Federal Reserve
BULLETIN
September 2020
Vol. 106, No. 5
Board of Governors of the Federal Reserve System
www.federalreserve.gov

Changes in U.S. Family Finances from 2016 to 2019: Evidence from the Survey of Consumer Finances

Neil Bhutta, Jesse Bricker, Andrew C. Chang, Lisa J. Dettling, Sarena Goodman, Joanne W. Hsu, Kevin B. Moore, Sarah Reber, Alice Henriques Volz, and Richard A. Windle, of the Board's Division of Research and Statistics, prepared this article with assistance from Kathy Bi, Jacqueline Blair, Julia Hewitt, and Dalton Ruh.

The Federal Reserve Board's triennial Survey of Consumer Finances (SCF) collects information about family income, net worth, balance sheet components, credit use, and other financial outcomes.[1] The 2019 SCF reveals improvements in economic well-being among large parts of the income and wealth distributions since the previous time the survey was conducted in 2016, and many groups with historically lower income and wealth saw relatively large gains.[2]

During the three years between the beginning of the 2016 and 2019 surveys, real gross domestic product grew at an annual rate of 2.5 percent, and the civilian unemployment rate fell from 5.0 percent to 3.8 percent.[3] These changes in aggregate economic performance were unevenly reflected in the income of families with different characteristics. Several observations from the SCF about real family income, which is measured for the year before the survey, stand out:

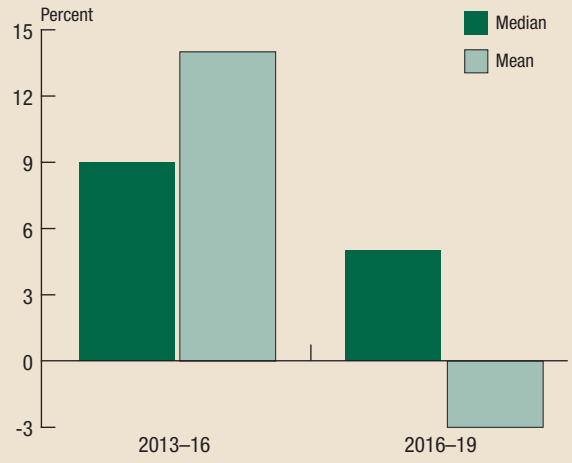
- Between 2016 and 2019, median family income rose 5 percent, and mean family income decreased 3 percent (figure 1). These changes suggest that the income distribution narrowed slightly over the period, particularly as the decrease in mean income was mainly driven by families in the top 1 percent of the income distribution (see box 1, "The Data Used in This Article"). These patterns stand in contrast to the 2010–16 period, during which mean income growth vastly outpaced median income growth and the income distribution widened considerably.
- Between 2016 and 2019, families that were high wealth, had a college education, or identified as White non-Hispanic experienced proportionally smaller income growth than other groups of families but continued to have the highest income:

[1] For a general description of the SCF data, see box 1, "The Data Used in This Article." The appendix provides a summary of key technical aspects of the survey.

[2] For a detailed discussion of the 2016 survey as well as references to earlier surveys, see Jesse Bricker, Lisa J. Dettling, Alice Henriques, Joanne W. Hsu, Lindsay Jacobs, Kevin B. Moore, Sarah Pack, John Sabelhaus, Jeffrey Thompson, and Richard Windle (2017), "Changes in U.S. Family Finances from 2013 to 2016: Evidence from the Survey of Consumer Finances," *Federal Reserve Bulletin,* vol. 103 (September), https://www.federalreserve.gov/publications/files/scf17.pdf.

[3] Against this backdrop, the annual rate of change in the consumer price index averaged 2.2 percent. Changes in aggregate statistics reported here are measured from March to March or first quarter to first quarter of the respective survey years, just before the beginning of the field period for each survey.

Figure 1. Change in median and mean family incomes, 2013–19 surveys



Note: Changes are based on inflation-adjusted dollars.
Source: Here and in subsequent figures and tables, Federal Reserve Board, Survey of Consumer Finances.

— In grouping families by wealth, families at the top of the distribution experienced a sharp decline in average income (following particularly outsized gains over the 2010–16 period), whereas families in the lower and middle portions of the wealth distribution all saw modest gains.

— In grouping families by the reference person's educational attainment, those with a college degree experienced relatively large declines in both median and mean income, whereas those with a high school diploma and those with some college experience saw gains. More broadly, the income gaps between families with a college degree and those without one decreased.

— Black non-Hispanic families and White non-Hispanic families experienced similar growth in median income, but mean income fell for White non-Hispanic families and rose slightly for Black non-Hispanic families.

The improvements in economic activity along with rising house and corporate equity prices combined to support continued increases in median and mean family net worth (wealth) between 2016 and 2019.[4] The national CoreLogic Home Price Index increased at an annual rate of 5.2 percent between early 2016 and early 2019, exceeding the rate of consumer price inflation. The value of corporate equity holdings, as measured by a broad stock price index, grew at around an 11.5 percent annual rate between the two surveys, leading to large inflation-adjusted increases in equity holdings.[5] These price trends contributed to the following changes in the distribution of household net worth:

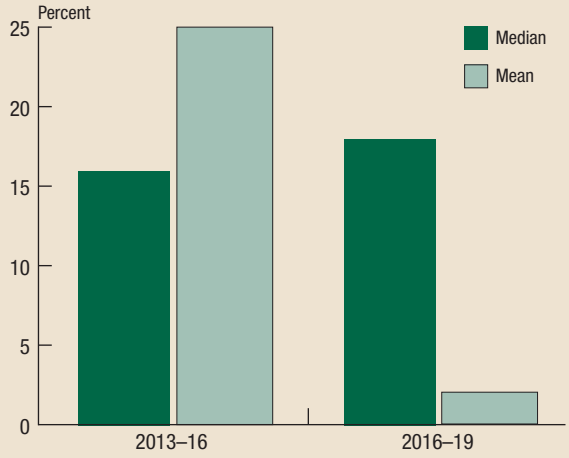
- Between 2016 and 2019, median net worth grew 18 percent, and mean net worth rose a modest 2 percent (figure 2). In contrast, the 2010–16 period saw outsized gains in mean net worth relative to median net worth, driven by growth between 2013 and 2016.
- Families at the top of the income and wealth distributions experienced very little, if any, growth in median and mean net worth between 2016 and 2019 after experiencing large gains between 2013 and 2016.
- Families near the bottom of the income and wealth distributions generally continued to experience substantial gains in median and mean net worth between 2016 and 2019.

[4] Changes in aggregate statistics reported here are measured from March to March—and, for Standard & Poor's (S&P) 500 stock price index, using the monthly average—of the respective survey years, just before the beginning of the field period for each survey.

[5] Between March 2019 and March 2020, roughly the 2019 SCF field period, the national CoreLogic Home Price Index grew an additional 4.3 percent and the S&P 500 stock price index decreased 5.4 percent. These price changes emphasize the need to evaluate SCF findings in the appropriate time frame.

- Wealth continued to increase among families with either a high school diploma or some college. However, families without a high school diploma, which saw the largest proportional gains in median and mean net worth between 2013 and 2016, saw the largest drops between 2016 and 2019.
- The homeownership rate increased between 2016 and 2019 to 64.9 percent, a reversal of the declining trend between 2004 and 2016. For families that own a home, the median net housing value (the value of a home minus home-secured debt) rose to about $120,000 from about $106,000 in 2016.

Figure 2. Change in median and mean family net worth, 2013–19 surveys



Note: Changes are based on inflation-adjusted dollars.

- Nearly two-thirds of working-age families participated in retirement plans in 2019, down slightly from 2016. Participation continued to be uneven across the income distribution. Less than 40 percent of families in the bottom half of the income distribution were in a retirement plan, compared with more than 80 percent of upper-middle-income families and more than 90 percent of families in the top decile of income.
- Ownership rates of corporate equities increased between 2016 and 2019, driven by families in the lower half of the income distribution. Still, less than one-third of lower-income families in 2019 were participating in the stock market, compared with about 70 percent of upper-middle-income families and more than 90 percent of families in the top decile of the income distribution.
- About 13 percent of families in the 2019 SCF owned a privately held business, similar to 2016. Business ownership increases with income, and nearly 40 percent of families in the top decile of the income distribution owned a business.

Between 2016 and 2019, average consumer loan interest rates for major types of debt increased: The average 30-year, fixed-rate mortgage interest rate rose from 3.7 percent to 4.3 percent, the average new vehicle loan interest rate rose from 4.2 percent to 5.5 percent, and the average credit card interest rate rose from 12.3 percent to 15.1 percent.[6] While the fraction of families with any kind of debt basically held steady between 2016 and 2019, debt balances among families with debt increased:

- Overall, debt obligations increased modestly between 2016 and 2019. Among families with debt, median debt rose 2 percent, and mean debt increased 7 percent.
- Debt secured by residential property increased substantially between 2016 and 2019. About 42 percent of families in both 2016 and 2019 had debt secured by their primary residence, and the median value of this debt increased 14 percent to $134,800.

[6] Changes in the mortgage interest rate are measured from March to March of the respective survey years using the contract rate on 30-year, fixed-rate conventional home mortgage commitments published by the Federal Home Loan Mortgage Corporation, while changes in the vehicle loan and credit card interest rates are measured from the first quarter to the first quarter of the respective survey years using the G.19 data on commercial bank interest rates published by the Federal Reserve Board.

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. Although the majority of the data are collected between May and December of each survey year, a small fraction of the data collection occurs in the first four months of the next calendar year. In the 2019 SCF, this portion of the data collection overlapped with early months of the COVID-19 pandemic, with about 9 percent of interviews conducted between February and April 2020.

The majority of statistics included in this article describe the characteristics of "families." As used in this article, the SCF definition of "family" is more comparable with the U.S. Census Bureau definition of "households"—which can include one-person families—than with its use of "families." The appendix provides full definitions of "family" for the SCF and the associated family "reference person," along with information about how demographic and economic groups are constructed for this article.

The survey collects information on families' total income before taxes for the calendar year preceding the survey. However, the majority 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. Most of the core survey questionnaire has changed in only minor ways relevant to this article since 1989. However, when the questionnaire has been modified at various points to enhance and update the survey, every effort was 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 on both attributes that are broadly distributed in the population (such as homeownership) and attributes 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 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 construct estimates for the full population. In the 2019 survey, 5,783 families were interviewed, and in the 2016 survey, 6,254 families were interviewed.

This article draws principally on the final data from the 2019 and 2016 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 2019 dollars using the "current methods" version of the consumer price index for all urban consumers. The appendix provides additional detail on the adjustments.

The principal detailed tables (tables 1 through 5) describing income, net worth, and asset and debt holdings focus on the percentage of various groups that have such items and the median and mean holding for those that 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.

As an example of the effect of outliers on mean values, consider mean income. Between 2016 and 2019, the opposite signs of the median and mean changes in income, together with the changes observed along the usual income distribution, suggest that outliers may be responsible for the negative change in mean income. Figures A and B help examine this

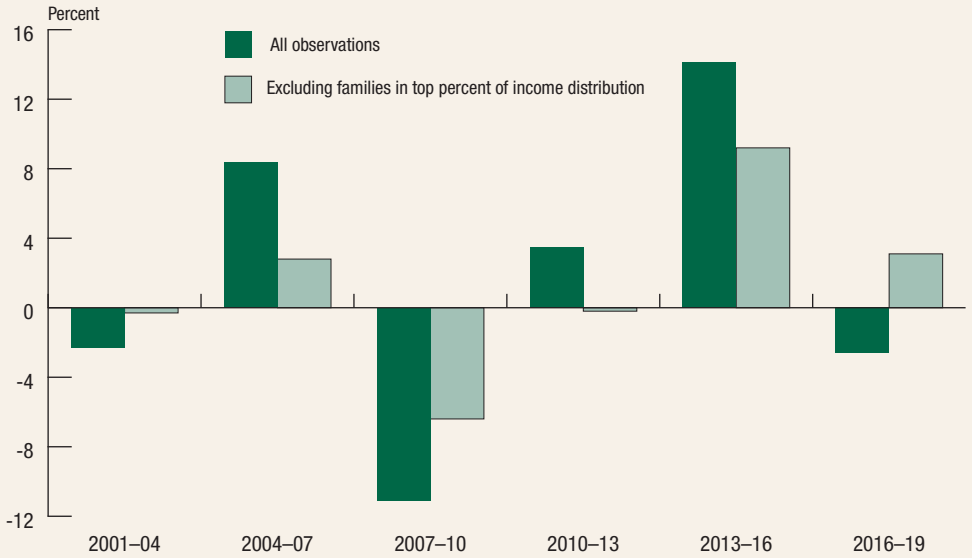
continued on next page

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

possibility and illustrate the influence of outliers. Figure A graphs the changes in median income over each survey interval since 2001 for all observations, excluding families in the top 1 percent of the income distribution. Changes between surveys are quite similar whether or not the top 1 percent of the income distribution is included. Figure B graphs the changes in mean income over each survey interval since 2001 for all observations, excluding families in the top 1 percent of the income distribution. In contrast to figure A, changes are often quite dissimilar with and without families in the top 1 percent. Indeed, excluding these families reverses the sign of the change in mean income between 2016 and 2019 to a 3.1 percent gain.[3] This pattern implies that the overall decline in mean income is driven by families in the top 1 percent of the income distribution.

