mean net worth. While the median net worth of the top decile dropped 6 percent to $1,871,800 in 2013, the group's mean net worth rose slightly and exceeded $4 million in 2013.

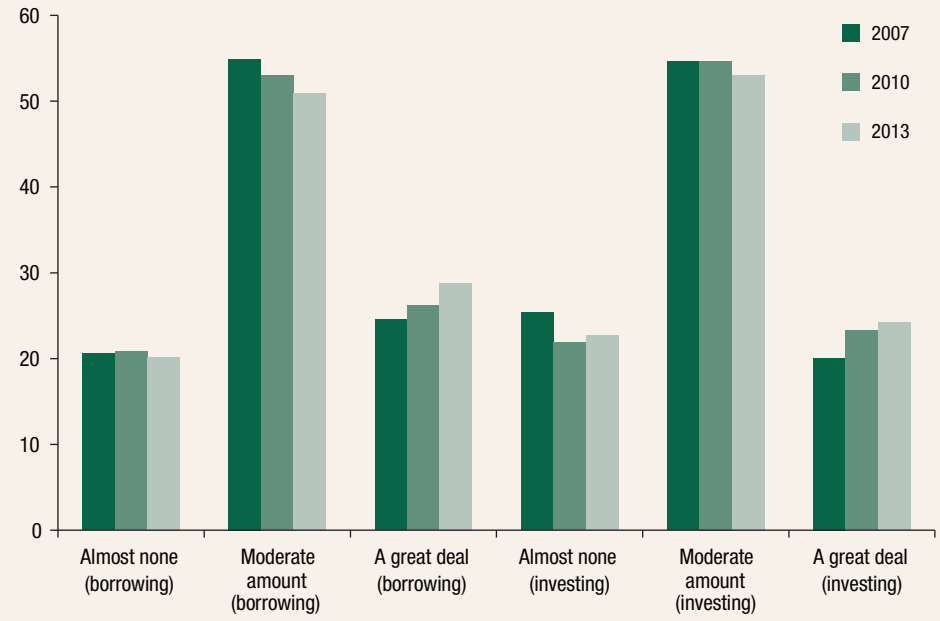
Box 5. Shopping for Financial Services

As a normal part of their financial lives, families make a variety of decisions to select investment products for any savings they may have, or loan products for any credit they may use. To the extent that families devote more or less attention to such decisions, or are better or worse informed, the wealth of otherwise comparable families may differ substantially over time.

The Survey of Consumer Finances (SCF) contains a self-assessment of families' intensity of shopping for borrowing or investing services. Note that although the survey questions are intended to elicit a description of behavior in general, the responses could also reflect short-term needs for such services and therefore the immediate need for shopping.

In 2013, only 29 percent of families reported shopping "a great deal" for loan terms, and 24 percent "a great deal" for investment terms (figure A). However, the rate of shopping "a great deal" for both loan and investment terms has increased in each wave of the SCF from 2007 to 2013. The percent of families who reported shopping either "a moderate amount" or "almost none" declined from 2010 to 2013.

Figure A. Intensity of shopping for borrowing or investing, 2007–13 surveys



In 2013, for the first time, more families turned to the Internet than to any other source for information about borrowing (table B). The fraction of families who reported using the Internet for information about borrowing reached 47 percent in 2013, well over the 41.7 percent who reported doing so in 2010. The share reporting that they used the Internet as a source of information for investing also rose between 2010 and 2013, from 33.0 percent to 35.3 percent.

continued on next page

Box 5. Shopping for Financial Services—*continued*

Table B. Information used for decisions about borrowing or investing, 2007–13 surveys

Percent

Source	Type of service					
	Borrowing			Investing		
	2007	2010	2013	2007	2010	2013
Calling around	33.4	27.0	24.7	18.0	15.7	13.2
Advertisements and media	43.0	34.2	29.0	29.9	26.1	21.3
Internet	38.4	41.7	47.0	28.3	33.0	35.3
Friends, relatives, associates	45.9	43.9	46.1	42.3	40.8	40.8
Bankers, brokers, and other sellers of financial services	39.2	39.5	41.5	38.3	39.1	38.3
Lawyers, accountants, and other financial advisors	19.5	19.5	21.5	29.3	31.1	31.8
Does not borrow or invest	9.6	14.6	13.7	10.2	11.7	13.2

Friends, relatives, and associates remained very common sources for information used to make borrowing and investing decisions in 2013 (46.1 percent for borrowing and 40.8 percent for investing), suggesting that there may be feedback effects in financial outcomes; those who know relatively well-informed people may obtain better services.

Sellers of financial services also remained commonly reported sources of information in 2013 (41.5 percent for borrowing, 38.3 percent for investing). For both types of decisions, fewer families reported consulting print media or material in the mail in 2013 than in 2010.

Assets

Between 2010 and 2013, ownership of any type of asset changed little, rising slightly from 97.4 percent to 97.9 percent in 2013 (table 3). At the same time, ownership rates of nearly every type of individual asset fell between 2010 and 2013. This finding indicates that while most families continue to hold some type of asset, many more families now hold fewer different types of assets.

Conditional on holding any assets, the median family's total asset holdings fell 11 percent, from $200,600 in 2010 to $177,900 in 2013. The conditional mean value of total assets also fell, although the drop was more modest, at 3 percent. Much of this decline in the conditional median and mean value of total assets held can be explained by declines in homeownership and stagnant real home prices between 2010 and 2013. The larger drop in median—versus mean—asset holdings indicates that losses in asset values were spread unequally across families and asset types.

Financial Assets

Overall, ownership of any financial assets—which includes transaction accounts, certificates of deposit, savings bonds, other bonds, stocks, pooled investment funds, retirement accounts, cash value life insurance, and other managed assets—remained high in 2013, at 94.5 percent.[18] This finding represented almost no change from the level seen in 2010 (94.0 percent). However, the conditional median value of all financial assets held by families fell 8 percent, from $23,000 in 2010 to $21,200 in 2013. Conditional mean values, by contrast, rose 5 percent, from $257,800 to $270,100. This increase indicates that some

[18] See the appendix for detailed definitions of SCF asset and liability categories.

Table 3. Holding and values of assets, 2010 and 2013 surveys
Thousands of 2013 dollars except as noted

Balance sheet item	Percent holding		Conditional median value			Conditional mean value		
	2010	2013	2010	2013	Percent change 2010–13	2010	2013	Percent change 2010–13
Any Asset	**97.4**	**97.9**	**200.6**	**177.9**	**-11**	**656.2**	**638.9**	**-3**
Types of financial asset								
Any financial asset	**94.0**	**94.5**	**23.0**	**21.2**	**-8**	**257.8**	**270.1**	**5**
Transaction accounts	92.5	93.2	3.8	4.1	9	34.8	36.3	4
Certificates of deposit	12.2	7.8	21.4	16.0	-25	77.8	64.5	-17
Savings bonds	12.0	10.0	1.1	1.0	-7	6.6	6.4	-3
Bonds	1.6	1.4	146.8	94.5	-36	659.1	581.7	-12
Stocks	15.1	13.8	21.4	27.0	26	224.8	294.3	31
Pooled investment funds	8.7	8.2	85.7	80.0	-7	416.4	462.9	11
Retirement accounts	50.4	49.2	47.2	59.0	25	183.4	201.3	10
Cash value life insurance	19.7	19.2	7.8	8.0	2	30.4	35.3	16
Other managed assets	5.7	5.2	75.0	100.0	33	265.7	370.6	39
Other	8.0	6.9	5.4	4.0	-25	68.5	55.1	-20
Types of nonfinancial asset								
Any nonfinancial asset	**91.3**	**91.0**	**165.6**	**148.4**	**-10**	**434.6**	**407.2**	**-6**
Vehicles	86.7	86.3	16.3	15.8	-4	23.7	22.6	-5
Primary residence	67.3	65.2	182.2	170.0	-7	280.1	262.6	-6
Other residential property	14.3	13.2	128.6	123.8	-4	309.7	316.3	2
Equity in nonresidential property	7.7	7.2	69.7	60.0	-14	344.6	268.0	-22
Business equity	13.3	11.7	84.4	67.5	-20	844.8	973.9	15
Other	7.0	7.3	16.1	13.0	-19	71.3	72.2	1

Note: See the appendix for definitions of asset categories used in the SCF.

families experienced large gains in the values of their financial assets, but the median family experienced a loss in financial asset values.

Although overall ownership rates of any financial asset remained unchanged, ownership rates of almost every specific type of financial asset fell (with the exception of transaction accounts), suggesting families now hold fewer different types of financial assets.

Transaction accounts—which include checking, savings, money market, and call accounts—remained the most commonly held type of financial asset in 2013, with an ownership rate of 93.2 percent, a slight increase from the 92.5 percent of families that held a transaction account in 2010. The conditional median and mean values of those accounts also rose between 2010 and 2013, 9 percent and 4 percent, respectively. In 2013, median transaction account holdings were $4,100, and mean holdings were $36,300.

Rates of ownership of certificates of deposits fell markedly between 2010 and 2013, from 12.2 percent to 7.8 percent. The amount held in those accounts also fell, with the median declining 25 percent and the mean declining 17 percent. These declines are, at least in part, attributable to low interest rates over this period, which reduced the advantage of certificates of deposit over transaction accounts.

Ownership of savings bonds, other bonds, directly held stocks, and pooled investment funds sustained sizable drops in ownership rates between 2010 and 2013, although none of the four types of assets are commonly held, with ownership rates in 2013 varying between 1.4 percent (other bonds) and 13.8 percent (directly held stocks). The conditional median and mean value of most of these assets also fell between 2010 and 2013, with the exception

of pooled investment funds and stocks. The median value of stocks rose 26 percent, from $21,400 in 2010 to $27,000 in 2013. The growth in median and mean holdings of stocks is largely explained by the widespread increase in stock market indexes between 2010 and 2013.[19] However, some of the increase in conditional holdings might be due to exits from ownership, if those who exited tended to have stock holdings of lower value.[20]

Ownership of retirement accounts—including individual retirement accounts (IRAs), Keogh accounts, and certain employer-sponsored accounts, such as 401(k), 403(b), and thrift savings accounts—fell below 50 percent in 2013, continuing the downward trend also observed between the 2007 and 2010 surveys. Median and mean values of retirement accounts, however, rose substantially. The conditional median value of retirement accounts rose 25 percent from $47,200 in 2010 to $59,000 in 2013; and the mean value rose 10 percent, from $183,400 in 2010 to $201,300 in 2013. This growth is likely explained by a combination of resurgent stock markets and increased contributions by those who participated in retirement plans.[21]

The percent of families owning the remaining financial asset categories—cash value of life insurance, other managed assets, and the catch-all "other" category—declined between 2010 and 2013. The median and mean values of other managed assets moved in line with stocks and retirement accounts, and they reflected the positive effect of the stock market on the value of assets in these portfolios.