Figure A. Between-survey changes in median income

Figure B. Between-survey changes in mean income



continued on next page

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

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 minus median liabilities will generally not equal median net worth). In contrast, means for a common population are additive. In the context of this article, 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 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 statistical 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 generally is not addressed, the article highlights findings that are significant or are interesting in a broader context. Standard errors for all estimates in tables 1 and 2 are available on the SCF website.

[1] Additional information about the survey is available on the Board's website at https://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.

[3] This reversal is perhaps unsurprising, as the standard errors in table 1 make clear the decline in mean income is not statistically significant at conventional levels.

- Between 2016 and 2019, the fraction of families with credit card debt increased. In addition, median and mean balances for families with credit card debt increased, to $2,700 and $6,300, respectively.
- About 22 percent of families owed student loan debt in 2019, similar to the fraction in 2016. Median balances among families owing such debt rose 10 percent between 2016 and 2019, to more than $22,000.
- Amid rising balances and interest rates, median debt payment-to-income ratios among families with debt increased slightly between 2016 and 2019. The fraction of families with payment-to-income ratios greater than 40 percent increased 0.4 percentage point to 7.4 percent. These increases reversed declining trends observed from 2007 through 2016.

Income

Median and mean inflation-adjusted before-tax family income moved modestly in different directions between 2016 and 2019 (table 1).[7] Median income rose 5 percent, from $56,000 to $58,600. Mean income decreased 3 percent, from $109,300 to $106,500. The decrease in mean income was mainly driven by families in the top 1 percent of the income distribution (for details, see box 1, "The Data Used in This Article"). Altogether, these changes are consistent with a slight narrowing of the income distribution over this period.[8]

[7] To measure income, the interviewers request information on the family's income, before taxes, for the full calendar year preceding the survey. The components of income in the SCF are the following: 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] An upcoming FEDS Note explores recent trends in the distribution of wealth and income in more detail and can be found at https://www.federalreserve.gov/econres/notes/feds-notes/default.htm.

Table 1. Before-tax median and mean family income, by selected characteristics of families, 2016 and 2019 surveys

Thousands of 2019 dollars, except as noted

Family characteristic	Median income			Mean income		
	2016	2019	Percentage change 2016–19	2016	2019	Percentage change 2016–19
All families	**56.0**	**58.6**	**5**	**109.3**	**106.5**	**-3**
	(.7)	(1.0)		(2.1)	(1.7)	
Percentile of usual income						
Less than 20	17.2	17.7	3	18.2	18.0	-1
20–39.9	35.2	36.7	4	36.4	37.3	2
40–59.9	57.5	59.1	3	58.3	59.9	3
60–79.9	91.6	94.9	4	100.1	96.8	-3
80–89.9	144.0	150.4	4	148.3	152.9	3
90–100	267.6	283.0	6	518.6	487.6	-6
Age of reference person (years)						
Less than 35	43.1	48.6	13	60.0	65.1	9
35–44	70.0	74.3	6	103.3	111.0	7
45–54	73.9	77.8	5	139.8	145.3	4
55–64	64.9	63.6	-2	150.3	130.6	-13
65–74	53.3	50.2	-6	113.4	107.8	-5
75 or more	42.6	43.1	1	82.0	74.9	-9
Education of reference person						
No high school diploma	28.2	30.8	9	41.3	39.6	-4
High school diploma	43.1	45.8	6	60.9	63.8	5
Some college	50.8	51.2	1	71.7	79.0	10
College degree	98.0	95.7	-2	201.8	176.5	-13
Race or ethnicity of respondent						
White non-Hispanic	65.1	69.0	6	131.3	122.8	-6
Black or African American non-Hispanic	37.6	40.3	7	57.5	59.6	4
Hispanic or Latino	40.9	40.7	-1	61.0	58.5	-4
Other or multiple race	53.9	55.7	3	92.5	112.0	21
Housing status						
Owner	75.7	77.4	2	142.6	136.7	-4
Renter or other	33.6	35.6	6	50.9	50.5	-1
Urbanicity						
Metropolitan statistical area (MSA)	58.7	61.1	4	116.7	112.4	-4
Non-MSA	41.1	43.2	5	57.5	62.9	9
Percentile of net worth						
Less than 25	26.9	29.9	11	36.5	37.9	4
25–49.9	44.7	46.5	4	54.1	58.2	7
50–74.9	68.9	70.3	2	79.7	80.6	1
75–89.9	96.6	101.8	5	120.7	129.9	8
90–100	229.7	236.2	3	486.0	427.9	-12

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

The income distribution widened considerably over the 2010–16 period, as a sharp 18 percent increase in mean income far outpaced a more moderate 4 percent growth in median income. Further, the changes over the most recent survey period suggest that, despite an initial bounceback in income growth between 2013 and 2016 to the robust pre-crisis rates, the United States has yet to return to the general pattern of sustained increases in income between surveys that had dated back to the early 1990s.[9]

Some predictable patterns in income levels across demographic groups are observed in the 2019 SCF, and those patterns are largely consistent with previous surveys.[10] Across age groups, income shows a life-cycle pattern, rising to a peak for families in which the reference person is in one of the middle age groups and then declining for those in which the reference person is older and increasingly likely to be retired.[11] Income also shows a strong positive association with education; in particular, income among families in which the reference person has a college degree tends to be substantially higher than for those with less schooling. Mean income among college-educated families in the 2019 SCF was more than twice that of families in any other education group.

Among families in which the survey respondent identifies as White non-Hispanic, income is substantially higher than for all three other race and ethnic groups—Black non-Hispanic, Hispanic, and other or multiple race families.[12] Income is also considerably higher for homeowners and for families living in urban areas than for other families.[13] Finally, family income is positively correlated with net worth.

Changes in Income by Family Characteristics

With few exceptions, median income displayed broad-based gains between 2016 and 2019 across different types of families, whether grouped by economic characteristics such as usual income, wealth, urbanicity, or homeowner status, or by demographic characteristics such as age, education, or race and ethnicity.[14] However, with respect to mean income, some types of families saw gains, while many others saw losses.

A family's income at a particular time may not be indicative of its "usual" income.[15] A recent spell of unemployment, a bonus from an employer, a capital loss or gain on invest-

[9] From 2013 to 2016, both median and mean income increased substantially—9 percent and 14 percent, respectively—retracing combined losses seen over the 2007–10 and 2010–13 periods. 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 https://www.federalreserve.gov/econres/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, a data visualization tool, and access to online tabulation software that may be used to create customized tables based on the variables analyzed in this article.

[11] To reflect changes in societal norms regarding family formation, composition, and responsibilities as of the 2019 survey, the term "head" has been replaced by "reference person."

[12] The appendix provides information on racial and ethnic identification in the SCF.

[13] 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.

[14] Changes in the experiences of families with particular characteristics can reflect shifts in the demographic composition of the survey population. The appendix provides information on evolutions in the survey's racial and ethnic composition, as well as the educational composition and the age composition, since 2004 and, in particular, indicates drift in the composition of the survey population away from families identifying as White non-Hispanic toward those identifying as one of the other racial and ethnic groups (partially on account of changes in the survey question), a more-educated survey population, and an older survey population over time.

[15] Usual income is measured in the survey after actual income has been reported, if respondents indicate they experienced a temporary deviation in income from what they would earn in a "normal year." Over the past

ments, or other factors may cause income to deviate temporarily from the usual amount. Across the distribution of families grouped by their usual level of income, all quintiles saw increases in median income between 2016 and 2019. While there was little variation across income groups, families in the top decile saw the largest proportional gain.[16] However, with respect to mean income, several income groups saw declines: Although changes in either direction were relatively modest for the bottom four quintiles, the top decile posted a notable 6 percent decrease, consistent with some narrowing of the income distribution between 2016 and 2019.[17]

All prime working-age groups (that is, those younger than age 55) saw increases in median and mean income between 2016 and 2019, ranging from 4 to 13 percent. The youngest families saw the largest gains in both median and mean income—13 percent and 9 percent, respectively. Except for the 75 and older age group, which saw a very modest increase in median income, both median and mean income decreased for all groups 55 and older, with mean income dropping 13 percent for the 55 to 64 age group.[18] Notably, these groups all experienced exceptionally large growth in mean income between 2010 and 2016.

Between 2016 and 2019, growth in median income decreased with educational attainment. Families without a high school diploma saw a 9 percent increase in their median income, while families with a college degree saw a 2 percent decrease. Growth in mean income by attainment group exhibited less consistency, with both the most and least educated groups experiencing decreases. Mean income decreased 4 percent among families that did not complete high school and dropped 13 percent among families that completed college. Those with a high school diploma and those with some college saw increases of 5 percent and 10 percent, respectively. These patterns indicate that the gaps in income between families with a college degree and those without one decreased between 2016 and 2019. This change, to some extent, reflects compositional changes among families with a college degree over this period, as there was a decrease in the share of families aged 45 to 64—which, as previously noted, tend to have relatively high income—and a modest increase in the share of families that are retired.[19] That said, families with a college degree experienced relatively robust growth in median and mean income between 2010 and 2016.

Over the 2016–19 period, median income rose for nearly all families grouped by race or ethnicity, with the exception of Hispanic families, which experienced a slight decline.[20] With respect to mean income, both Hispanic and White non-Hispanic families saw declines, while Black non-Hispanic families and families that identified as other or multiple races saw gains.[21] Indeed, despite Black non-Hispanic families and White non-Hispanic families experiencing similarly robust growth in median income, White non-Hispanic families saw the largest drop in mean income of all the groups. That said, this drop comes on

several surveys, an increasing share of families have reported that their actual income aligned with their usual income, rising from 70 percent of families in the 2010 SCF to 77 percent of families in the 2019 SCF.

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

[17] Mean income for the top decile of usual income increased 30 percent over the 2010–16 period.

[18] There were no noticeable changes in the share working among families in age groups older than 55; instead, decreases in various components of income are driving these changes.

[19] Among families with a college degree in 2019, 34.2 percent were between ages 45 and 64, down from 37.9 percent in 2016. In 2019, 22.2 percent of families with a college degree were retired, up from 20.8 percent in 2016.

[20] An upcoming FEDS Note discusses differences in income and wealth holding by race and ethnicity in more detail and can be found at https://www.federalreserve.gov/econres/notes/feds-notes/default.htm.

[21] While the change in the value of mean income for families identifying as other or multiple race was quite large—21 percent—it was not statistically significant at conventional levels, as the small size of the group makes the mean particularly sensitive to extreme values. Relative to 2016, families in this group were more educated, slightly older, and more likely to be in the top usual income decile in 2019.

the heels of a 24 percent surge in mean income among families in this group between 2010 and 2016.

Reflecting the top-line changes, both homeowners as well as renters and other non-owners experienced median income growth but mean income losses between 2016 and 2019. The median income gap between families living in a metropolitan statistical area (MSA) and those living in a non-MSA widened slightly between 2016 and 2019 as median income grew similarly among families in both types of areas (and the level of median income is lower for those in non-MSAs). However, the mean income gap between the two groups shrank.

In grouping families by percentile of net worth (as measured concurrently in the SCF), both median and mean income rose almost throughout the distribution between 2016 and 2019. The one exception is the mean income of families in the top decile of net worth, which dropped 12 percent, marking the first decline in either median or mean income for that group since 2010.[22] Over the 2010–16 period, growth in both median and mean income among families in the top decile of the wealth distribution was exceptionally strong—19 percent and 38 percent, respectively. For families in the lowest quartile of net worth, median income jumped 11 percent to $29,900, and mean income grew 4 percent to $37,900 between 2016 and 2019. Families in the middle quartiles saw growth in median and mean income ranging from 1 to 8 percent over this period.