Nonfinancial Assets

Ownership of nonfinancial assets—including vehicles, residential and nonresidential property, and business equity—remained high in 2013 at 91.0 percent, falling only slightly from 2010. For every separate category of nonfinancial assets except "other," however, ownership rates fell. These patterns indicate that most families still hold a nonfinancial asset, but they hold fewer types than were held in 2010.

The most commonly held type of nonfinancial asset in 2013 was vehicles, a very broad category that includes cars, vans, sport utility vehicles, trucks, motor homes, recreational vehicles, motorcycles, boats, airplanes, and helicopters. Between 2010 and 2013, the fraction of families owning a vehicle declined slightly from 86.7 percent to 86.3 percent. The median and mean value of vehicles owned by families also fell between 2010 and 2013. The median value decreased from $16,300 to $15,800, and the mean declined from $23,700 to $22,600 between 2010 and 2013.[22]

Housing ownership also fell, both for primary residences and for other residential property. Ownership declined from 67.3 percent of families owning a primary residence in 2010 to 65.2 percent owning a primary residence in 2013. This decrease represented a continued decline since the 2004 SCF was conducted, when the homeownership rate was 69.1 percent.[23]

---

[19] For comparison, the March 2010 to March 2013 increases in the S&P 500, the Dow Jones Industrial Index, and the Wilshire 5000 indexes were 34.6 percent, 35.0 percent, and 36.3 percent, respectively. In real terms, these correspond to increases of 25.9 percent, 26.3 percent and 27.4 percent, respectively.

[20] See box 6, "Direct and Indirect Holdings of Publicly Traded Stock," for more details on patterns in stock holding.

[21] See box 7, "Retirement Accounts and Plan Participation," for more details.

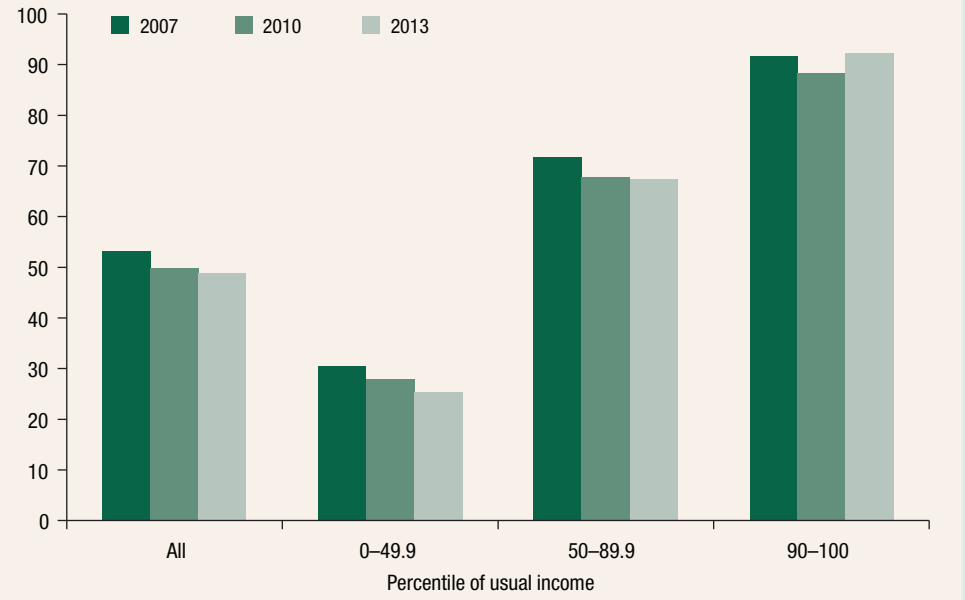
[22] Survey respondents were asked to provide the year, make, and model of each of their cars, vans, sport utility vehicles, and trucks. This information was used to obtain market prices from data collected by the National Automobile Dealers Association and a variety of other sources. For other types of vehicles, the respondent was asked to provide a best estimate of the current value.

[23] See box 8, "Homeownership and Net Housing Wealth," for more details.

Box 6. Direct and Indirect Holdings of Publicly Traded Stock

Families may hold stocks in publicly traded companies directly or indirectly, and information about each of these forms of stock holding is collected separately in the Survey of Consumer Finances.[1] When direct and indirect forms of stock holdings are combined, the 2013 data show a further decline in stock ownership over the most recent period. The level of stock ownership in 2013, at 48.8 percent, reflects a continued decline from the peak level of 53.2 percent reported in the 2007 survey (figure A). Grouping families by their location in the usual income distribution reveals that the lowest income group experienced further declines in stock ownership from 2010 to 2013, while the ownership rate for the upper-middle income group remained about the same over the most recent period.[2] For the top income group, the rate of ownership increased 3.9 percentage points from 2010 to 2013, reaching 92.1 percent, slightly above the 91.7 percent found in the 2007 survey.

Figure A. Families with direct and indirect holdings of stock, 2007–13 surveys



In contrast to the decline in stock ownership, the mean value of stock holdings increased from $228,300 in 2010 to $269,900 in 2013, exceeding the mean value of $254,000 in 2007 (table B). Across all usual income groups, the mean value of stock holdings increased from 2010 to 2013, with the mean value for the upper-middle and top income groups rising above the 2007 level. For the lowest income group, the mean value in 2013 remained slightly below the level attained in 2007. The value of stock holdings varies substantially across usual income groups, with mean holdings for the top group about seven times the size of mean holdings of the upper-middle income group.

Table B. Mean levels for direct and indirect holdings of stock, 2007–13 surveys

Thousands of 2013 dollars

	Conditional mean value		
	2007	2010	2013
All	**254.0**	**228.3**	**269.9**
Percentile of usual income			
0–49.9	53.8	36.1	53.6
50–89.9	127.8	113.0	132.3
90–100	982.0	885.9	969.3

continued on next page

Box 6. Direct and Indirect Holdings of Publicly Traded Stock—*continued*

Among families that held stock, either directly or indirectly, in 2013, ownership through a tax-deferred retirement account was the most common (87.0 percent), followed by direct stock (28.2 percent), direct holdings of pooled investment funds (16.0 percent), and managed investment accounts or an equity interest in a trust or annuity (8.2 percent). From 2010 to 2013, ownership of stock through a tax-deferred retirement account or managed investment account increased slightly, while ownership through all other types declined or remained the same. The fraction of families that owned stock through multiple types declined to 31.6 percent in 2013, down from 32.8 percent in 2010.

[1] Indirect stock holdings are those in pooled investment funds, retirement accounts, and other managed assets.
[2] For a description of the usual income measure, see box 2, "Usual versus Actual Income."

The conditional median and mean value of primary residences also fell in real terms, 7 percent and 6 percent, respectively. Among families who are homeowners, the median family's home was worth $170,000 in 2013, down from $182,200 in 2010. The decline in respondent-reported home values between the two most recent surveys is a little surprising, given the widespread perception that house values have stabilized and partially recovered in most areas. However, inflation-adjusted national home price indexes showed slight declines over the period between the onsets of field work for the two most recent surveys.[24] In addition, the divergence in house price trends is well within empirical estimates of homeowner reporting bias in house values, and it may reflect a correction in perceived values following the housing boom period, during which houses may have been overvalued by respondents.[25] It is also worth noting that since the 2013 survey was administered, house price indexes have increased substantially.

Ownership and median values of other residential property, which includes residences such as second homes and time shares, also fell between 2010 and 2013. Mean values of other residences increased slightly.

The largest relative drop in ownership rates of any type of nonfinancial asset was in the category of business equity, where ownership rates fell from 13.3 percent to 11.7 percent. The median family with business equity also experienced a decline of 20 percent in value, with median business equity falling from $84,400 to $67,500 between 2010 and 2013. The mean value of business equity rose 15 percent. This change indicates that losses in business equity were not equally distributed, and many business-owning families experienced large gains, while the median business-owning family experienced a loss.[26]

[24] The CoreLogic national house price index increased at an annual rate of 2.0 percent between early 2010 and early 2013, and the Federal Housing Finance Agency (FHFA) index rose at an annual rate of 0.7 percent over the same period. Both are below the rate of consumer price inflation used to index SCF asset values, which ran 2.3 percent during that period (see the appendix for details on inflation-adjusting SCF values). Therefore, real house prices measured by either index fell between the two surveys. In the year following the beginning of the 2013 survey field period, the CoreLogic index increased 10.9 percent, and the FHFA index increased 6.6 percent, while consumer prices were little changed.

[25] See Alice M. Henriques (2013), "Are Homeowners in Denial about Their House Values? Comparing Owner Perceptions with Transaction-Based Indexes," Finance and Economics Discussion Series 2013-79 (Washington: Board of Governors of the Federal Reserve System, September), www.federalreserve.gov/pubs/feds/2013/201379/201379pap.pdf.

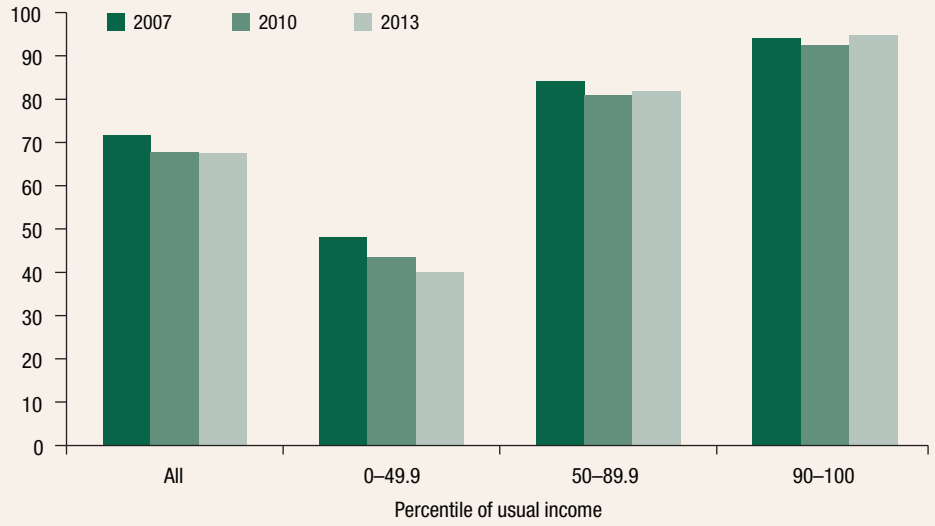
[26] See box 9, "Holdings of Business Equity," for more details.

Box 7. Retirement Accounts and Plan Participation

Ownership of retirement accounts and participation in retirement plans can both increase families' net worth and provide security to families as they approach retirement. A family is considered a participant in retirement plans if it has any of the following: an individual retirement account (IRA); an account-type job pension (defined contribution, known as DC), including 401(k)s; or a defined benefit (DB) pension. The following discussion focuses on prime-age families, those whose head is between ages 35 and 64, as these families have generally finished their education and are established in their careers but are generally too young for full retirement.

Grouping families by usual income indicates that those in the bottom half of the usual income distribution saw overall declines in retirement plan participation between 2007 and 2010 and then again between 2010 and 2013, from 48.2 percent in 2007 to 40.2 percent in 2013 (figure A).[1] This overall decline was driven by declines in both IRA and DC coverage, as there was little change in the fraction of families with a DB plan. Those families in the next 40 percent of the income distribution saw only a slight net decline in overall retirement plan participation between 2007 and 2013 and, between 2010 and 2013, experienced a slight increase in participation driven by increases in participation for all three classes of retirement assets. Families in the top 10 percent of the income distribution saw a slight increase in retirement plan participation from 2007 to 2013, reaching 94.6 percent in 2013, just topping the 94.1 percent seen in 2007.

Figure A. Participation in any retirement plan for families ages 35–64, 2007–13 surveys



The value of assets held within IRAs and DC plans are among the most significant components of many families' balance sheets and are a significant determinant of their future retirement security. The average combined IRA and DC pension balance for families owning those assets in the lowest income group was $39,100 in 2013. That figure is close to the 2010 average balance of $40,500 but down more than 20 percent from the 2007 value of $50,600 (table B). Those in the upper-middle income group saw an increase in their average total balance between 2007 and 2010. While there was little change in average balance from 2007 to 2010, between 2010 and 2013, the average balance for this group increased by approximately $20,000, or 16 percent, from $126,900 to $147,300. Average balances fell for those in the top income group, and particularly for those at the very top. For example, the fraction of families in the top 10 percent of the income distribution with retirement account balances exceeding $1,000,000 fell from 14 percent in 2010 to 9 percent in 2013.

continued on next page

Box 7. Retirement Accounts and Plan Participation—*continued*

Table B. Mean retirement savings among those with an IRA or DC pension, families ages 35–64, 2007–13 surveys

Thousands of 2013 dollars

	Conditional mean value		
	2007	2010	2013
All	**184.4**	**198.4**	**194.8**
Percentile of usual income			
0–49.9	50.6	40.5	39.1
50–89.9	125.6	126.9	147.3
90–100	485.0	539.3	446.1

[1] For a description of the usual income measure, see box 2, "Usual versus Actual Income."

Debt, Debt Burden, and Credit Market Experiences

The fractions of families holding any type of debt fell slightly between 2010 and 2013, from 74.9 percent to 74.5 percent, representing a continued decline in debt holding since 2007 (table 4).[27] The conditional median and mean value of debt held also fell between 2010 and 2013. The conditional median fell 20 percent, from $75,800 in 2010 to $60,400 in 2013. The conditional mean also fell, from $140,000 in 2010 to $122,300 in 2013, a decline of 13 percent.

Debt Holdings by Type

Between 2010 and 2013, the mix of debt held by families also changed. Fewer families held debt secured by a primary residence, and those that did have such types of debt owed smaller amounts. However, more families held education loans in 2013 than in 2010, and those with education loans owed larger amounts on the loans.

Paralleling the drop in homeownership, rates of holding of debt secured by a primary residence (hereafter, home-secured debt) fell between 2010 and 2013. The fraction of families with mortgages and other home-secured debt fell from 47.0 percent in 2010 to 42.9 percent in 2013. This decline was much larger than the 3.3 percent decrease in homeownership noted previously.

However, home-secured debt continued to be the most common type of debt held by families. The conditional median and mean values of home-secured debt also fell between 2010 and 2013. The conditional median value of home-secured debt fell 2 percent, from $117,500 to $115,000. The conditional mean value of home-secured debt fell 5 percent, from $165,400 to $156,700. The declines in holding and the conditional mean and median values of home-secured debt represented a continuation of declines seen between 2007 and 2010.[28] These declines also parallel the declines in home values seen between 2010 and 2013 (table 3), although the declines in the value of debt are much smaller than the declines in home values (2 percent versus 7 percent).

[27] See the appendix for a detailed definition of SCF liability categories.

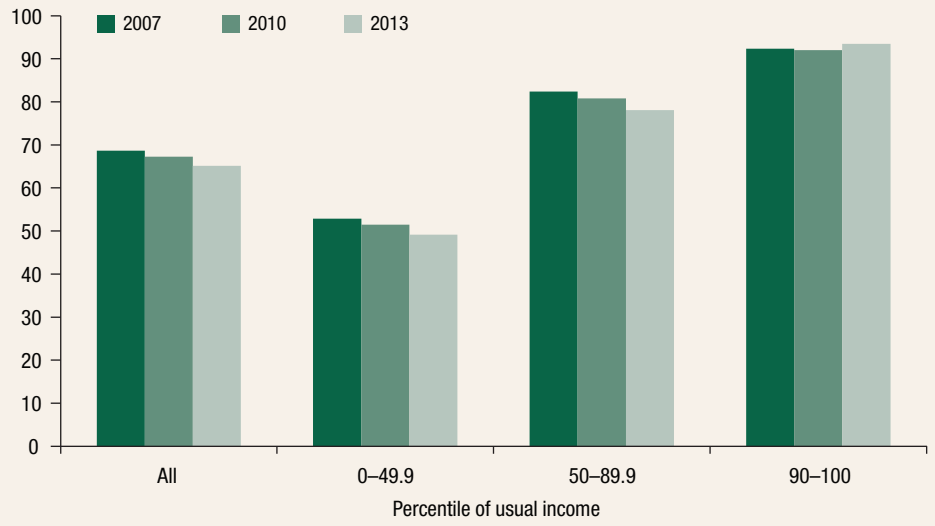
[28] Between 2007 and 2010, the fraction of respondents holding debt secured by a primary residence fell from 48.7 percent to 47.0 percent. Between 2007 and 2010, the conditional median value of home-secured debt fell 2.2 percent, and the conditional mean fell 1.2 percent.

Box 8. Homeownership and Net Housing Wealth

The percentage of families that owned their primary residence fell from 68.6 percent in 2007 to 65.2 percent in 2013 (figure A). The most recent time the Survey of Consumer Finances recorded a homeownership rate this low was 1995.[1] Across families grouped by percentile of usual income, there are large differences in homeownership rates, which tend to increase with usual income.[2] For families in the bottom half of the income distribution, the homeownership rate was 49.2 percent in 2013; for those in the top 10 percent by income, the homeownership rate was 93.5 percent in 2013.

Between 2007 and 2010, the homeownership rate fell across all usual income groups. Between 2010 and 2013, homeownership rates continued to fall for the bottom two income groups, however, for the top income group, homeownership rates rose between 2010 and 2013.

Figure A. Home Ownership Rate, 2007–13 surveys



For families that own their primary residence, mean net housing value—defined as the home's value less any debts on the home—declined between 2007 and 2013 (table B).[3] In 2007, among home-owning families, the average net housing wealth (value of the home minus outstanding mortgages) was $221,000. In 2013, that number had fallen to $159,400, a decline of 3.1 percent since 2010.

Across usual income groups, the mean net value of housing tends to increase as usual income rises. In 2013, the mean value of net housing wealth among homeowners in the bottom half of the income distribution was $92,400. For the top income group, the mean net value of housing was roughly five times larger, at $446,500.

Between 2007 and 2010, the mean net value of housing fell between 20 and 32 percent for all three usual income groups. Between 2010 and 2013, mean net housing value continued to fall for all three groups, but the magnitudes of the declines differed substantially. For the upper-middle income group, mean net housing was essentially unchanged between 2010 and 2013, falling just $600. For the bottom income group, net housing value fell 11 percent between 2010 and 2013, and for the top income group, net housing value fell 4 percent.

continued on next page

Box 8. Homeownership and Net Housing Wealth—*continued*

Table B. Mean net housing value for homeowners, 2007–13 surveys

Thousands of 2013 dollars

	Conditional mean value		
	2007	2010	2013
All	**221.0**	**164.5**	**159.4**
Percentile of usual income			
0–49.9	131.6	103.8	92.4
50–89.9	186.2	126.7	126.1
90–100	600.8	467.0	446.5

[1] The homeownership rate in 1995 was 64.7 percent; it rose to a peak of 69.1 percent in 2004.
[2] For a description of the usual income measure, see box 2, "Usual versus Actual Income."
[3] Survey of Consumer Finances respondents were asked to report the value of their home. Only primary residences were included. Debts on the home include any mortgages or home equity loans against the primary residence.

Lines of credit not secured by residential property were not widely held by families in either the 2010 or 2013 surveys, at around 2 percent of families. The decline in conditional debt outstanding among those with such debts are quite substantial, with both the median and mean values falling by about one-third between 2010 and 2013.