Net Worth

Median and mean inflation-adjusted net worth—the difference between families' gross assets and their liabilities—increased between 2016 and 2019 (table 2). Specifically, the median net worth of all families rose 18 percent to $121,700, and the mean net worth increased a modest 2 percent to $748,800. These patterns continued growth seen over the 2013–16 period, although the gain in mean net worth over that period was a much larger 25 percent. Median and mean net worth over the 2010–13 period were effectively stagnant despite the recovery in house and other asset prices that followed the large declines in the 2007–10 period amid the Great Recession.[23]

Net worth tends to rise systematically with income, as higher-income families have higher levels of saving, which results in a feedback effect of higher income from the accumulated assets.[24] In addition, net worth generally increases with age until it plateaus (or decreases modestly) for the oldest age groups as they retire, a pattern reflecting the fact that individuals usually save for retirement throughout their working career and then spend those savings in retirement. Finally, net worth exhibits strong differentials across groups defined in terms of education, racial or ethnic background, urbanicity, and housing status; these differentials generally mirror those for income, but the wealth differences are larger.

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. On the one

[22] To investigate whether the COVID-19 pandemic influenced the families included in the top decile of net worth and generated this decrease, removing interviews completed after March 1, 2020—before any state or Washington, D.C., declared a state of emergency—from the top decile reveals a larger decrease in mean income between 2016 and 2019.

[23] Between the 2010 and 2013 surveys, median net worth increased 2 percent and mean net worth did not change. Between 2007 and 2010, median net worth declined 39 percent and mean net worth declined 15 percent.

[24] For a discussion of patterns of saving by usual income, see box 2, "Saving Behavior."

Table 2. Family median and mean net worth, by selected characteristics of families, 2016 and 2019 surveys

Thousands of 2019 dollars, except as noted

Family characteristic	Median net worth			Mean net worth		
	2016	2019	Percentage change 2016–19	2016	2019	Percentage change 2016–19
All families	**103.5**	**121.7**	**18**	**736.0**	**748.8**	**2**
	(2.9)	(3.5)		(13.6)	(15.6)	
Percentile of usual income						
Less than 20	7.1	9.8	37	82.4	114.1	38
20–39.9	31.5	44.0	40	128.0	136.0	6
40–59.9	94.2	92.9	-1	242.2	220.5	-9
60–79.9	181.5	199.1	10	394.2	423.0	7
80–89.9	421.7	382.3	-9	851.3	850.0	0
90–100	1,732.3	1,589.3	-8	4,814.3	4,850.1	1
Age of reference person (years)						
Less than 35	11.7	13.9	19	81.0	76.3	-6
35–44	63.6	91.3	44	307.0	436.2	42
45–54	132.1	168.6	28	773.7	833.2	8
55–64	199.2	212.5	7	1,241.6	1,175.9	-5
65–74	237.6	266.4	12	1,133.7	1,217.7	7
75 or more	281.6	254.8	-10	1,134.8	977.6	-14
Education of reference person						
No high school diploma	24.3	20.5	-16	167.1	137.8	-18
High school diploma	71.3	74.0	4	265.4	305.2	15
Some college	70.2	88.8	26	362.2	376.4	4
College degree	310.7	308.2	-1	1,607.2	1,519.9	-5
Race or ethnicity of respondent						
White non-Hispanic	181.9	188.2	3	993.1	983.4	-1
Black or African American non-Hispanic	18.2	24.1	33	146.8	142.5	-3
Hispanic or Latino	21.9	36.2	65	203.3	165.5	-19
Other or multiple race	68.8	74.5	8	486.8	657.2	35
Housing status						
Owner	246.2	255.0	4	1,099.9	1,102.1	0
Renter or other	5.3	6.3	18	96.8	95.6	-1
Urbanicity						
Metropolitan statistical area (MSA)	105.3	126.0	20	799.0	806.4	1
Non-MSA	93.3	90.4	-3	293.8	324.8	11
Percentile of net worth						
Less than 25	.1	.3	131	-13.0	-13.5	-5
25–49.9	42.3	57.3	36	47.5	58.1	22
50–74.9	204.0	224.1	10	217.1	236.3	9
75–89.9	643.4	652.7	1	701.2	703.7	0
90–100	2,539.3	2,598.7	2	5,675.3	5,729.6	1

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 Survey of Consumer Finances as well as details on standard errors (shown in parentheses below the first row of data for the medians and means).

hand, median and mean net worth rose—in most instances, considerably—between 2016 and 2019 for the bottom two quintiles. Those in the lowest usual income quintile saw a large jump in median net worth (37 percent to $9,800) and a similar increase in mean net worth (38 percent to $114,100). Further, families in the fourth quintile rebounded from relatively modest gains in median and mean net worth between 2013 and 2016. On the other hand, families in the third quintile of usual income saw declines in both median and mean net worth (1 percent and 9 percent, respectively). Those toward the top of the distribution experienced the largest declines in median net worth and essentially stable mean net worth.[25]

Nearly all age groups experienced increases in median net worth between 2016 and 2019, while mean net worth decreased for several age groups. With respect to both median and mean net worth, families aged 75 and older experienced the largest declines (10 percent and 14 percent, respectively), and families aged 35 to 44 experienced the largest increases (44 percent and 42 percent, respectively).[26] Growth in net housing wealth contributed to increases among those aged 35 to 44, while the drawing down of financial assets factored into decreases among the oldest group. As with income, prime working-age families generally experienced substantial gains in net worth, with the only exception being a modest decline in mean net worth among families younger than age 35.

Between 2016 and 2019, there was considerable variation in the extent to which median and mean net worth changed by education group, ranging from an 18 percent decrease to a 26 percent increase. Both measures of net worth continued to increase among families in which the reference person had either a high school diploma or some college. However, although families without a high school diploma saw the largest gains in both median and mean net worth between 2013 and 2016, they saw the largest drops between 2016 and 2019 (16 percent and 18 percent, respectively); nonetheless, both measures remained above their 2013 levels. Among families with a college degree, declines in median and mean net worth were more modest, leaving median net worth essentially unchanged from its 2013 level and mean net worth well above its 2013 level. As with income, these patterns generally point to a shrinking gap in net worth between families with and without a college degree between 2016 and 2019, with this gap nonetheless remaining substantial.[27]

From 2016 to 2019, median net worth increased for all types of families grouped by race or ethnicity. Further, large gains among Black non-Hispanic and Hispanic families seen over the previous survey interval continued. Non-White and Hispanic families experienced larger proportional growth in median net worth than White non-Hispanic families during the 2016–19 period; nonetheless, the typical White non-Hispanic family still had more than double the amount of wealth than the typical family in any other racial or ethnic group in 2019. With respect to mean net worth, only families identified as other or multiple race saw

[25] The top decile of the usual income distribution in 2019 included a larger share of younger families than in 2016. Further, median net housing wealth for the top decile of usual income declined between 2016 and 2019. These two factors likely contributed to lower median wealth for this group in 2019.

[26] All in all, the changes in net worth by age group nearly reversed patterns once again between the two previous surveys, as families younger than age 45 and between ages 65 and 74 had experienced the only declines over the 2013–16 period. Over the 2010–13 period, median and mean net worth increased for families younger than age 45, decreased for those between ages 45 and 64, increased for those between ages 65 and 74, and decreased for the oldest group.

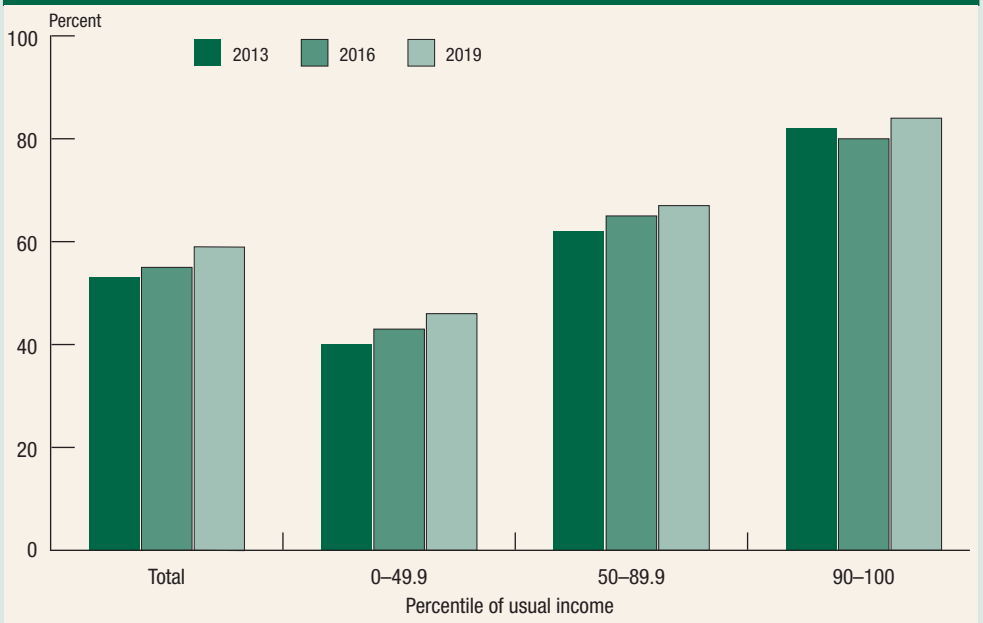
[27] For a discussion of transmission of wealth by parental education, see box 3, "Intergenerational Transmission of Wealth."

Box 2. Saving Behavior

Because saving out of current income is an important determinant of family net worth, the Survey of Consumer Finances 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.

The fraction of families that reported saving has increased over the past three surveys (figure A). Between 2016 and 2019, the proportion of all families that saved increased from 55 percent to 59 percent.

Figure A. Families that saved by usual income, 2013–19 surveys



Within a given year, the fraction of families saving is greater for families with higher usual income. In 2019, for example, the fraction of families in the top decile of income that saved was 84 percent, almost double the 46 percent of the bottom half of the income distribution that saved. Between 2016 and 2019, the fraction of families that saved increased across all three income groups.

an increase.[28] While two of the remaining groups experienced relatively modest decreases, mean net worth among Hispanic families dropped 19 percent.[29]

The median net worth of homeowners grew modestly between 2016 and 2019, while their mean net worth essentially did not change. Renters or other non-homeowners, whose average levels of net worth are far exceeded by those of homeowners, experienced an 18 percent jump in median net worth and a 1 percent decline in mean net worth.

Between 2016 and 2019, families living in MSAs experienced a 20 percent increase in median net worth and a slight 1 percent increase in mean net worth, while families in other

[28] Similar to mean income, the change in the value of mean net worth for families identifying as other or multiple race was quite large—35 percent—but not statistically significant at conventional levels, as the small size of the group makes the mean particularly sensitive to extreme values.

[29] Relative to 2016, more Hispanic families were younger than age 35 in 2019. Further, this group constituted only about 10 percent of families in both 2016 and 2019, and, thus, median and mean values exhibit more variability.

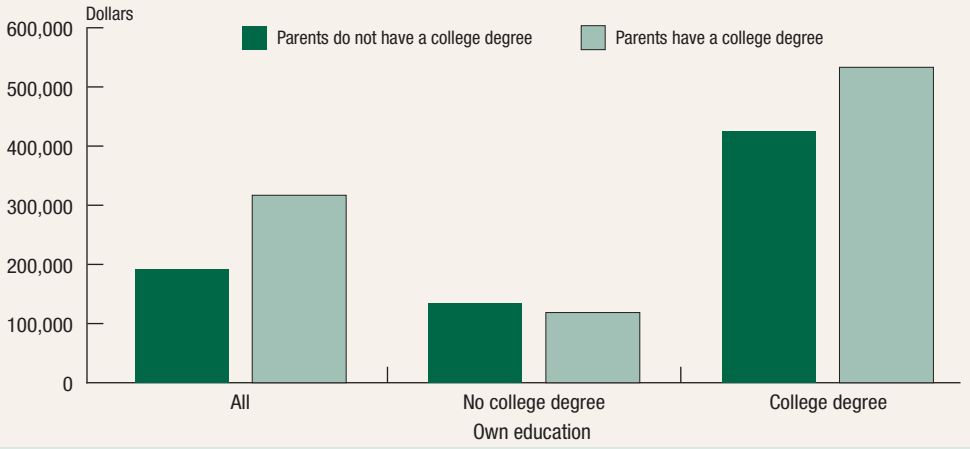
Box 3. Intergenerational Transmission of Wealth

Families can transmit wealth and resources across generations in numerous ways. Families can directly transfer their wealth to the next generation in the form of a bequest. They can also provide the next generation with *inter vivos* transfers (gifts)—for example, providing down-payment support to enable a home purchase. In addition to direct transfers or gifts, families can make investments in their children that indirectly increase their wealth. For example, families can invest in their children's educational success, which can, in turn, increase their children's ability to accumulate wealth.