The fraction of families with education loans, and the conditional median and mean value of education loans, increased between 2010 and 2013, representing a continuation of the long-term trend of rising education debt. In 2010, 19.2 percent of families had an education loan. This share rose to 20.0 percent of families in 2013. The conditional median value of education loans rose 15 percent, from $13,900 in 2010 to $16,000 in 2013. The mean rose 5 percent, from $27,500 to $28,900.[29]

As discussed earlier, the fraction of families owning a vehicle fell slightly between 2010 and 2013, to 86.3 percent. At the same time, the fraction of families with vehicle loans increased slightly, and in 2013, 30.9 percent of families had vehicle loans. This finding represented a reversal of the trend between 2007 and 2010, when the fraction of families with a vehicle loan fell. Between 2010 and 2013, the conditional median value of vehicle loans rose 11 percent and the conditional mean fell 4 percent. This movement indicates that although fewer families have vehicles overall, families are beginning to take out more loans on vehicles.

Other installment loans, often associated with purchases of furniture, appliances, and other durable goods, were held by 11.5 percent of families in 2010, falling to 10.1 percent of families in 2013. The median balances on such loans decreased 9 percent between the two surveys, and the mean was effectively unchanged.

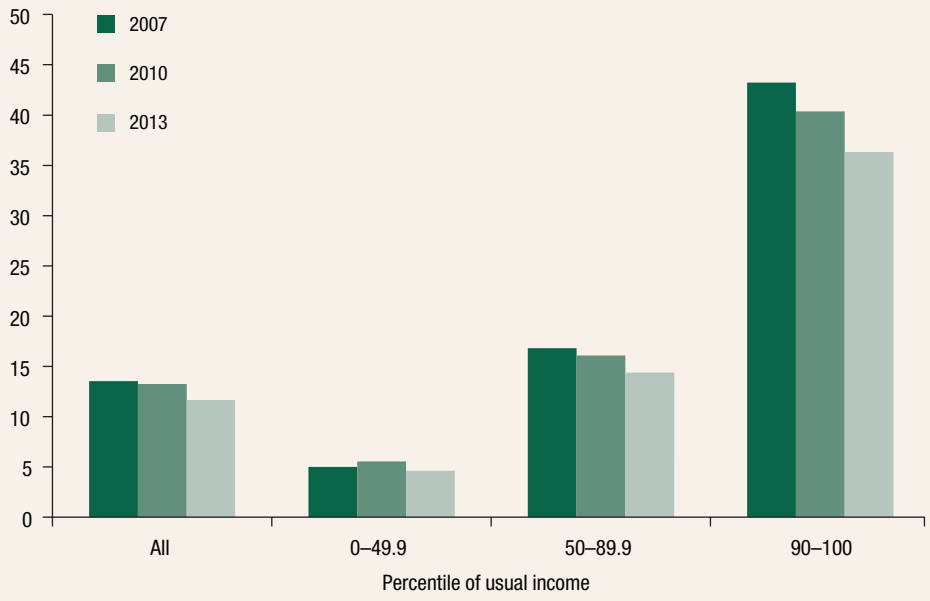
The fraction of families with outstanding balances on their credit cards fell between 2010 and 2013, representing a continuation of declines seen between 2007 and 2010. In 2010, 39.4 percent of families held credit card debt, while in 2010, 38.1 percent of families held credit card debt. The median family with a credit card balance carried $2,300 in 2013, down

[29] See box 10, "Education Debt," for more details.

Box 9. Holdings of Business Equity

The fraction of families that owned a privately held business fell 1.6 percentage points between 2010 and 2013, to 11.7 percent (figure A).[1] This level is the lowest ever recorded in the Survey of Consumer Finances, dating back to the 1989 survey. Ownership of business equity also decreased across all usual income groups between 2010 and 2013.[2] For the top two income groups, this decrease was a continuation of a decline from the levels in the 2007 survey. Families in the top income group saw the largest percentage point decline in business ownership, but the ownership level for this group, 36.3 percent, remains substantially higher than for other groups.

Figure A. Families with holdings of business equity, 2007–13 surveys



For families with business equity, the mean value increased substantially, going from $844,800 in 2010 to $973,900 in 2013, but it remained below the 2007 level (table B). Although the overall mean value of business equity increased from 2010 to 2013, a different picture emerges across usual income groups. Only families in the top income group experienced an increase in the mean value of business equity. The mean value of business equity for the upper-middle income group was approximately unchanged, while the bottom income group experienced a substantial decline in the mean value.

Table B. Family holdings of business equity, 2007–13 surveys

Thousands of 2013 dollars

	Conditional mean value		
	2007	2010	2013
All	**1062.5**	**844.8**	**973.9**
Percentile of usual income			
0–49.9	248.9	198.0	152.7
50–89.9	330.2	276.8	274.7
90–100	2672.5	2196.0	2604.0

continued on next page

Box 9. Holdings of Business Equity—*continued*

[1] The forms of business in this category are sole proprietorships, limited partnerships, other types of partnerships, S corporations and other types of corporations that are not publicly traded, limited liability companies, and other types of private businesses. If the surveyed family lived on a farm or ranch that was used at least in part for agricultural business, the value of that part, net of the corresponding share of associated debts, is included with other business assets.

[2] For a description of the usual income measure, see box 2, "Usual versus Actual Income."

18 percent from $2,800 in 2010. The mean balance fell from $7,600 in 2010 to $5,700 in 2013, a 25 percent drop.

Debt Burden

The ability of individual families to service their loans is a function of two factors: the level of their loan payments and the income and assets they have available to meet those payments. In planning their borrowing, families make assumptions about their future ability to repay their loans. Problems may occur when events turn out to be contrary to those assumptions. If such misjudgments are sufficiently large and prevalent, a broad pattern of default, restraint in spending, and financial distress in the wider economy might ensue (such as was seen in the period after the 2007 survey).

The SCF data can be used to construct three measures of debt burdens: leverage ratios, debt-to-income ratios, and payment-to-income ratios. Leverage ratios compare debts to assets, debt-to-income ratios compare total debt to income, and payment-to-income ratios compare total payments made on debt to income. All three ratios can be constructed either in aggregate or as a median for debtors.[30]

Table 4. Holding and values of debt items, 2010 and 2013 surveys
Thousands of 2013 dollars except as noted

Types of debts	Percent holding		Conditional median value			Conditional mean value		
	2010	2013	2010	2013	Percent change 2010–13	2010	2013	Percent change 2010–13
Any debt	**74.9**	**74.5**	**75.8**	**60.4**	**-20**	**140.0**	**122.3**	**-13**
Secured by residential property								
Primary residence	47.0	42.9	117.5	115.0	-2	165.4	156.7	-5
Other	5.3	5.2	105.0	90.0	-14	192.4	156.1	-19
Lines of credit not secured by residential property	2.1	1.9	6.4	4.4	-32	52.7	35.2	-33
Installment loans								
Education loans	19.2	20.0	13.9	16.0	15	27.5	28.9	5
Vehicle loans	30.2	30.9	10.7	11.9	11	15.2	14.6	-4
Other installment loans	11.5	10.1	3.6	3.3	-9	15.9	15.9	0
Credit card balances	39.4	38.1	2.8	2.3	-18	7.6	5.7	-25
Other	6.4	6.6	4.8	4.0	-17	18.0	14.6	-19

Note: See the appendix for definitions of liability categories used in the SCF.

[30] The aggregate is defined as the total amount of debt held/payments divided by the total assets held or income among all survey respondents. The median for debtors is defined as the median of each individual families' ratio among those carrying debt only.

Box 10. Education Debt

The level of education loan debt held by U.S. families has increased dramatically over the past decade. In the 2010 Survey of Consumer Finances (SCF), education loan debt surpassed vehicle loan debt as the largest source of nonmortgage debt owed by U.S. families, a trend that continues in the 2013 SCF (see table 4). The SCF provides the data necessary to look at the growth of education loans between the 2001 and 2013 surveys across income and education groups. The analysis presented here will focus on "young families," defined as those with a head of household younger than age 40 at the time of the survey.[1]

The fraction of young families with education debt increased from 22.4 percent to 38.8 percent between 2001 and 2013 (table A). Conditional on having education debt, the mean and median levels of education debt also increased substantially between 2001 and 2013.

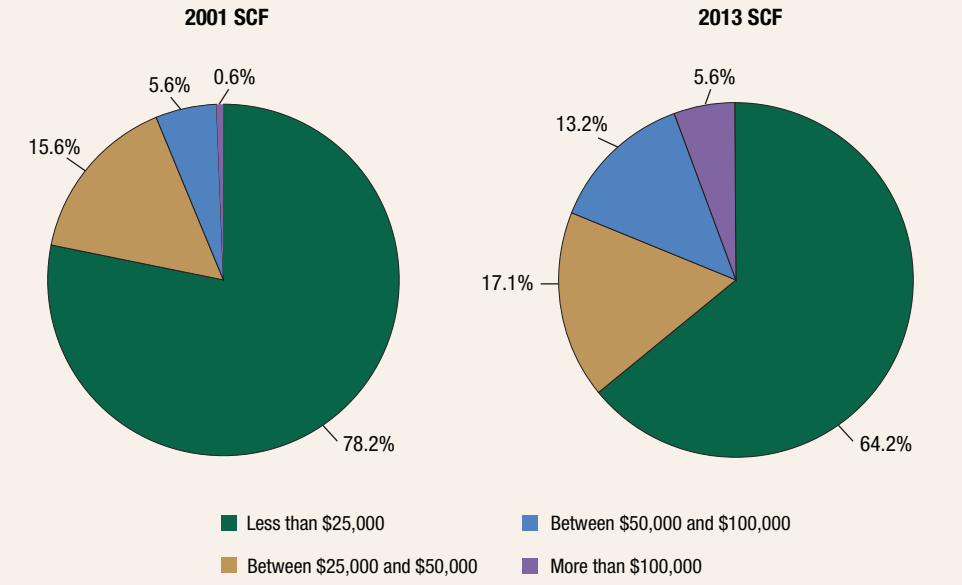
Table A. Education debt outstanding among young families, 2001 and 2013 surveys

Thousands of 2013 dollars except as noted

	2001	2013
Percent with education debt	22.4	38.8
Conditional mean education debt	16.9	29.8
Conditional median education debt	10.5	16.8

Despite this growth in education debt, the majority of young families with education debt owed less than $25,000 in both 2001 and in 2013 (figure B), and the share of families with large balances, though growing, is still relatively small.