The Survey of Consumer Finances (SCF) collects information about the highest level of education obtained by a parent. Because higher levels of education are associated with higher levels of wealth and income, as seen in tables 1 and 2 in the main text, splitting families according to their parents' level of education is a common way to examine the intergenerational transmission of economic resources.[1]

Overall, higher levels of parental education are associated with higher wealth (figure A). The typical family with a parent with a college degree has about 1.7 times the wealth of a family without a parent with a college degree. However, a family's own education is a stronger predictor of its wealth than the education of its parents. Further, when families are split according to their own level of education, parental education has a differential relationship with wealth holding. Among families without a college degree themselves, there is almost no relationship between parental education and wealth. However, among families with a college degree, families with a parent who also has a college degree have higher levels of wealth.

Figure A. Median wealth, by parental education and own education



The SCF collects information on all inheritances, trusts, and substantial gifts a family has received, enabling an examination of direct transfers from one generation to the next. Direct transfers collected in the SCF include both financial assets and nonfinancial assets like real estate or a business.

Parental education is positively associated with the probability that a family received an inheritance, trust, or gift (table B). Twenty-seven percent of families with a parent who has a college degree have received an inheritance, compared with 22 percent of families without a parent who has a college degree. Conditional on receiving an inheritance, higher levels of parental education are also associated with larger inheritances. Among families that have received an inheritance, the typical value of all inheritances received by families with a parent who has a college degree is $92,700, compared with $76,200 for families without a parent who has a college degree.[2]

continued on next page

Box 3. Intergenerational Transmission of Wealth—*continued*

Table B. Receipt and expected receipt of inheritances, by parental education

Percent or 2019 dollars

Parental education	Received an inheritance, trust, or gift	Conditional median value of inheritances received	Expects to receive an inheritance	Conditional median value of inheritances expected
Parents do not have a college degree	21.9%	$76,200	9.5%	$100,000
Parents have a college degree	27.2%	$92,700	23.6%	$200,000

Some families may not have received an inheritance but expect to receive one at a later date if, for example, a parent is still living. The SCF collects information on expected inheritances as well as received inheritances. Higher levels of parental education are also positively associated with expected inheritances. Families with a parent who has a college degree are more than twice as likely to expect an inheritance (23.6 percent) than families without a parent who has a college degree (9.5 percent). And conditional on expecting an inheritance, families with a parent who has a college degree expect to receive double the size of the inheritance of families without a parent who has a college degree.

[1] Parental education refers to the highest degree obtained by the reference person's mother or father.
[2] The value of up to three reported inheritances are adjusted to 2019 dollars using the year of receipt and the consumer price index for all urban consumers. Any additional inheritances are unadjusted because the SCF only collects the year of receipt for up to three inheritances.

areas saw a modest 3 percent dip in median net worth but an 11 percent increase in mean net worth.

Median and mean net worth rose for much of the net worth distribution, with the bottom quartile's 5 percent loss in mean net worth representing the only decline. For the lowest quartile, median net worth was $100 in 2016 and $300 in 2019, and mean net worth was negative $13,000 in 2016 and negative $13,500 in 2019. The wealth portfolio of families in the middle of the net worth distribution is dominated by housing, and, as such, changes in their wealth between surveys tend to reflect the extent to which growth in house prices surpassed inflation.[30] Indeed, both the second and third quartiles saw growth in their median and mean net worth between 2016 and 2019, with the second quartile experiencing particularly large gains in both measures (36 percent and 22 percent, respectively). Finally, following outsized increases in both median and mean net worth between 2010 and 2016, families near the top of the wealth distribution saw very little change in net worth; nonetheless, median and mean net worth for that group were about four and eight times the levels of the next decile, respectively—evidence that wealth remains concentrated among these families.

Assets

In 2019, virtually all families owned some type of asset, little changed from 2016 (table 3). Conditional on holding at least one asset, median total asset holdings rose 13 percent, to about $228,000 in 2019. The conditional mean value of total assets rose a modest 2 percent.

Financial Assets

Overall, 98.7 percent of families in 2019 owned at least one financial asset—which includes transaction accounts, certificates of deposit, savings bonds, other bonds, stocks, pooled

[30] For instance, recessionary declines in house prices led to a disproportionate decrease in the wealth of families in the middle of the net worth distribution.

Table 3. Holding and values of assets, 2016 and 2019 surveys
Thousands of 2019 dollars, except as noted

Balance sheet item	Percent holding		Conditional median value			Conditional mean value		
	2016	2019	2016	2019	Percentage change 2016–19	2016	2019	Percentage change 2016–19
Any asset	**99.4**	**99.6**	**201.9**	**227.6**	**13**	**842.3**	**860.3**	**2**
Types of financial asset								
Any financial asset	**98.5**	**98.7**	**25.0**	**25.7**	**3**	**361.5**	**363.7**	**1**
Transaction accounts	98.0	98.2	4.8	5.3	11	42.8	41.7	-3
Certificates of deposit	6.5	7.7	21.3	25.0	18	80.5	102.0	27
Savings bonds	8.6	7.5	1.1	.8	-25	10.1	8.5	-16
Bonds	1.2	1.1	106.4	121.0	14	820.0	653.6	-20
Stocks	13.9	15.2	26.6	25.0	-6	348.6	348.5	0
Pooled investment funds	10.0	9.0	121.2	110.0	-9	825.3	854.3	4
Retirement accounts	52.1	50.5	63.8	65.0	2	243.5	255.2	5
Cash value life insurance	19.4	19.0	9.0	9.0	0	39.8	41.0	3
Other managed assets	5.5	5.9	117.0	115.0	-2	503.8	512.2	2
Other	8.1	7.4	5.9	4.0	-32	57.1	73.8	29
Types of nonfinancial asset								
Any nonfinancial asset	**90.8**	**91.4**	**169.0**	**194.3**	**15**	**529.8**	**544.6**	**3**
Vehicles	85.2	85.4	18.4	17.2	-7	27.0	26.6	-1
Primary residence	63.7	64.9	196.8	225.0	14	320.3	344.2	7
Other residential property	13.8	13.1	154.9	160.0	3	381.0	400.3	5
Equity in nonresidential property	6.2	6.7	74.5	72.0	-3	505.4	377.1	-25
Business equity	13.0	13.4	85.0	89.1	5	1,266.4	1,248.7	-1
Other	6.5	7.9	13.8	15.0	8	86.6	75.8	-13

Note: See the appendix for definitions of asset categories used in the Survey of Consumer Finances.

investment funds, retirement accounts, cash value life insurance, and other managed assets—little changed from 2016.[31] The conditional median value of all financial assets held by families rose 3 percent to $25,700 in 2019. The conditional mean value increased a modest 1 percent to $363,700. The large difference between median and mean values reflects the highly disproportionate share of financial assets held by some households.

Transaction accounts—which include checking, savings, money market, call accounts, and prepaid debit cards—remained the most commonly held type of financial asset in 2019, with an ownership rate of more than 98 percent.[32] The conditional median value of transaction accounts rose 11 percent between 2016 and 2019, to $5,300. The mean value of transaction accounts in 2019 was about $42,000, down slightly from 2016.

The second-most commonly held type of financial asset continued to be retirement accounts—including individual retirement accounts, Keogh accounts, and certain employer-sponsored accounts, such as 401(k), 403(b), and thrift savings accounts. About half of families owned such accounts in 2019. The conditional median value of retirement accounts increased a modest 2 percent between 2016 and 2019, to $65,000, while the conditional mean value rose 5 percent to $255,200 in 2019.[33]

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

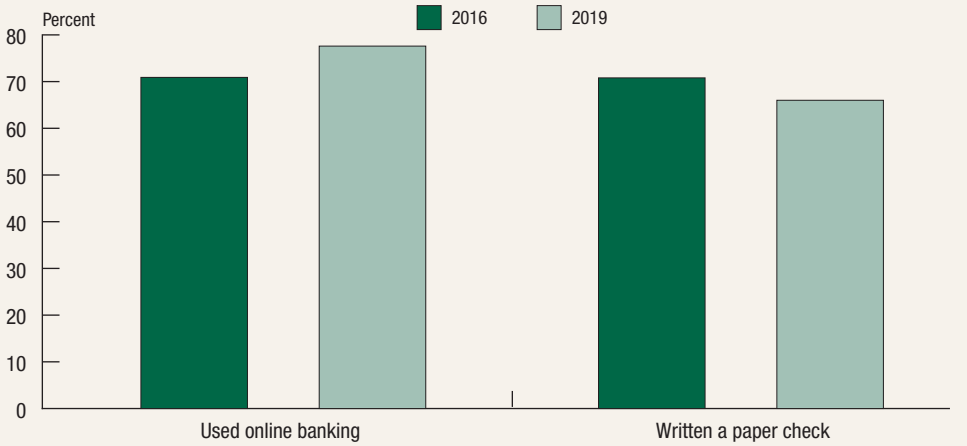
[32] For a discussion on use of online and in-person banking services for transaction accounts, see box 4, "Online Banking."

[33] For more details, see box 6, "Retirement Plan Participation."

Box 4. Online Banking

The Survey of Consumer Finances (SCF) asks families about their use of online banking.[1] In 2019, families reported, on average, increased use of online banking (figure A, left bars).

Figure A. Participation in banking activities, 2016 and 2019



One question is whether use of online banking has reduced use of physical financial services.[2] Fortunately, the SCF also collects some information on families' use of physical financial services. For example, the fraction of families that wrote a paper check in the past 12 months to make a payment declined somewhat in 2019 (figure A, right bars).

That said, even families that used online banking continued to use at least some physical financial services, such as visiting local bank branches (table B). Among families that did not use online banking, 85 percent visited their main checking account branch and 81 percent visited their main savings account branch. Yet, even among those families that used online banking, 79 percent visited their checking account branch and 67 percent visited their savings account branch.[3] Online banking appears to be an imperfect substitute for at least some physical financial services, including visiting a local bank branch.

Table B. Visiting main checking or main savings account bank branch in the past 12 months, by use of online banking in the past 12 months

Percent

Type of banking activity	Visited checking branch	Visited savings branch
Used online banking	79	67
Did not use online banking	85	81

[1] In 2016, the SCF changed the way it asks about online banking to be a separate question. Before 2016, online banking was one of the options for how a household interacted with a financial institution.

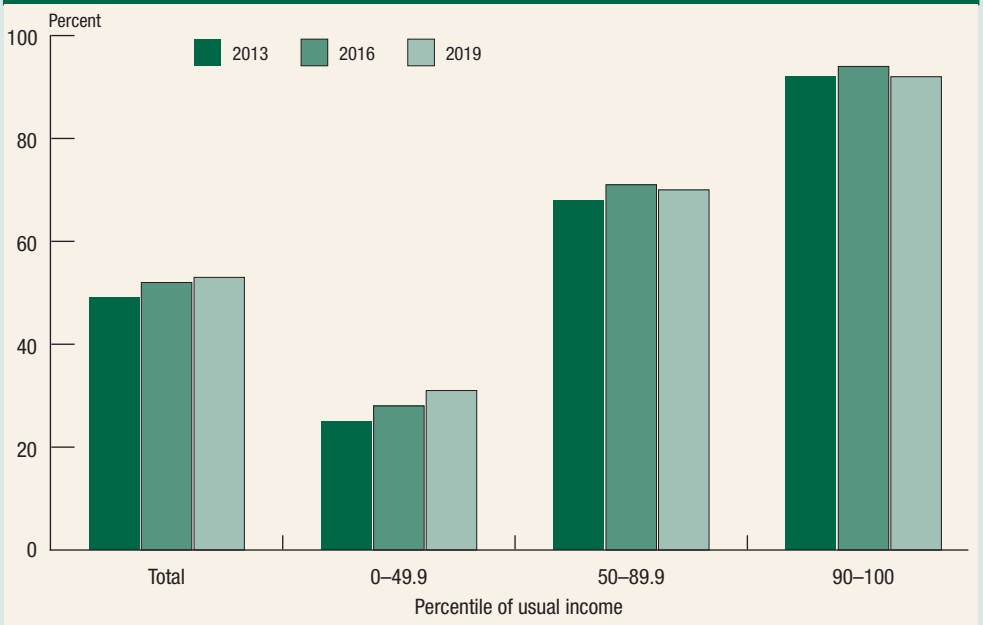
[2] As discussed in box 10, "Shopping for Financial Services," more families are using the internet for information on borrowing or investing services, which may be contributing to the reduced use of physical financial services.

[3] These statistics update the estimates in table 1 of Elliot Anenberg, Andrew C. Chang, Serafin Grundl, Kevin B. Moore, and Richard Windle (2018), "The Branch Puzzle: Why Are There Still Bank Branches?" FEDS Notes (Washington: Board of Governors of the Federal Reserve System, August 20), https://dx.doi.org/10.17016/2380-7172.2206.