Figure B. Distribution of education loan balances of young families, 2001 and 2013 surveys

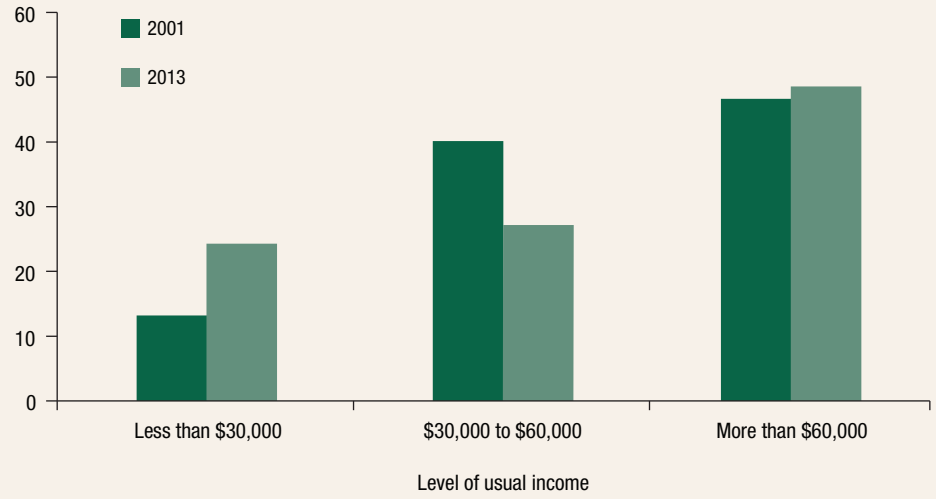


In 2013, nearly 50 percent of the education debt of young SCF families was held by families with usual income more than $60,000 (figure C), a share that was mostly unchanged between 2001 and 2013. However, compared with the 2001 survey, in 2013, a larger share of education debt was held by young SCF families with incomes of less than $30,000. About 24 percent of young families' education debt is held by those making less than $30,000, nearly double the share that these families held in 2001.[2]

continued on next page

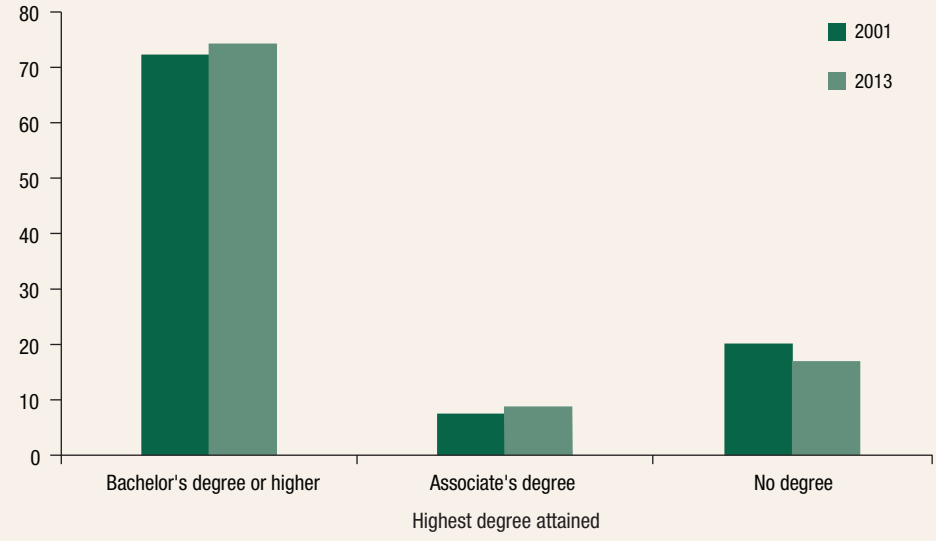
Box 10. Education Debt—*continued*

Figure C. Share of young families' education loan debt, by income group, 2001 and 2013 surveys



Highly educated young families continue to hold the majority of education debt in 2013 (figure D). Nearly three-fourths of young families' education debt is held by families where at least one member has a bachelor's degree or higher.

Figure D. Share of young families' education loan debt, by highest degree attained, 2001 and 2013 surveys



Although families without a degree in the 2013 SCF held roughly the same share of education debt that they did in 2001, the overall amount of debt that they held increased. At the same time, incomes for many families in this group (and other groups) were lower (see table 1). To get a sense of how these trends might affect repayment, it is useful to consider debt payment to income ratios for young families with and without degrees.

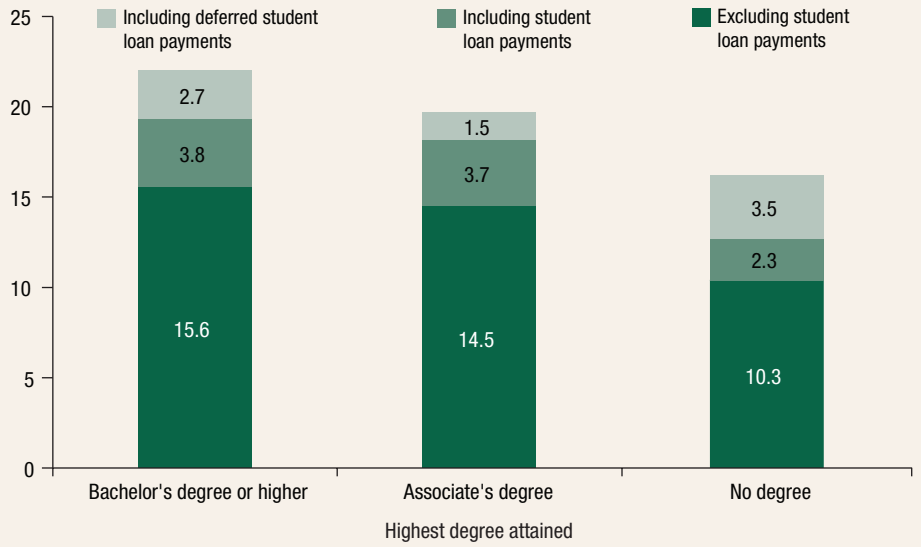
continued on next page

Box 10. Education Debt—*continued*

Young SCF families with education debt and with a bachelor's degree or higher use about 3.8 percent of their income to repay education debt (figure E). Debt payments are relatively low even though debt levels are increasing because a typical education loan repayment length is much longer than other debt terms (the mean repayment term in the 2013 SCF is 13 years). Debt payments are also low because families can defer education loans, a status that allows a temporary halt to payments on the loan.[3] If these families had to start paying on these deferred loans, they would use another 2.7 percent of income to repay education debt.[4]

Young families without a college degree use 2.3 percent of income to repay education debt. However, if those families had to start repaying their deferred loans, then they would use an additional 3.5 percent of income on education debt repayment. The use of deferments is currently helping these families to manage their education debt during tough economic times. However, because education loans are not generally dischargeable in bankruptcy, these debts will eventually have to be repaid.

Figure E. Average debt payment-to-average income, by highest degree attained, 2013 survey



[1] Note that the SCF does not sample institutional populations, such as college dorms, and thus it is not possible to track what is happening to education debt in situations where a non-primary economic unit child is solely responsible for the education debt.

[2] Young families with education debt in this income group generally have no college degree, though about one-fourth of these families held a bachelor's degree or higher in both the 2001 and 2013 SCF.

[3] There are several reasons why a borrower may be relieved from making current payments on an education loan, though the specific criteria vary across types of loans. For example, deferment is generally granted when the borrower is continuing his or her education. Deferment is often granted when the borrower is experiencing particular types of financial hardship, such as unemployment. There are also special categories of public service, such as the Peace Corps, the military, or selected medical and teaching positions, which qualify the borrower for relief from making current payments and sometimes ultimately qualify the borrower for loan forgiveness.

[4] A payment is not reported for most deferred loans in the SCF.

Table 5. Debt burdens and credit market experiences, 2001–13 surveys
Percent or thousands of 2013 dollars

Measure of debt burden/interaction with credit markets	2001	2004	2007	2010	2013
Debt burden					
Leverage ratio					
Aggregate	12.0	15.0	14.8	16.4	14.6
Median for debtors	29.4	34.7	34.8	41.3	38.6
Debt to income ratio					
Aggregate	80.1	111.6	115.2	124.7	104.6
Median for debtors	76.7	107.0	111.1	118.8	107.4
Payment to income ratio					
Aggregate	12.9	14.4	14.6	14.7	12.0
Median for debtors	16.7	18.1	18.7	18.1	15.9
Fraction with payment to income ratio greater than 40%	8.8	9.4	11.4	10.4	8.2
Credit market experiences					
Credit constrained					
Turned down for credit	17.0	17.5	16.7	17.4	16.4
Did not apply for credit for fear of being turned down	15.5	15.8	15.3	18.5	19.0
Either turned down for credit or feared denial	24.9	25.6	24.5	28.3	27.6
Late on payments					
Late on payments	14.0	16.3	20.8	17.3	14.9
Late on payments 60 days or more	5.3	6.9	5.5	8.1	6.9
Took out a payday loan in past year	n.a.	n.a.	2.4	3.9	4.2
Declared bankruptcy in past 5 years	4.3	4.4	3.8	3.6	4.1
Use credit cards for convenience only/do not carry a balance	57.9	56.6	56.2	63.0	64.0

n.a. Not available (relevant data not collected).
Note: See the appendix for a description of measures of debt burden and credit market experiences.

Leverage ratios, debt-to-income ratios, and payment-to-income ratios all rose between 2001 and 2010 and then fell between 2010 and 2013 (table 5).[31] Leverage ratios and debt-to-income ratios have not fallen back to levels seen in 2001, but payment-to-income ratios are lower than levels seen in 2001.

In 2013, the median leverage ratio for debtors was 38.6 percent, down from 41.3 percent in 2010 but still higher than the medians of 29.4 percent in 2001 or 34.8 percent in 2007. In aggregate, the leverage ratio in 2013 was 14.6 percent, higher than 2001 but lower than the 2004–10 period.

In 2013, the median debt-to-income ratio for debtors was 107.4 percent, down from the level seen in 2010 (118.8 percent). The level in 2013 is similar to that witnessed in 2004, and similar trends can be seen for the aggregate.

Payment-to-income ratios for the median debtor fell from 18.1 percent to 15.9 percent between 2010 and 2013.[32] The 2013 level is lower than what was observed in any of the survey years between 2001 and 2010. Similar trends held in the aggregate payment-to-income ratios.

[31] For definitions of the components of table 5, see the appendix.