Box 5. 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 2019 data show a slight uptick in stock ownership since 2016. In 2019, about 53 percent of families owned stocks, compared with nearly 52 percent in 2016 (figure A). Grouping families by their location in the usual income distribution reveals that families in the bottom half of the income distribution exhibited an increase in stock ownership from 2016 to 2019. That said, in any given year, participation in the stock market among families in the two higher income groups stands well above the bottom half's participation. In 2019, about 31 percent of families in the bottom half of the income distribution held stocks, whereas about 70 percent of families in the upper-middle-income group held stock, and more than 90 percent of families in the top decile held stock.

Figure A. Families with direct and indirect holdings of stock, 2013–19 surveys



In addition to these differences across income groups in stock market participation rates, there are significant differences in the value of stock market holdings, conditional on holding stock. In 2019, the conditional median value of stock holdings for the bottom half of the income distribution was about $10,000, compared with $40,000 for the upper-middle-income group and nearly $439,000 for the top income decile (table B). Conditional mean values are substantially larger than the conditional median values and exhibit wider differences across groups.

For the top decile of income, conditional median and mean values of stock holdings were higher in 2019 than in 2016 and substantially above levels observed in 2013. In contrast, for the bottom half of the distribution, conditional median and mean values were lower in 2019 relative to 2013. That said, these changes over time should be interpreted with caution, as they are influenced by changes in the composition of families holding stock. For example, as noted earlier, the bottom half of the income distribution exhibited a significant increase in stock market participation since 2013, which could push median and mean values down over time, as new participants are likely to have relatively small amounts invested in stocks.

continued on next page

Box 5. Direct and Indirect Holdings of Publicly Traded Stock—*continued*

Table B. Median and mean levels for direct and indirect holdings of stock, 2013–19 surveys

Thousands of 2019 dollars

Survey year	2013	2016	2019
Conditional median values			
All	39.5	42.5	40.0
Percentile of usual income			
0–49.9	11.0	11.2	9.9
50–89.9	38.2	42.5	40.0
90–100	310.9	378.6	438.5
Conditional mean values			
All	296.4	366.4	373.2
Percentile of usual income			
0–49.9	58.9	55.7	55.8
50–89.9	145.2	162.8	174.8
90–100	1,064.4	1,452.3	1,505.2

[1] Indirect holdings are those in pooled investment funds, retirement accounts, and other managed assets. Indirect holdings, particularly through tax-deferred retirement accounts, are much more common than direct holdings.

Direct ownership of stocks increased slightly between 2016 and 2019, to more than 15 percent of families. Stocks may also be indirectly held in pooled investment funds and other managed assets, which were held by 9 percent and nearly 6 percent of families, respectively (for more on families' stock holdings, see box 5, "Direct and Indirect Holdings of Publicly Traded Stock"). Rates of ownership of almost all other types of financial assets are below 10 percent, the exception being cash value life insurance at 19 percent.

Nonfinancial Assets

Ownership of nonfinancial assets—including vehicles, residential or nonresidential property, and business equity—remained high in 2019 at about 91 percent. Ownership of primary residences increased slightly to almost 65 percent in 2019.[34] Reported values of primary residences rose markedly between 2016 and 2019. The conditional median value increased 14 percent to $225,000. In addition to ownership of primary residences, about 13 percent of families in 2019 reported owning other residential property, such as second homes or time shares.

The most commonly held type of nonfinancial asset in 2019 was vehicles, which includes cars, vans, sport utility vehicles (SUV), trucks, motor homes, recreational vehicles, motorcycles, boats, airplanes, and helicopters. Between 2016 and 2019, the fraction of families owning a vehicle held steady at about 85 percent, but the conditional median value declined 7 percent, to about $17,000.[35]

[34] For more details, see box 7, "Homeownership and Net Housing Wealth."

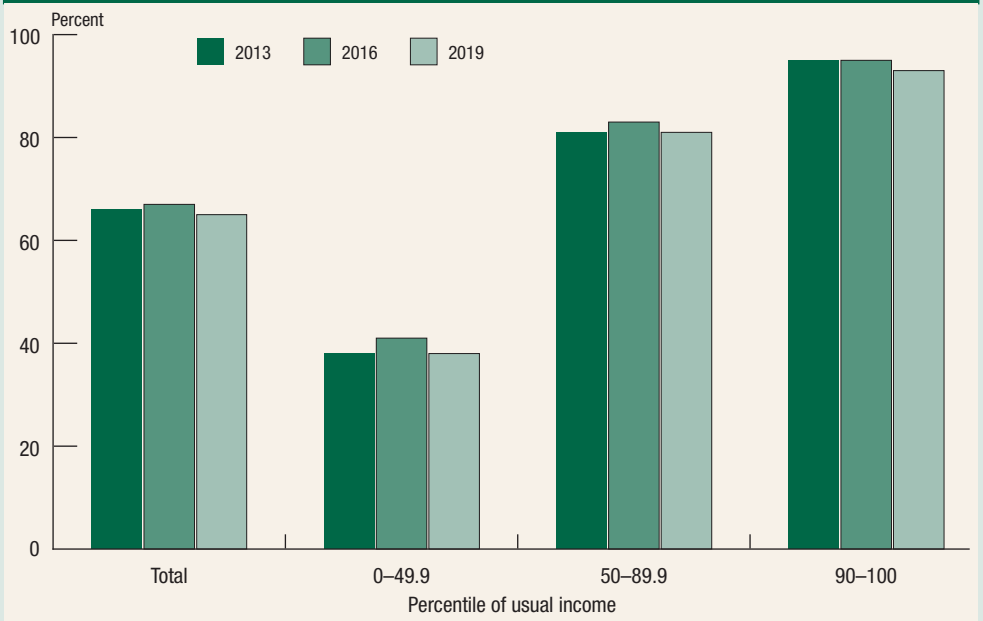
[35] Survey respondents are asked to provide the year, make, and model of each of their cars, vans, SUVs, and trucks. This information is used to obtain market prices from data collected by the National Automobile Dealers Association and a variety of other sources. For other types of vehicles, the respondent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

Box 6. Retirement Plan Participation

Participation in retirement plans can both increase families' net worth and provide extra retirement financial security through lower taxes on savings, a guaranteed income in retirement, or both. In this discussion, a family is considered a participant in a retirement plan if it has any of the following: an individual retirement account (IRA); an account-type job pension (defined contribution plan, or DC), which includes 401(k)s; or a defined-benefit (DB) pension. The following discussion focuses on working families with a reference person aged 35 to 64, by usual income group. The focus is on these families because, generally speaking, these families have finished their education but have not retired.

Across the usual income distribution, families, on average, saw decreases in retirement plan participation from 2016 to 2019 (figure A). These decreases followed increases in 2016 and left participation little changed, on balance, since 2013.

Figure A. Participation in any retirement plan, by usual income group, over time



The decline in participation in any retirement plan from 2016 to 2019 was driven by declines in IRA or DC participation across all usual income groups (figure B, left bars). Though families in the top decile of the usual income distribution slightly decreased their IRA or DC participation, the decrease in participation for the bottom two usual income groups was more pronounced, driven by declines in IRA participation in particular (not shown).[1]

Although all usual income groups decreased IRA or DC participation, for families in the top half of the distribution, there was a partially offsetting increase in DB participation, while for families in the bottom half, there was also a decline in DB participation (figure B, right bars).[2]

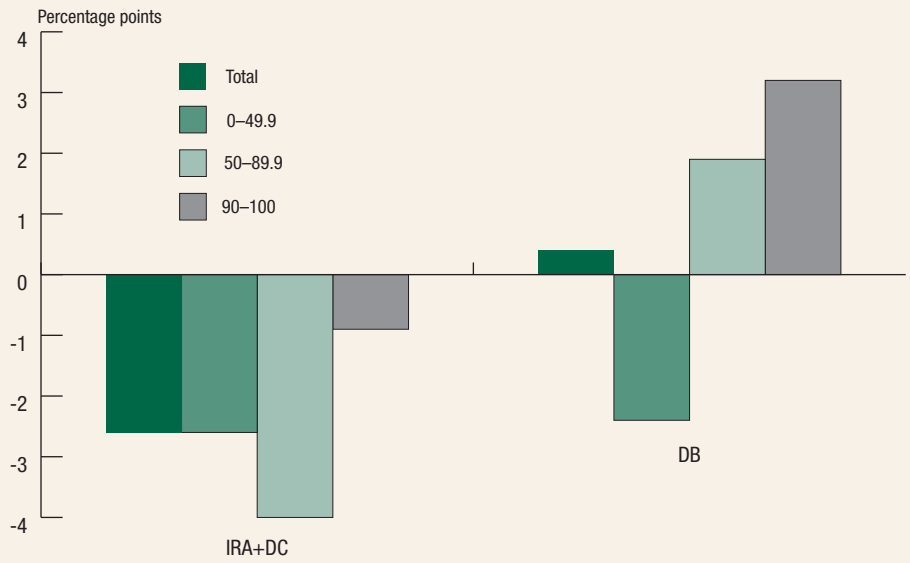
For many families, the assets held in IRAs and DC plans (typically associated with either a current job or a past job) are among the most important components of their balance sheets and are a significant determinant of their future retirement security. Among families that have these assets, the average combined IRA and DC pension account balance increased to $269,600 in 2019, and the gains occurred throughout the usual income distribution (table C). For families in the bottom half of the distribution, although participation in IRA or DC plans fell in 2019, the average balance for participating families increased slightly from 2016, reaching $57,400. The average balance for participating families in the upper-middle part of the distribution increased about $3,700 between 2016 and 2019, to

continued on next page

Box 6. Retirement Plan Participation—*continued*

$170,600. The average balance for participating families in the top 10 percent of the distribution increased the most, reaching $692,800.

Figure B. 2016–19 changes in defined contribution and defined-benefit plan participation, by usual income



Note: IRA is individual retirement account, DC is defined contribution plan, and DB is defined-benefit pension.

Table C. Mean retirement savings among those with an individual retirement account or an account-type job pension, families ages 35 to 64, 2013–19 surveys

2019 dollars

Percentile of usual income	2013	2016	2019
All	213,900	252,700	269,600
0–49.9	42,900	56,900	57,400
50–89.9	161,700	166,900	170,600
90–100	489,900	682,200	692,800

[1] Participation in IRA or DC plans for the three usual income groups from lowest to highest income were 31 (29) percent, 74 (70) percent, and 92 (91) percent in 2016 (2019).
[2] Participation in DB plans for the three usual income groups from lowest to highest income were 17 (14) percent, 34 (36) percent, and 31 (35) percent in 2016 (2019).

Ownership of business equity was about 13 percent in 2019.[36] The conditional median value was more than $89,000, and the conditional mean value was more than $1.2 million. The wide difference between the median and mean values reflects the small fraction of privately held businesses with very high valuations. Ownership of equity in nonresidential property was 6.7 percent in 2019, and conditional median and mean values of equity in nonresidential property were about $70,000 and $375,000, respectively.

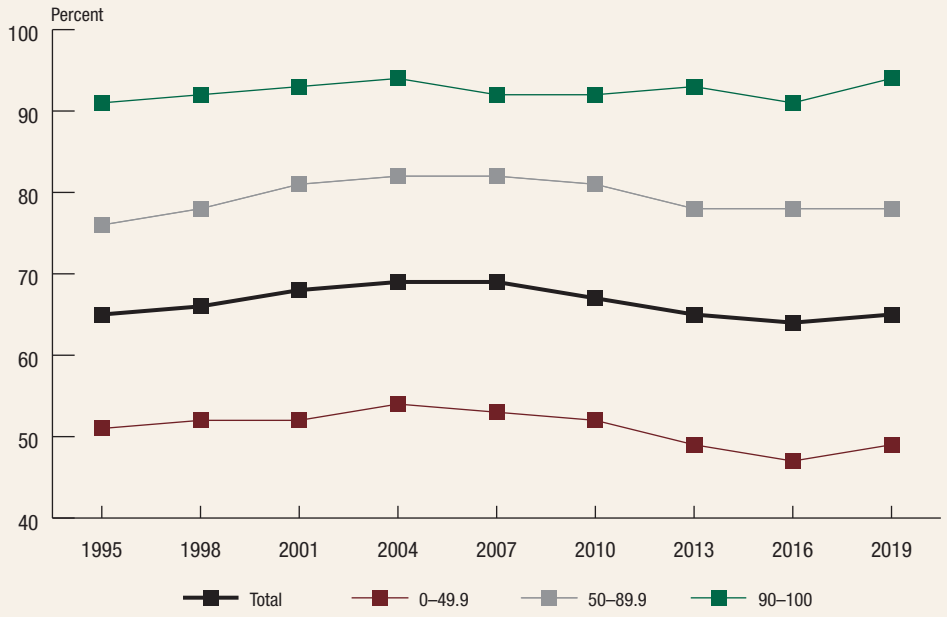
[36] For more details, see box 8, "Holdings of Business Equity."