[32] An alternative aggregate version of payment-to-income ratios is the debt service ratio. See Karen Dynan, Kathleen Johnson, and Karen Pence (2003), "Recent Changes to a Measure of U.S. Household Debt Service," *Federal Reserve Bulletin*, vol. 89 (October), pp. 417–26, www.federalreserve.gov/pubs/bulletin/2003/1003lead.pdf. A discussion of how this measure compares with the one presented here can be found in the appendix.

A limitation of using measures of debt burdens for the median debtor is that they may not be indicative of distress because they reflect the situation of a typical family. Unless errors of judgment by both families and lenders are pervasive, one would not expect to see signs of financial distress at the median. Thus, a more compelling indicator of distress is the proportion of families with unusually large debt burdens. In 2013, 8.2 percent of debtors had payment-to-income ratios greater than 40 percent. This value represents a decrease from 2010, when 10.4 percent of debtors had payment-to-income ratios of over 40 percent. The levels in 2013 are lower than those witnessed at any time between 2001 and 2010.

Credit Market Experiences

The SCF also collects various measures of respondents' recent experiences with credit markets, such as information on credit applications and payment behavior. Overall, SCF respondents' experiences with credit markets display a mixed picture. The fraction of respondents who were late on payments fell, while the fraction who took out a payday loan rose, and credit constraints eased slightly.

The SCF asks two questions intended to capture whether or not families are likely credit constrained: first, if the family was turned down for credit, and, second, if the family did not apply for credit for fear of being turned down. Overall, between 2010 and 2013, the fraction of families that responded "yes" to one or both of these questions fell from 28.3 percent in 2010 to 27.6 percent in 2013. This decrease indicates that, by this measure, fewer families were credit constrained in 2013 than in 2010. There was also a change in composition within this category between 2010 and 2013: More families reported not applying for fear of being turned down in 2013 than in 2010, while fewer families reported being turned down for credit in 2013 than in 2010. In fact, 2010 and 2013 were the first survey years that more families reported not applying for fear of being turned down (19 percent in 2013) than reported being turned down (16.4 percent in 2013).

The SCF also asks respondents if they have taken out a payday loan in the past year. Payday loans are unsecured loans that are typically small and short-term. Because these loans generally carry interest rates that far exceed those for conventional forms of credit, usage of payday loans is often a signal that an individual cannot obtain credit by other means. In 2013, 4.2 percent of families reported taking out a payday loan, up from 3.9 percent in 2010 and 2.4 percent in 2004, the first year the SCF asked respondents about usage of payday loans.

The SCF also collects information on families' debt payment behavior. Families that have any debt at the time of their interview are asked whether they were behind on any of their loan payments in the preceding year. In 2013, 14.9 percent of families reported being late on payments at all, down from 17.3 percent in 2010. The percent of families who reported being late on payments 60 or more days declined from 8.1 percent in 2010 to 6.9 percent. Compared with 2001, more families reported being late on payments at all in 2013, and more reported being late 60 or more days.

An additional measure of financial distress and problems managing debt is bankruptcy. The SCF asks respondents if they have declared bankruptcy in the past five years. In 2013, 4.1 percent of families reported having declared bankruptcy in the past five years, up from 3.6 percent in 2010 but down from 4.3 percent in 2001.

A final measure of debt payment behavior covered in the SCF is whether a family uses credit cards for convenience only, or carries a balance month to month. In 2013, 64 percent of families reported using credit cards for convenience only (not carrying a balance), up from 57.9 percent in 2001 and 63 percent in 2010.

Appendix: Survey Procedures and Statistical Measures

The 2013 data used here are derived from the final internal version of the survey information. Data from this survey, suitably altered to protect the privacy of respondents, along with additional tabulations of data from the surveys beginning with 1989, are expected to be available in September 2014 on the Federal Reserve Board's website.[33]

As part of the general reconciliations required for this article, the survey data were compared with many external estimates. One particularly important comparison is between the Survey of Consumer Finances (SCF) and the Federal Reserve's Statistical Release Z.1, Financial Accounts of the United States, for the household sector.[34] This comparison suggests that when the definitions of the variables in the two sources are adjusted to a common conceptual basis, the estimates of totals in the two systems tend to be close. The data series in the SCF and in Statistical Release Z.1 usually show very similar growth rates.[35] In general, the income and net worth data from the SCF can be compared with those of other surveys only in terms of the medians because of the special design of the SCF sample.[36]

Adjustment for Inflation

In this article, all dollar amounts from the SCF are adjusted to 2013 dollars using the "current methods" version of the CPI for all urban consumers. In an ongoing effort to improve accuracy, the Bureau of Labor Statistics has introduced several revisions to its CPI methodology. The current-methods index attempts to extend these changes to earlier years to obtain a series as consistent as possible with current practices in the official CPI.[37] To

[33] Data from the 2013 SCF as well as links to the data used in this article for earlier periods and links to working papers describing statistical methodologies are available on the Board's public website at www.federalreserve.gov/econresdata/scf/scfindex.htm.

Results reported in this article for earlier surveys may differ from the results reported in earlier articles because of additional statistical processing, correction of data errors, revisions to the survey weights, conceptual changes in the definitions of variables used in the articles, and adjustments for inflation.

[34] See Board of Governors of the Federal Reserve System (2014), Statistical Release Z.1, "Financial Accounts of the United States" (June 5), www.federalreserve.gov/releases/z1.

[35] For details on how these comparisons are structured and the results of comparisons for earlier surveys, see Alice M. Henriques and Joanne W. Hsu (2013), "Analysis of Wealth Using Micro and Macro Data: A Comparison of the Survey of Consumer Finances and Flow of Funds Accounts," Finance and Economics Discussion Series 2013-46 (Washington: Board of Governors of the Federal Reserve System, May), www.federalreserve.gov/pubs/feds/2013/201346/201346pap.pdf.

[36] Family incomes are a good example of issues that arise when comparing SCF means and medians against other survey estimates. Over the 2010–13 period, estimates of inflation-adjusted household income for the previous year from the Current Population Survey (CPS) of the U.S. Census Bureau show a decrease in both the median (negative 7.3 percent) and the mean (negative 5.7 percent). The change in median is slightly larger in absolute terms than the corresponding decline in the SCF, though the SCF shows an increase in the mean. The medians for 2013 are similar in the SCF ($46,700) and the CPS ($51,000). Typically, the SCF shows a higher level of mean income than does the CPS; for 2013, the SCF yields an estimate of $87,200, while the CPS yields an estimate of $71,000. The two surveys differ in their definitions of the units of observation and in other aspects of their methodologies. Most relevant is the fact that a CPS household can contain more people than a corresponding SCF family. If the SCF measure is expanded to include the income of household members not included in the SCF definition of a family, the median falls 5.1 percent over the period (from $52,400 in 2010 to $49,700 in 2013), while the mean rises 3.2 percent (from $86,900 in 2010 to $89,700 in 2013). The substantial difference in mean levels is likely the result of the truncation of large values in the CPS data above a certain amount, which is done with the intent of minimizing the possibility that participants in that survey might be identifiable.

[37] For technical information about the construction of this index, see Kenneth J. Stewart and Stephen B. Reed (1999), "Consumer Price Index Research Series Using Current Methods, 1978–98," *Monthly Labor Review*, vol. 122 (June), pp. 29–38.

adjust assets and liabilities to 2013 dollars and to adjust family income for the preceding calendar year to 2013, the figures given in the following table were applied:

Survey year	Adjustment factor for assets and debts in the survey year	Adjustment factor for income in the calendar year before the survey year
2001	1.3132	1.3501
2004	1.2331	1.2665
2007	1.1228	1.1546
2010	1.0717	1.0894
2013	1.0000	1.0145

Definition of "Family" in the Survey of Consumer Finances

The definition of "family" used throughout this article differs from that typically used in other government studies. In the SCF, a household unit is divided into a primary economic unit (PEU)—the family—and everyone else in the household. The PEU is intended to be the economically dominant single person or couple (whether married or living together as partners) and all other persons in the household who are financially interdependent with that economically dominant person or couple.

This report also designates a head of the PEU, not to convey a judgment about how an individual family is structured but as a means of organizing the data consistently. If a couple is economically dominant in the PEU, the head is the male in a mixed-sex couple or the older person in a same-sex couple. If a single person is economically dominant, that person is designated as the family head in this report.

Asset and Liability Categories in the Survey of Consumer Finances

The specific concepts of asset and liability categories in the SCF are necessarily tied to the survey question wording and associated field interviewer instructions, both of which can be found in the SCF codebook for the year(s) in question.[38] What follows is a general exposition of the asset and liability categories reported in the tables.

Transaction accounts include checking, savings, and money market deposit accounts; money market funds; and call or cash accounts at brokerages. Call accounts include those that hold money received from the sale of securities until the money is reinvested. The savings account category includes a relatively small number of tax-preferred accounts such as medical or health savings accounts and Coverdell or 529 education accounts.

Certificate of deposits are accounts that are held for a set period of time that must be cashed or renewed at the maturity date. Savings bonds include only U.S. government issues; recent series include EE, HH, and I, and older bonds may be series E and H. Other bonds include only those held directly (not part of a managed investment account or bond fund) and include corporate and mortgage-backed bonds; federal, state, and local government bonds; and foreign bonds. Stocks include publicly traded stocks that are directly held—that is, corporate equities not held as part of a managed investment account or mutual fund.

Pooled investment funds include stock funds, tax-free bond funds, government bond funds, other bond funds, and any combinations thereof, but exclude money market funds and indirectly held mutual funds. These funds include all other types of directly held pooled investments, such as traditional open-end and closed-end mutual funds, real estate investment trusts, and hedge funds.

[38] Codebooks for each SCF wave can be found at www.federalreserve.gov/econresdata/scf/scfindex.htm.

Retirement accounts include IRAs, Keogh accounts, and certain employer-sponsored accounts, such as 401(k), 403(b), and thrift savings accounts from current or past jobs; other current job plans from which loans or withdrawals can be made; and accounts from past jobs from which the family expects to receive the account balance in the future. This definition of employer-sponsored plans is intended to confine the analysis to accounts that are portable across jobs and for which families will ultimately have the option to withdraw the balance. Usually, such accounts may be invested in virtually any asset, including stocks, bonds, pooled investment funds, options, and real estate. In principle, employer-sponsored plans may be invested in a similarly broad way, but, in practice, a person's choices for investment are sometimes limited to a narrower set of assets.[39]

Cash value life insurance is the current (nonzero) value of any life insurance policies with a cash value that can be withdrawn. The survey measures the value of such policies according to their current cash value, not their death benefit. In this article, the cash value is included as an asset only when the cash value at the time of the interview was nonzero. This designation excludes term life insurance policies, which only provide a death benefit.

Other managed assets include personal annuities and trusts with an equity interest and managed investment accounts. Annuities may be those in which the family has an equity interest in the asset or in which the family possesses an entitlement only to a stream of income. The wealth figures in this article include only the annuities in which the family has an equity interest.[40] The trusts or managed investment accounts included in other managed assets are those in which families have an equity interest and for which components were not separately reported. Typically, such accounts are those in which the ownership is complicated or the management is undertaken by a professional.[41]

Other financial assets include oil and gas leases, futures contracts, royalties, proceeds from lawsuits or estates in settlement, and loans made to others. One specific financial asset excluded from this category and any other is employment-related stock options. Because such options are typically not publicly traded, or their execution is otherwise constrained, their value is uncertain until the exercise date; until then, meaningful valuation would require complex assumptions about the future behavior of stock prices.

[39] Although tax-deferred retirement assets are clearly an important element in retirement planning, families may hold a variety of other assets that are intended, at least in part, to finance retirement. Two common and often particularly important types of retirement plans are not included in the assets described in this section: Social Security (the federally funded Old-Age and Survivors' Insurance program (OASI)) and employer-sponsored defined-benefit plans. OASI is well described elsewhere, and it covers the great majority of the population (See Social Security Administration, "Online Social Security Handbook: Your Basic Guide to the Social Security Programs," Publication 65-008, www.ssa.gov/OP_Home/handbook.) The retirement income provided by defined-benefit plans is typically based on workers' salaries and years of work with an employer, a group of employers, or a union. Unfortunately, future income streams from OASI and defined-benefit plans cannot be translated directly into a current value because valuation depends critically on assumptions about future events and conditions—work decisions, earnings, inflation rates, discount rates, mortality, and so on—and no widely agreed-upon standards exist for making these assumptions.

[40] In 2013, 4.8 percent of families reported having any type of annuity, and of these families, 80.7 percent reported having an equity interest.

[41] In 2013, 81.5 percent of families with trusts or managed investment accounts had an equity interest in such an account. The survey encourages respondents who have trusts or managed investment accounts that are held in relatively common investments to report the components separately. Of the 4.3 percent of families that reported having any kind of trust or managed investment account in 2013, 54.9 percent of them reported at least one of the component assets separately. Of families that detailed the components in 2013, 88.5 percent reported some type of financial asset, 10.8 percent reported a primary residence, 11.0 percent reported other real estate, 7.5 percent reported a business, and 0.1 percent reported another type of asset. The fraction of these families reporting the primary residence as a component of a trust decreased 0.5 percentage points between 2010 and 2013, and the fraction reporting a business increased 2.5 percentage points.

Vehicles include cars, vans, sport utility vehicles, trucks, motor homes, recreational vehicles, motorcycles, boats, airplanes, and helicopters.[42] Primary residences include mobile homes and their sites, the parts of farms and ranches not used for farming or ranching business, condominiums, cooperatives, townhouses, other single-family homes, and other permanent dwellings. Other residential property includes second homes, time-shares, one- to four-family rental properties, and other types of residential properties. It also includes outstanding balances on loans that the family may have made to finance the sale of properties they previously owned and which are still owed to the family.

Nonresidential real estate includes the following types of properties unless they are owned through a business: commercial property, rental property with five or more units, farm and ranch land, undeveloped land, and all other types of nonresidential real estate. Most often, nonresidential real estate properties are functionally more like a business than a residential property. They may have several owners, they are typically worth a considerable amount, and they often carry large mortgages, which appear to be paid using the revenues from the property, not the family's other income. As in the case of privately owned businesses, the value of the property in this analysis is taken to be the net value.

Business equity includes net worth in the following forms of business: sole proprietorships, limited partnerships, other types of partnerships, S corporations and other types of corporations that are not publicly traded, limited liability companies, and other types of private businesses. If the family lived on a farm or ranch that was used at least in part for agricultural business, the value of that part, net of the corresponding share of associated debts, is included with other business assets. In the survey, self-employment status and business ownership are independently determined.[43]

Debt secured by residential property consists of first-lien and junior-lien mortgages and home equity lines of credit (HELOCs) secured by the primary residence. For purposes of this article, first- and junior-lien mortgages consist only of closed-end loans—that is, loans typically with a one-time extension of credit, a set frequency of repayments, and a required repayment size that may be fixed or vary over time in accordance with a pre-specified agreement or with changes in a given market interest rate.[44] As a type of open-ended credit, HELOCs typically allow credit extensions at the borrower's discretion subject to a prearranged limit and allow repayments at the borrower's discretion subject to a prearranged minimum size and frequency.

Lines of credit not secured by residential property are any lines of credit except HELOCs and borrowing on credit cards.

The term "installment loan" describes closed-end consumer loans—that is, loans that typically have fixed payments and a fixed term. The most common examples are education loans; automobile loans; and loans for furniture, appliances, and other durable goods. Other installment loans include all closed-end consumer loans that are not for education or a vehicle—that is, loans that typically have fixed payments and a fixed term. Examples include loans for furniture, appliances, and other durable goods.

[42] Of families owning any type of vehicle in 2013, 99.7 percent had a car, van, sport utility vehicle, motorcycle, or truck. The remaining types of vehicles were held by 12.7 percent of families.

[43] Among the 11.7 percent of families with a business in 2013, 68.3 percent had a family head or the spouse or partner of the head who was self-employed; among the 11.3 percent of families in which either the head or the spouse or partner of the head was self-employed, 70.5 percent owned a business.

[44] Of all families, 41.0 percent had a first-lien mortgage in 2013 (44.6 percent in 2010), 2.7 percent had a junior-lien mortgage (3.9 percent in 2010), 7.5 percent had a HELOC (10.3 percent in 2010), and 5.0 percent had a HELOC with an outstanding balance (7.2 percent in 2010).

Credit card balances consist of balances on bank-type cards (such as Visa, MasterCard, and Discover as well as Optima and other American Express cards that routinely allow holders to carry a balance), store cards or charge accounts, gasoline company cards, so-called travel and entertainment cards (such as American Express cards that do not routinely allow holders to carry a balance and Diners Club), other credit cards, and revolving store accounts that are not tied to a credit card. Balances exclude purchases made after the most recent bill was paid.

The "other" debt category comprises loans on cash value life insurance policies, loans against pension accounts, borrowing on margin accounts, and a miscellaneous category largely comprising personal loans not explicitly categorized elsewhere.

Finally, the SCF measure of liabilities excludes debt owed by family-owned businesses and debt owed on nonresidential real estate; in this article, such debt is netted against the corresponding assets.

Measures of Debt Burden and Credit Market Experiences in the Survey of Consumer Finances

The SCF includes several questions designed to capture information about respondents' debt burdens and interactions with credit markets. The specific concepts addressed in the SCF are necessarily tied to the survey question wording and associated field interviewer instructions, which can be found in the SCF codebook for the year(s) in question.[45] What follows is a general exposition of the debt burden and credit market experience measures reported in the tables.

Leverage ratios compare the total of all debts to the total of all assets. The aggregate version of this measure is the sum of all debts for all SCF respondents, divided by the sum of all assets for SCF respondents. The median for debtors is the median of each individual family's leverage ratio and is calculated for those with positive values of total debt only.

The aggregate debt-to-income ratio is the sum of liabilities for all SCF respondents, divided by the total income for all SCF respondents. The median for debtors is the 50th percentile of an individual family's debt-to-income ratios and is calculated for those with positive values of total debt only.

Payment-to-income ratios measure total debt payments relative to total income.[46] The aggregate version of this measure is the sum of all debt payments for all SCF respondents, divided by total income for all SCF respondents. The median for debtors is the 50th percentile of an individual family's payment-to-income ratios and is calculated for those with positive values of total debt only.

It should be recognized that the aggregate measure of payment-to-income ratios that is referenced in this article can differ from aggregate measures constructed from other sources such as the debt service ratio.[47] The survey measure of payments relative to income can differ from the aggregate-level measure for several reasons. First, the debt payments included in each measure are different. The aggregate-level measure includes only debts originated

[45] Codebooks for each SCF wave can be found at www.federalreserve.gov/econresdata/scf/scfindex.htm.

[46] The definition of debt payments in the SCF does not include payments on leases or rental payments. The survey collects information on vehicle lease payments and rent on primary residences, and, thus, in principle a broader measure of debt payments could be constructed, one that would be similar to the "financial obligations ratio" estimated by the Federal Reserve staff.

[47] See Dynan and others, "U.S. Household Debt Service," in note 32.

by depositories, finance companies, and other financial institutions, whereas the survey includes, in principle, debts from all sources. Second, the aggregate-level measure uses an estimate of disposable personal income from the national income and product accounts for the period concurrent with the estimated payments as the denominator of the ratio, whereas the survey measure uses total before-tax income reported by survey families for the preceding year; the differences in these two income measures are complex. Third, the payments in the aggregate-level measure are estimated using a formula that entails many assumptions about minimum payments and the distribution of loan terms at any given time; the survey measure of payments is directly asked of the survey respondents but may also include payments of taxes and insurance on real estate loans. Fourth, because the survey measures of payments and income are based on the responses of a sample of respondents, they may be affected both by sampling error and by various types of response errors. As mentioned earlier in this article, the survey income measure tracks the most comparable measure of income in the Census Bureau's Current Population Survey (CPS).

The SCF asks two questions that are intended to capture whether or not families are credit constrained, which is broadly defined as having difficulty accessing credit. The first question asks the respondent if the family was turned down for credit at any point in the past year. The second asks if, within the past year, the family did not apply for credit for fear of being turned down. A combination of these two questions is used to measure overall credit constraints.

Delinquency on debt obligations is captured by asking families that have any debt at the time of their interview whether or not they have been behind in any of their loan payments in the preceding year. The survey asks if respondents have been behind at all and if they have been behind in payments for 60 or more days.