Box 7. Homeownership and Net Housing Wealth

The percentage of families that owned their primary residence increased from 63.7 percent in 2016 to 64.9 percent in 2019 (figure A). The 2016 homeownership rate was the lowest recorded in the Survey of Consumer Finances (SCF) since 1989, and the 2019 rate remains well below the peak observed in 2004.[1] Across families grouped by percentile of usual income, there are large differences in homeownership rates, which tend to increase with usual income. For families in the bottom half of the income distribution, the homeownership rate was 49.1 percent in 2019, while the homeownership rate for those in the top 10 percent of the distribution was 93.6 percent.

Between 2016 and 2019, the homeownership rate rose for the bottom half and top 10 percent of the income distribution, while the rate essentially did not change for the upper-middle-income group. The 2016–19 period is a change in the trend for the bottom usual income group, for which homeownership had declined in each survey since 2007. For the top income group, the homeownership rate has fluctuated within a relatively narrow range, between 91.4 and 93.6 percent, since 2007.

Figure A. Homeownership rate, by usual income group, 1995–2019 surveys



For families that own their primary residence, the median net housing value—defined as the home's value minus any debts secured by the home (that is, outstanding mortgages, home equity loans, and home equity lines of credit)—increased between 2016 and 2019, continuing the rise in values between 2013 and 2016 (table B).[2] In 2016, among home-owning families, the median net housing value was $106,400. In 2019, that number had risen to $120,000, an increase of 13 percent.

Across usual income groups, the median net housing value increases as usual income rises. In 2019, the median value of net housing wealth among homeowners in the bottom half of the income distribution was $89,000. For the top income group, the mean net housing value was almost four times larger, at $346,000.

Between 2016 and 2019, median net housing value increased for homeowners in the bottom half of the income distribution as well as for upper-middle-income homeowners. For the bottom income group, net housing value rose the most—19 percent. This trend,

continued on next page

Box 7. Homeownership and Net Housing Wealth—*continued*

along with the group's increase in homeownership rates, contributed to the group's growth in wealth.

For the upper-middle-income group, the median net housing value increased 9 percent. Meanwhile, the top income group saw a net housing value decline of 6 percent. These changes stand in contrast to the patterns in 2013 and 2016, where higher-income households gained more.

Table B. Median net housing value for homeowners, 2013–19 surveys

Thousands of 2019 dollars

Percentile of usual income	2013	2016	2019
All	87.9	106.4	120.0
0–49.9	65.9	74.5	89.0
50–89.9	84.3	103.6	113.0
90–100	274.5	367.4	346.0

[1] The homeownership rate in 1989 was 63.9 percent. It rose to a peak of 69.1 percent in 2004.
[2] SCF respondents are asked to report the value of their home. Only primary residences are included. Debts on the home include any mortgages or home equity loans against the primary residence.

Debt, Debt Burden, and Credit Market Experiences

The share of families holding any type of debt held steady between 2016 and 2019, at roughly 77 percent (table 4).[37] The conditional median value of debt increased 2 percent to nearly $65,000, and the conditional mean value increased 7 percent to more than $140,000.

Table 4. Holding and values of debt items, 2016 and 2019 surveys

Thousands of 2019 dollars, except as noted

Types of debts	Percent holding		Conditional median value			Conditional mean value		
	2016	2019	2016	2019	Percentage change 2016–19	2016	2019	Percentage change 2016–19
Any debt	**77.1**	**76.6**	**63.6**	**64.8**	**2**	**131.2**	**140.6**	**7**
Secured by residential property								
Primary residence	41.9	42.1	118.1	134.8	14	167.7	180.8	8
Other	5.6	4.7	106.4	122.0	15	170.8	205.9	21
Lines of credit not secured by residential property	1.8	1.5	3.2	2.0	-37	59.2	40.4	-32
Installment loans								
Education loans	22.4	21.5	20.2	22.3	10	36.4	40.3	11
Vehicle loans	33.8	36.9	13.6	13.1	-4	18.3	17.6	-4
Other installment loans	11.2	10.5	3.6	3.8	5	16.4	20.6	26
Credit card balances	43.9	45.4	2.4	2.7	10	6.1	6.3	3
Other	5.4	5.2	5.3	5.0	-6	28.5	24.7	-13

Note: See the appendix for definitions of liability categories used in the Survey of Consumer Finances.

[37] For a discussion of the resources that families use when making borrowing and investment decisions, see box 10, "Shopping for Financial Services." See the appendix for a detailed definition of SCF liability categories.

Debt Holdings by Type

About 42 percent of families in 2019 held debt secured by a primary residence, similar to the percentage in 2016. As observed earlier in table 3, about 65 percent of families in 2019 owned their principal residence. These numbers imply that almost two-thirds of homeowners have home-secured debt, while more than one-third of homeowners own their home free of debt.

The conditional median and mean values of home-secured debt increased between 2016 and 2019, closely tracking the rise in home values shown in table 3. The conditional median value of home-secured debt increased 14 percent, from $118,100 to $134,800, and the conditional mean value of home-secured debt increased 8 percent.

Credit card debt continued to be the most widely held type of debt in 2019, with more than 45 percent of families reporting a credit card balance after their last payment. Of those with credit card debt, the median family owed $2,700 in 2019, up 10 percent from 2016. About 37 percent of families held vehicle loans, and nearly 22 percent of families had education loans in 2019. Conditional median and mean balances on vehicle loans declined between 2016 and 2019, as did vehicle values shown in table 3. In contrast, conditional median and mean balances on education loans increased much more between surveys—to $22,300 and $40,300, respectively—representing a continuation of the long-term trend of rising education debt. (For more on education debt, see box 9, "Education Debt.")

In 2019, 10.5 percent of families held other installment loans, down slightly from 2016. These loans are often associated with purchases of furniture, appliances, and other durable goods, though the category also includes medical debt.

Debt Burden

The ability of individual families to service their loans is a function of many factors, including 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 economic shocks are sufficiently large and prevalent, a broad pattern of default, restraint in spending, and financial distress in the wider economy might ensue.

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 debt to income, and payment-to-income ratios compare payments made on debt relative to income. All three ratios can be constructed either in aggregate or as a median for debtors.[38]

Most of these ratios increased slightly between 2016 and 2019, implying families faced somewhat higher debt burdens, after having declined from 2010 to 2016 (table 5).[39] However, these ratios remain below their levels just before the 2007–08 financial crisis. In 2019, the median leverage ratio for debtors was slightly below its 2007 level at 33.9 percent; median debt-to-income and payment-to-income ratios for debtors in 2019—at 95.7 percent and 15.3 percent, respectively—were well below 2007 levels.[40]

[38] The aggregate is defined as the total amount of debt held (or 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 family's ratio among those carrying debt only.

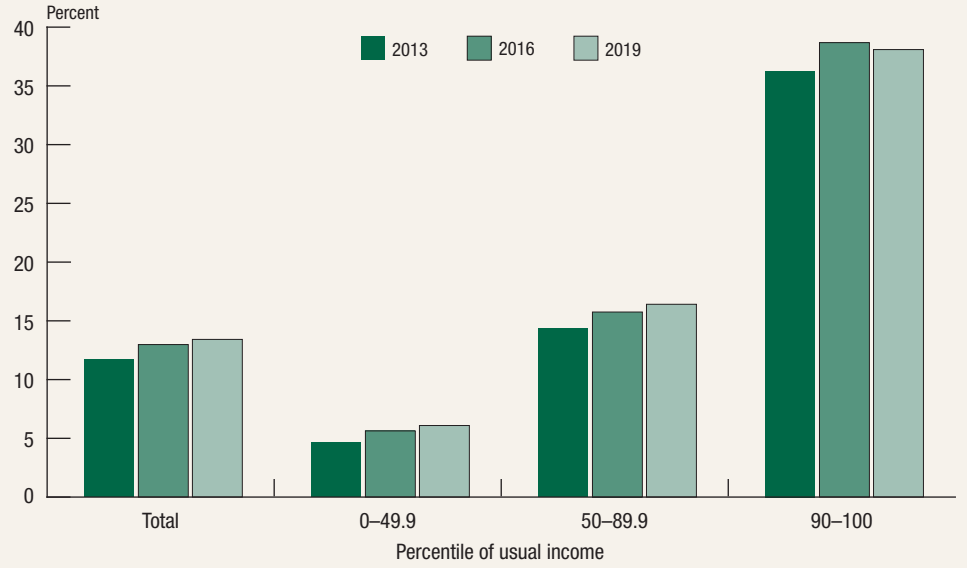
[39] For definitions of the components of table 5, see the appendix.

[40] An alternative aggregate version of payment-to-income ratios is the debt service ratio. See Karen Dynan,

Box 8. Holdings of Business Equity

About 13 percent of families in the 2019 Survey of Consumer Finances (SCF) owned a privately held business, which is up slightly relative to the past two surveys (figure A).[1] As in past surveys, business ownership increases with income, and nearly 40 percent of families in the top income decile own a business.

Figure A. Families with holdings of business equity, by usual income group



Most families that own businesses in the SCF employ fewer than five people (table B).[2] For these families, mean business equity in the 2019 SCF was about $450,000, while mean business equity for families that own businesses with five or more employees was about $4.1 million. For businesses of each size, median valuations were more modest ($50,000 for smaller and $725,000 for larger businesses).

Table B. Assets and income, by size of business

Percent or 2019 dollars

Percentile of usual income	Business owners		All others
	Less than five employees	Five or more employees	
Share of businesses	78	22	n.a.
Business assets (mean)	$ 447,400	$4,081,500	n.a.
Business assets (median)	$ 50,000	$ 725,000	n.a.
Net worth* (mean)	$1,327,500	$3,479,500	$392,100
Net worth* (median)	$ 308,100	$1,065,600	$ 89,000
Usual income (mean)	$ 166,700	$ 498,900	$ 82,000
Usual income (median)	$ 97,600	$ 258,600	$ 54,500

n.a. Not applicable.

* Net worth excludes the value of businesses.

Business-owning families also tend to be wealthier and have higher incomes than families without a business (table B). For example, the mean net worth of families without a

continued on next page

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, https://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.

Box 8. Holdings of Business Equity—*continued*

business was about $400,000, while the mean net worth of families that own businesses employing fewer than five people or five or more people—excluding the value of businesses—was about $1.3 million and $3.5 million, respectively. A similar pattern is observed for mean and median family income (table B).

[1] The forms of business in this category are sole proprietorships, limited partnerships, other types of partnerships, subchapter S corporations and other types of corporations that are not publicly traded, limited liability companies, and other types of private businesses. If the family surveyed lived on a farm or ranch 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. Note: This definition excludes the 5 percent of SCF families in which the reference person is self-employed but does not report a business interest.

[2] For families with more than one business, we use the business with the larger amount of employees.

Another important indicator of potential financial distress is the proportion of families with unusually large debt burdens. In 2019, 7.4 percent of debtors had payment-to-income ratios greater than 40 percent. This value represents a slight increase from 2016, when 7.0 percent of debtors had payment-to-income ratios greater than 40 percent. However, the level in 2019 is substantially lower than the level observed in 2007.

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. The SCF asks several questions that attempt to capture whether families are credit constrained, two of which are (1) whether the family was turned down for credit over the past 12 months, and (2) whether the family decided not to apply for credit during the past 12 months for fear of being turned down.[41] In 2019, almost 11 percent of families responded "yes" to the first question, and about 13 percent responded "yes" to the second.

SCF families' capacity to stay current on their financial obligations improved between 2016 and 2019, continuing a trend since 2010 (table 5). 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 2019, 12.3 percent of families reported being late on payments, down from 13.5 percent in 2016 and 20.8 percent in 2007. The percentage of families that reported being 60 days late or more declined from 5.8 percent in 2016 to 4.6 percent in 2019, substantially below the recent peak of 8.1 percent in 2010.

The SCF 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, and they generally carry interest rates far exceeding those for conventional forms of credit. In 2019, about 3 percent of families reported taking out a payday loan, similar to 2016.

Additional measures of financial distress are whether families have declared bankruptcy or experienced a foreclosure. In 2019, 2 percent of families reported having declared bankruptcy in the past five years, and about 1 percent of families reported having foreclosure proceedings brought against properties they owned in the past five years.[42]

[41] This 12-month time frame differs from analogous questions in surveys before 2016, which had asked families about their experiences with credit constraints over the past five years. Consequently, table 5 reports only one year of historical data on credit constraints over the past 12 months.

[42] The SCF began asking about foreclosure experiences starting with the 2016 survey.

Box 9. Education Debt

Student debt continued to be the largest source, in dollar terms, of nonmortgage debt owed by families in the 2019 Survey of Consumer Finances (SCF) (see table 4 in the main text).