Payday loans are defined as loans that are meant to be repaid in full out of the respondent's next paycheck; they are unsecured loans that are typically small, short-term, and carry above-average interest rates.

Bankruptcy behavior is a retrospective question in which the respondent reports whether or not he had declared bankruptcy at any time in the past five years.

Finally, convenience use of credit cards is determined using questions on whether or not a respondent had positive balances after the most recent payment for bank-type cards (such as Visa, MasterCard, and Discover as well as Optima and other American Express cards that routinely allow holders to carry a balance), store cards, gasoline company cards, so-called travel and entertainment cards (such as American Express cards that do not routinely allow holders to carry a balance and Diners Club), and other credit cards.

Percentiles of the Distributions of Income and Net Worth

Throughout this article, references are made to various percentile groups of the distributions of income or net worth. For a given characteristic, a percentile can be used to define a family's rank relative to other families. For example, the 10th percentile of the distribution of usual income is the amount of income received by a family for whom less than 10 percent of other families have lower incomes and 90 percent have higher incomes. The

percentiles of the distributions of income and net worth used to define the income and net worth groups in table 1 and table 2 in the article are given in the following table:

Item	Survey year				
	2001	2004	2007	2010	2013
Percentile of usual income					
20	24,300	25,800	25,200	26,200	23,300
40	43,200	44,300	43,300	43,600	40,500
60	67,500	69,700	69,300	67,500	63,100
80	108,000	112,700	110,200	108,900	104,500
90	155,300	164,600	155,900	163,400	154,600
Percentile of net worth					
25	16,800	16,400	15,900	8,900	8,800
50	113,700	114,800	135,400	82,800	81,200
75	377,000	405,900	418,600	323,300	317,300
90	972,000	1,028,400	1,022,100	1,020,800	941,700

The groups that are created when a distribution is divided at every 10th percentile are commonly referred to as deciles. Similarly, when a distribution is divided at every 20th (25th) percentile, the groups are known as quintiles (quartiles). Families in the first income decile, for example, are those with income below the 10th percentile.

Racial and Ethnic Identification

In this article, the race and ethnicity of a family in the SCF are classified according to the self-identification of that family's original respondent to the SCF interview. The questions underlying the method of classification used in the survey were changed in both 1998 and 2004. Starting in 1998, SCF respondents were allowed to report more than one racial identification; in surveys before then, only one response was recorded. For maximum comparability with earlier data, respondents reporting multiple racial identifications were asked to report their strongest racial identification first. In the 2013 SCF, 6.1 percent of respondents reported more than one racial identification, up from 5.4 percent in 2007 and 2.3 percent in 2004.

Beginning with the 2004 survey, the question on racial identification is preceded by a question on whether respondents consider themselves to be Hispanic or Latino in culture or origin; previously, such ethnic identification was captured only to the extent that it was reported as a response to the question on racial identification. The sequence of these two questions in the 2004 SCF is similar to that in the CPS. When families in the March 2004 CPS are classified in a way that is most compatible with the SCF, the proportion of Hispanic families is 10.5 percent; the 2004 SCF estimate is 11.2 percent. Differences in these proportions are attributable to sampling error and possibly to differences in the wording and context of the questions.

For greater comparability with earlier SCF data, the data reported in this article ignore the information on ethnic identification available in the surveys since 2004, but respondents reporting multiple racial identifications in the surveys starting with 1998 are classified as "non-white or Hispanic." Of those who responded affirmatively to the question on Hispanic or Latino identification in 2013, 88.1 percent also reported "Hispanic or Latino" as one of their racial identifications, and 80.1 percent reported it as their primary racial identification. Because the question on Hispanic or Latino ethnicity precedes the one on racial

identification in the surveys from 2004 through 2013, the answer to the second of these two questions may have been influenced by the answer to the first.[48]

The Sampling Techniques

The survey is expected to provide a core set of data on family income, assets, and liabilities. The major aspects of the sample design that address this requirement have been constant since 1989. The SCF combines two techniques for random sampling. First, a standard multistage area-probability sample (a geographically based random sample) is selected to provide good coverage of characteristics, such as homeownership, that are broadly distributed in the population.

Second, a supplemental sample is selected to disproportionately include wealthy families, which hold a relatively large share of such thinly held assets as noncorporate businesses and tax-exempt bonds. Called the "list sample," this group is drawn from a list of statistical records derived from tax returns. These records are used under strict rules governing confidentiality, the rights of potential respondents to refuse participation in the survey, and the types of information that can be made available. Persons listed by *Forbes* magazine as being among the wealthiest 400 people in the United States are excluded from sampling.

Of the 6,026 interviews completed for the 2013 SCF, 4,568 were from the area-probability sample, and 1,458 were from the list sample; for 2010, 5,012 were from the area-probability sample, and 1,480 were from the list sample. The number of families represented in the surveys considered in this article is given by the following table:

Year	Number of families represented (millions)
2001	106.5
2004	112.1
2007	116.1
2010	117.6
2013	122.5

Overall population growth between 2010 and 2013 was 2.4 percent, according to figures from the Census Bureau, down slightly from the 2.5 percent growth rate between 2007 and 2010. Also according to Census Bureau estimates, the number of households increased 4.2 percent between 2010 and 2013—well above the greatly diminished rate of household formation between 2007 and 2010, which was 1.3 percent. With the population growing more slowly than household formation, the average number of persons per household fell slightly, from 2.63 people in 2010 to 2.58 in 2013.

The Interviews

Aside from the addition of new questions in the 2010 survey to address the financial relationships of businesses that are not publicly traded, the survey questionnaire has changed in only minor ways since 1989, except in a small number of instances in which the structure was altered to accommodate changes in financial behaviors, in types of financial arrangements available to families, and in regulations covering data collection. In these cases and in all earlier ones, every effort has been made to ensure the maximum degree of com-

[48] For a comprehensive discussion of standards for defining race and ethnicity, see Executive Office of the President, Office of Management and Budget (2002), "Provisional Guidance on the Implementation of the 1997 Standards for Federal Data on Race And Ethnicity," guidance document (Washington: Executive Office of the President, December 15), www.whitehouse.gov/sites/default/files/omb/assets/information_and_regulatory_affairs/re_guidance2000update.pdf.

parability of the data over time. Except where noted in the article, the data are highly comparable over time.

The generosity of families in giving their time for interviews has been crucial to the ongoing success of the SCF. In the 2010 SCF, the median interview length was about 85 minutes. However, in some particularly complicated cases, the amount of time needed was substantially more than three hours. The role of the interviewers in this effort is also critical. Without their dedication and perseverance, the survey would not be possible.

The SCF interviews were conducted largely between the months of May and December in each survey year by NORC, a social science and survey research organization at the University of Chicago. The majority of interviews were obtained in person, although interviewers were allowed to conduct telephone interviews if that was more convenient for the respondent. Each interviewer used a program running on a laptop computer to administer the survey and collect the data.

The use of computer-assisted personal interviewing has the great advantage of enforcing systematic collection of data across all cases. The computer program developed to collect the data for the SCF was tailored to allow the collection of partial information in the form of ranges whenever a respondent either did not know or did not want to reveal an exact dollar figure.

The response rate in the area-probability sample is more than double that in the list sample. In both 2010 and 2013, about 70 percent of households selected for the area-probability sample actually completed interviews. The overall response rate in the list sample was about one-third; in the part of the list sample likely containing the wealthiest families, the response rate was only about one-half that level.

Weighting

To provide a measure of the frequency with which families similar to the sample families could be expected to be found in the population of all families, an analysis weight is computed for each case, accounting both for the systematic properties of the sample design and for differential patterns of nonresponse. The SCF response rates are low by the standards of some other major government surveys, and analysis of the data confirms that the tendency to refuse participation is highly correlated with net worth. However, unlike other surveys, which almost certainly also have differential nonresponse by wealthy households, the SCF has the means to adjust for such nonresponse. A major part of SCF research is devoted to the evaluation of nonresponse and adjustments for nonresponse in the analysis weights of the survey.[49]

Sources of Error

Errors may be introduced into survey results at many stages. Sampling error—the variability expected in estimates based on a sample instead of a census—is a particularly important source of error. Such error can be reduced either by increasing the size of a sample or, as is done in the SCF, by designing the sample to reduce important sources of variability. Sampling error can be estimated, and for this article we use replication methods to do so.

[49] The weights used in this article are adjusted for differential rates of nonresponse across groups. See Arthur B. Kennickell (1999), "Revisions to the SCF Weighting Methodology: Accounting for Race/Ethnicity and Homeownership," working paper (Washington: Board of Governors of the Federal Reserve System, January), www.federalreserve.gov/econresdata/scf/scf_workingpapers.htm.

Replication methods draw samples, called replicates, from the set of actual respondents in a way that incorporates the important dimensions of the original sample design. In the SCF, weights were computed for all of the cases in each of the replicates.[50] Every value for which standard errors are reported in this article is a weighted statistic estimated using the replicate samples. To estimate the overall standard error, a measure of the variability of these estimates is combined with a measure of the variability because of imputation for missing data.

Other errors include those that interviewers may introduce by failing to follow the survey protocol or misunderstanding a respondent's answers. SCF interviewers are given lengthy, project-specific training and ongoing coaching to minimize such problems. Respondents may introduce error by interpreting a question in a sense different from that intended by the survey. For the SCF, extensive pretesting of questions and thorough review of the data tend to reduce this source of error.

Nonresponse—either complete nonresponse to the survey or nonresponse to selected items within the survey—may be another important source of error. As noted in more detail previously, the SCF uses weighting to adjust for differential nonresponse to the survey. To address missing information on individual questions within the interview, the SCF uses statistical methods to impute missing data; the technique makes multiple estimates of missing data to allow for an estimate of the uncertainty attributable to this type of nonresponse.

[50] See Arthur B. Kennickell (2000), "Revisions to the Variance Estimation Procedure for the SCF," working paper (Washington: Board of Governors of the Federal Reserve System, October), www.federalreserve.gov/econresdata/scf/scf_workingpapers.htm.

Errata

The authors revised this article on September 5, 2014, to correct the following:

- On p. 3, in figure 2, the mean value for the 2010–13 range was corrected to zero.
- On p. 15, in box 5, table B, the date range in the table title was corrected to 2007–13.