The amount of student debt that a family has can correlate negatively or positively with economic well-being. On the one hand, increased student borrowing can reflect lower socioeconomic status during schooling that persists into later periods. In addition, higher student debt balances may crowd out consumption or investment opportunities, either directly or indirectly (via reduced access to credit). On the other hand, higher student debt balances may reflect more time in school or more expensive education, both of which are often, but not always, commensurate with better future economic positions. Table A compares families across the distribution of student debt along several key dimensions generally unavailable in other data sources and helps illustrate this tension.

Table A. Characteristics of families with student debt, 2019

2019 dollars, except as noted

Family characteristics	Tercile of student debt			All
	Lowest	Middle	Highest	
Mean student debt	5,900	23,900	92,600	40,300
Mean income	95,200	87,400	98,800	93,800
Mean net worth (excluding student debt)	230,700	193,800	298,600	240,800
Mean student loan payment-to-income ratio	1.9%	2.9%	5.0%	3.3%
Percentage of families with zero payment	28%	30%	30%	29%
Percentage of families making payments under income-driven repayment plan	27%	32%	45%	35%
Percentage of families that own their home	54%	55%	59%	56%
Percentage of families that completed their degree	55%	63%	78%	65%
Percentage of families with master's degree or higher	14%	20%	52%	28%
Mean age of reference person (years)	40	39	40	40

Note: This table excludes families with zero education debt. Education level refers to the maximum education between a reference person and his or her spouse or partner. Degree completion refers to the educational program that the household's first reported student loan financed.

The 22 percent of families with student debt had lower average income and net worth (excluding student debt) than the population (see tables 1, 2, and 4 in the main text). However, the relationship is not as clear cut across the distribution of families with student debt, as both income and wealth exhibit a U-shape across the distribution, with those in the middle of the distribution (that averaged $23,900 of student debt) having lower income and wealth than the lowest and highest terciles (that averaged $5,900 and $92,600, respectively).

Some measures of financial hardship, though, rise throughout the distribution.[1] The likelihood a family was making payments under an income-driven repayment (IDR) plan as well as the likelihood a family was not making student loan payments both increase with student debt.[2] Notably, 45 percent of families in the top one-third of the distribution reported paying under an IDR plan in 2019, a rate more than 10 percentage points higher than either of the other two groups. Further, despite disproportionately many families

continued on next page

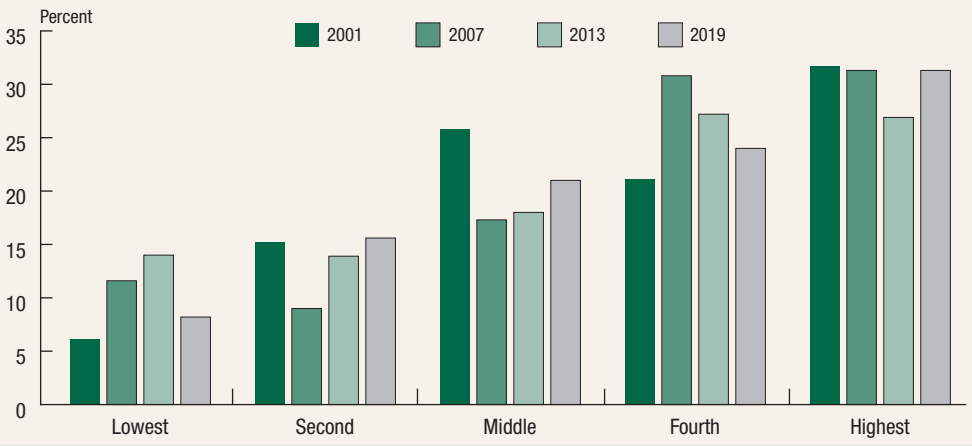
Box 9. Education Debt—*continued*

making zero or reduced payments, average student loan repayment burdens, as measured by the payment-to-income ratio, increase along the distribution.

Other measures indicate that economic positions improve throughout the distribution. Families with more debt in 2019 were more likely to both have graduated and hold an advanced degree, with those in the top one-third of the distribution more than 20 percentage points more likely to have completed their program and more than 35 percentage points more likely to have at least a master's degree than those in the bottom one-third.[3] Additionally, those with more student debt were more likely to own their homes.

Figure B shows the distribution of student debt across usual income quintiles through its surge over the past couple of decades. While there is some variation in how the debt was apportioned across quintiles over time, the distribution in 2019 closely resembled the distribution in 2001. In addition, across survey periods, student debt has consistently been disproportionately held by higher-income families, which likely can support their loan payments. Indeed, in each survey, more than half of outstanding student debt belonged to the top 40 percent of the income distribution, and the bottom quintile never held more than 14 percent of the debt.

Figure B. Share of education debt, by quintile of usual income over time



[1] Table A indicates that 35 percent of families with student debt were making a payment under an IDR plan in 2019. Including families that were on an IDR plan but not making a payment increases this figure to 37 percent. In 2018, 29 percent of federal Direct Loan student borrowers were on an IDR plan, as calculated by the College Board using data from the Federal Student Loan Portfolio; see page 20 of https://research.collegeboard.org/pdf/trends-student-aid-2018-full-report.pdf.

[2] That said, the fraction of families with student debt that held a private student loan—which are not all eligible for IDR plans and can have higher interest rates than federal student loans—was inversely related to the amount of student debt a family had (not shown).

[3] The SCF asks respondents with student loans whether they completed the educational program that each student loan financed, and we use the response that refers to the first reported student loan. Elsewhere in the survey, respondents are asked about their educational attainment and that of their spouse or partner, neither of which was necessarily financed with loans. Further, 32 percent of families on IDR plans had at least a master's degree (not shown), which is higher than 28 percent of all families with student debt with a master's degree in table A. These patterns are consistent with a recent Congressional Budget Office report that found that individuals who borrowed to attend graduate programs have much larger loan balances, on average, and are more likely to enroll in IDR plans than those who borrowed only to attend undergraduate programs; see https://www.cbo.gov/system/files/2020-02/55968-CBO-IDRP.pdf.

Table 5. Debt burdens and credit market experiences, 2007–19 surveys
Percent

Measure of debt burden or interaction with credit markets	2007	2010	2013	2016	2019
Debt burden					
Leverage ratio					
Aggregate	14.8	16.4	14.6	12.1	12.6
Median for debtors	34.8	41.3	38.6	36.4	33.9
Debt-to-income ratio					
Aggregate	115.2	124.7	104.6	92.6	101.2
Median for debtors	111.1	118.8	107.3	95.1	95.7
Payment-to-income ratio					
Aggregate	14.6	14.7	12.0	10.8	11.8
Median for debtors	18.7	18.1	15.9	14.7	15.3
Fraction with payment-to-income ratio greater than 40 percent	11.4	10.4	8.2	7.0	7.4
Credit market experiences					
Credit constrained					
Turned down for credit (past year)	n.a.	n.a.	n.a.	10.8	10.7
Did not apply for credit for fear of being turned down (past year)	n.a.	n.a.	n.a.	14.4	12.7
Either turned down for credit or feared denial (past year)	n.a.	n.a.	n.a.	20.8	18.4
Either turned down for credit or feared denial (past 5 years)	24.5	28.3	27.6	n.a.	n.a.
Late on payments					
Late on payments	20.8	17.3	14.9	13.5	12.3
Late on payments 60 days or more	5.5	8.1	6.9	5.8	4.6
Took out a payday loan in past year	2.4	3.9	4.2	3.4	2.8
Declared bankruptcy in past 5 years	3.8	3.6	4.1	3.0	2.0
Had foreclosure start in past 5 years	n.a.	n.a.	n.a.	2.1	1.3
Used credit cards for convenience only (that is, do not carry a balance)	56.2	63.0	64.0	57.5	56.0

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

Finally, between 2016 and 2019, the share of families that used a credit card exclusively for convenience (that is, they did not carry a balance) essentially did not change, remaining several percentage points below the 2010 and 2013 shares.

Box 10. Shopping for Financial Services

As part of their financial lives, families make a variety of decisions to select loan products for any credit they may use or investment products for any savings they may have. 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 and investing services. Since 2016, the SCF has asked families to rate the intensity of searching for borrowing or investing services, separately, on a 0 to 10 scale, with 10 being the highest intensity.[1]

Families' intensity of shopping for borrowing or investing services remained stable at a moderate level from 2016 to 2019 (table A). Another similar trend in 2019 is that families with higher usual income, on average, reported that they search more intensely for both borrowing and investing services than families with lower usual income. Among families that reported either a 9 or 10 for borrowing (investing) search intensity, families in the top usual income decile were overrepresented by about 21 (16) percent.

Table A. Mean amount of shopping around by families, by usual income group, 2016 and 2019

Index, 0–10

Percentile of usual income	Shop for credit, 2016	Shop for credit, 2019	Shop for investment, 2016	Shop for investment, 2019
All	6.5	6.5	6.0	5.9
0–49.9	5.9	5.8	5.5	5.4
50–89.9	7.1	7.1	6.4	6.3
90–100	7.3	7.4	7.0	6.8

Note: Mean intensity of shopping for credit or investment information by usual income percentile. Intensity of shopping ranges from 0 to 10, with 10 being the highest.

The SCF also asks families what sources of information they use to make decisions about borrowing or investing (table B).[2] In general, in 2019, families relied most heavily on the internet, personal connections, and business professionals for both borrowing and investing information.[3]

Table B. Sources of information for borrowing and investing decisions

Percent

Source of information	For credit			For investments		
	2001	2010	2019	2001	2010	2019
Calling around	36.2	26.9	20.7	19.4	15.7	13.1
Advertisements and media	41.8	34.2	25.0	26.8	26.1	19.5
Internet	21.8	41.7	55.5	14.8	33.0	45.2
Friends, relatives, associates	39.1	42.8	49.2	36.0	39.7	43.5
Business professionals	39.7	47.6	53.7	48.9	56.7	56.5
Does not borrow or invest	10.9	14.5	10.0	9.4	11.7	8.1
Other	8.9	5.5	6.2	15.1	8.0	9.2

The internet has become an increasingly important source of information over time. For information on borrowing, 55 percent of families reported using the internet in 2019, up 14 percentage points from 2010 and up 34 percentage points since 2001. Similarly, for information on investing, 45 percent of families reported using the internet, up 12 percentage points from 2010 and up 30 percentage points from 2001.

continued on next page

Box 10. Shopping for Financial Services—*continued*

Families reported less reliance on other forms of advertisements and media for information on borrowing or investing, also continuing a long-run trend and balancing out increased internet use. The use of friends, relatives, associates, and business professionals as sources has trended upward since 2001 for both borrowing and investing information, although it was roughly stable from 2016 to 2019 (not shown).

[1] Before 2016, the SCF also asked about shopping for financial services, though the response options were on a five-point scale, with 1 equaling "almost no shopping," 3 equaling "moderate shopping," and 5 equaling "a great deal of shopping."

[2] The SCF asks families to list all sources of information from 24 options. Table B combines some of these options. Advertisements and media include the sum of responses to four options: advertisements, magazines, mail, and TV or radio. Business professionals combines seven options: accountant, banker, broker, financial planner, insurance agent, lawyer, and real estate agent. Other consists of nine options: don't shop, material from work, past experience, personal research, other institution, self or spouse, shop around, store or dealer, and telemarketer. Calling around, internet, and friend or relative are individual options.

[3] One way to measure the relationship between the sources of information for borrowing versus investing is using the Spearman correlation. The Spearman correlation compares the rank-order of selections between two sets of options. Using all 24 possible response options, the Spearman correlation between sources of information for borrowing versus investing in 2019 was 0.89.

Appendix: Survey Procedures and Statistical Measures

The 2019 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 2020 on the Federal Reserve Board's website.[43]

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.[44] 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.[45] In general, the median values for income and net worth in the SCF are most

[43] Data from the 2019 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 website at https://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.

[44] See Board of Governors of the Federal Reserve System (2020), Statistical Release Z.1, "Financial Accounts of the United States" (June 11), https://www.federalreserve.gov/releases/z1; and Michael Batty, Jesse Bricker, Joseph Briggs, Elizabeth Holmquist, Susan McIntosh, Kevin Moore, Eric Nielsen, Sarah Reber, Molly Shatto, Kamila Sommer, Tom Sweeney, and Alice Henriques Volz (2019), "Introducing the Distributional Financial Accounts of the United States," Finance and Economics Discussion Series 2019-017 (Washington: Board of Governors of the Federal Reserve System, March), https://dx.doi.org/10.17016/FEDS.2019.017.

[45] 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), https://www.federalreserve.gov/pubs/feds/2013/201346/201346pap.pdf; and Lisa J. Dettling, Sebastian J. Devlin-Foltz, Jacob Krimmel, Sarah J. Pack, and Jeffrey P. Thompson (2015), "Comparing Micro and Macro Sources for Household Accounts in the United States: Evidence from the Survey of Consumer Finances," Finance and Economics Discussion Series 2015-086 (Washington: Board of Governors of the Federal Reserve System, June), http://dx.doi.org/10.17016/FEDS.2015.086.

comparable with values in other household surveys because of the special design of the SCF sample.[46]

Adjustment for Inflation

In this article, unless otherwise specified, all dollar amounts from the SCF are adjusted to 2019 dollars using the "current methods" version of the consumer price index (CPI) for all urban consumers. In an ongoing effort to improve accuracy, the U.S. 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.[47] To adjust assets and liabilities to 2019 dollars and to adjust family income for the preceding calendar year to 2019, 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
2004	1.3557	1.3923
2007	1.2344	1.2694
2010	1.1782	1.1977
2013	1.0982	1.1144
2016	1.0636	1.0773
2019	1.0000	1.0181

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 reference person within the PEU, not to convey a judgment about how an individual family is structured but as a means of organizing the data consistently. For example, the age and educational classifications ascribed to families throughout this report describe the age and education of the reference person. If a couple is economically dominant in the PEU, the reference person 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 reference person in this report. Note that the

[46] Family income measures help highlight the issues that can arise when comparing SCF medians and means against other survey estimates. Over the 2016–19 period, estimates of inflation-adjusted household income for the previous year from the Current Population Survey (CPS) of the U.S. Census Bureau show an increase in both the median (6.3 percent) and the mean (7.4 percent). The change in the median is slightly larger than the corresponding increase in the SCF, whereas the change in the mean is opposite signed. The medians for 2019 are similar in the SCF ($58,600) and the CPS ($64,200). Typically, the SCF shows a higher level of mean income than does the CPS; for 2019, the SCF yields an estimate of $106,500, while the CPS yields an estimate of $91,600. 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 rises 4.6 percent over the period (from $60,300 in 2016 to $63,100 in 2019), while the mean decreases a smaller 1.9 percent (from $112,700 in 2016 to $110,600 in 2019). The substantial difference in means is likely largely 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.

[47] 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.

term "reference person" is a new descriptor as of the 2019 survey, replacing the outdated "household head" terminology used in previous surveys.

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.[48] 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 (MMF); call or cash accounts at brokerages; and prepaid debit cards. 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. Prepaid debit cards, collected in the SCF for the first time in 2016, include reloadable prepaid debit cards and government benefit cards.

Certificates of deposit are accounts held for a set period 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 MMFs 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, exchange-traded funds, real estate investment trusts, and hedge funds.

Retirement accounts include individual retirement accounts, 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.[49]

---

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

[49] Although tax-deferred retirement assets are clearly an important element in retirement planning, families may hold a variety of other assets 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 (DB) 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, https://www.ssa.gov/OP_Home/handbook/handbook.html.) The retirement income provided by DB 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 DB 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.

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.[50] 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.[51]

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.

Vehicles include cars, vans, sport utility vehicles (SUV), trucks, motor homes, recreational vehicles, motorcycles, boats, airplanes, and helicopters.[52] 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 the family previously owned and that 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, farmland 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 from 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

[50] In 2019, 4.7 percent of families reported having any type of annuity, and of these families, 76 percent reported having an equity interest.

[51] In 2019, 90.2 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 held in relatively common investments to report the components separately. Of the 5.5 percent of families that reported having any kind of trust or managed investment account in 2019, 49.7 percent reported at least one of the component assets separately. Of families that detailed the components in 2019, 85.5 percent reported some type of financial asset, 12.7 percent reported a primary residence, 16.7 percent reported other real estate, 4.2 percent reported a business, and 1.1 percent reported another type of asset.

[52] Of families owning any type of vehicle in 2019, 99.7 percent had a car, van, SUV, motorcycle, or truck. The remaining types of vehicles were held by 12.8 percent of families.

private businesses. If the family lived on a farm or ranch used at least in part for agricultural business, then 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.[53]

Debt secured by residential property consists of first- and junior-lien mortgages and home equity lines of credit (HELOC) 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.[54] 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.

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, care 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), other credit cards, and revolving store accounts that are not tied to a credit card. Balances exclude purchases made after paying the most recent bill.

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 composed of 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

[53] Among the 13.4 percent of families with a business in 2019, 69.9 percent had a reference person or a spouse or partner who was self-employed; among the 14.3 percent of families in which either the reference person or a spouse or partner was self-employed, 65.5 percent owned a business.

[54] Of all families, 39.6 percent had a first-lien mortgage in 2019 (39.4 percent in 2016), 1.5 percent had a junior-lien mortgage (2.3 percent in 2016), 6.9 percent had a HELOC (6.7 percent in 2016), and 4.5 percent had a HELOC with an outstanding balance (4.4 percent in 2016).

instructions, which can be found in the SCF codebook for the year(s) in question.[55] 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.[56] 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.

The aggregate measure of the payment-to-income ratio referenced in this article can differ from other published measures that are conceptually similar, such as the debt service ratio, for several reasons.[57] First, the debt payments included in each measure are different. The aggregate-level measure includes only debts originated 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 by both sampling error and various types of response errors. As mentioned earlier in this article, the survey income measure tracks the most comparable measure of income in the U.S. Census Bureau's CPS.

The SCF asks multiple questions intended to capture whether families are credit constrained, which is broadly defined as having difficulty accessing credit.[58] One question

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

[56] The definition of payment-to-income ratio in the SCF includes only debt payments, not payments on leases or rental payments. That said, the SCF collects information on vehicle lease payments and rent on primary residences. Therefore, the SCF can be used to create a broader measure of a family's payments that includes leases and rental payments. See, for example, Andrew C. Chang, Joanne W. Hsu, Sarah J. Pack, and Michael G. Palumbo (2018), "Where's the Money Going? The Importance of Accounting for Rent Payments in Measuring a Household's Financial Obligations," FEDS Notes (Washington: Board of Governors of the Federal Reserve System, June 20), https://dx.doi.org/10.17016/2380-7172.2213.

[57] 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, https://www.federalreserve.gov/pubs/bulletin/2003/1003lead.pdf.

[58] Before 2016, these questions had asked families about their experiences over the past five years, rather than over the past year.

asks the respondent whether the respondent or the spouse or partner applied for particular types of credit in the past year. Among those that answer in the affirmative, a follow-up question asks the respondent whether a lender declined an application for credit or provided less credit than was sought at any point in the past year. Among those that answer in the negative, a follow-up question probes the rationale behind the decision not to apply for credit in the past year and, among other choices, offers "you did not think you would get approved" as a possibility. A combination of these 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 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 days or more.

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 over the past five years is based on a series of retrospective questions that ask whether the respondent or the partner or spouse has ever declared bankruptcy and, if so, the most recent year.

Foreclosure experience over the past five years is based on a series of retrospective questions that ask whether the respondent or the partner or spouse has ever had a foreclosure proceeding brought against an owned property and, if so, the most recent year.

Finally, convenience use of credit cards is determined using questions on whether 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, 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 which 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 tables 1 and 2 in the article are given in the following table:

Item	Survey year					
	2004	2007	2010	2013	2016	2019
Percentile of usual income						
20	28,400	27,700	28,800	25,600	26,900	28,400
40	48,700	47,600	47,900	44,500	46,300	47,900
60	76,600	76,200	74,300	69,300	73,900	75,300
80	123,900	121,200	119,800	114,800	118,500	127,300
90	181,000	171,400	179,700	169,800	188,400	188,400
Percentile of net worth						
25	18,000	17,500	9,800	9,600	10,800	12,400
50	126,200	148,900	91,100	89,200	103,500	121,700
75	446,300	460,200	355,500	348,400	392,500	403,800
90	1,130,600	1,123,700	1,122,300	1,034,100	1,261,800	1,220,200

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. For greater comparability with earlier SCF data, the data reported in this article group respondents into four classifications based on their responses to the racial identification question: White non-Hispanic, Black non-Hispanic, Hispanic or Latino, and other or multiple race. The "other or multiple race" classification consists of respondents identifying as Asian, American Indian, Alaska Native, Native Hawaiian, Pacific Islander, other race, and all respondents reporting more than one racial identification.[59]

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 data reported in this article, respondents reporting multiple racial identifications in the surveys starting with 1998 are classified as "other or multiple race." In the 2019 SCF, 6.8 percent of respondents reported more than one racial identification, up from 6.4 percent in 2016, 6.1 percent in 2013, 5.4 percent in 2007, and 2.3 percent in 2004. The public release data set includes the racial and ethnic identification variables, enabling the construction of alternative classifications.

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 classifications in this article ignore the information on ethnic identification available in the surveys since 2004, again for greater comparability with earlier SCF data. Of those who responded affirmatively to the question on Hispanic or Latino identification in 2019, 90.2 percent also reported "Hispanic or Latino" as one of their racial identifications, and 82.2 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 2019, the answer to the second of these two questions may have been influenced by the answer to the first.[60]

This all said, evolution of the racial and ethnic composition of the survey population represents important context for interpreting statistics describing the experiences of families by race or ethnicity over time. The next table displays the share of the SCF population each racial or ethnic group has represented in each survey since 2004 using current survey classifications:

[59] Articles for years before the 2016 SCF reported data that classified all families into two groups: White non-Hispanic and non-White or Hispanic. The definition for White non-Hispanic in this article is consistent with that used in earlier years, while the non-White or Hispanic group has been split into three classifications (Black non-Hispanic, Hispanic or Latino, and other or multiple race).

[60] 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).

Race or ethnicity of respondent	Survey year					
	2004	2007	2010	2013	2016	2019
White non-Hispanic	72.2	70.7	67.5	67.2	64.7	64.9
Black non-Hispanic	13.1	11.7	13.0	13.3	14.6	14.2
Hispanic or Latino	9.0	8.6	9.7	9.6	10.2	9.6
Other or multiple race	5.8	9.0	9.9	9.9	10.5	11.3

Classifications of Educational Attainment

In this article, the educational attainment of a family refers to the highest degree obtained by the household reference person. Beginning with the 2016 survey, the SCF modified its educational attainment question to align the SCF more closely with other household surveys, including the Census and CPS. For surveys before 2016, respondents were asked to list the highest grade of school or year of college completed, and follow-up questions asked respondents about the type of degree obtained. Starting with the 2016 survey, the first educational attainment question asks about the highest degree obtained, and follow-up questions ask respondents who report a high school degree whether it was obtained by getting a General Education Development certificate or completing another equivalency program. Follow-up questions also ask respondents who report some college about the number of years of college. It is possible this change may have prompted changes in reporting, although the educational attainment of SCF families was similar to CPS families in both 2013 and 2016.[61]

Similar to race and ethnicity, evolution of the educational composition of the survey population represents important context for interpreting statistics describing the experiences of families by educational attainment over time. The next table displays the share of the SCF population each education group has represented in each survey since 2004 using current survey classifications:

Education of reference person	Survey year					
	2004	2007	2010	2013	2016	2019
No high school diploma	14.4	13.5	12.0	11.0	12.7	10.7
High school diploma	30.6	32.9	32.2	31.3	26.0	24.5
Some college	24.4	24.5	25.1	25.7	27.3	28.5
College degree	30.5	29.1	30.8	32.0	34.0	36.3

Age Classifications

In this article, the age of a family refers to the age of the household reference person. Similar to race and ethnicity, as well as educational attainment, evolution of the age composition of the survey population represents important context for interpreting statistics describing the experiences of families by age over time. The next table displays the share of the SCF population each age group has represented in each survey since 2004 using current survey classifications:

[61] In 2013, the educational attainment of SCF (CPS) household heads was the following: 11.0 (11.3) percent had no high school degree, 31.3 (27.9) percent had a high school degree, 25.7 (29.0) percent had some college, and 32 (31.8) percent had a college degree. In 2016, the educational attainment of SCF (CPS) household heads was the following: 12.7 (10.4) percent had no high school degree, 26 (27.2) percent had a high school degree, 27.3 (28.9) percent had some college, and 34.0 (33.5) percent had a college degree.

Age of reference person (years)	Survey year					
	2004	2007	2010	2013	2016	2019
Less than 35	22.2	21.6	21.0	20.8	20.3	20.9
35–44	20.6	19.6	18.2	17.3	16.8	16.6
45–54	20.8	20.8	21.1	19.6	18.3	17.2
55–64	15.2	16.8	17.5	18.7	19.2	18.8
65–75	10.5	10.5	11.5	12.9	14.1	15.3
75 or more	10.7	10.6	10.7	10.7	11.2	11.3

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 largely 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* as being among the wealthiest 400 people in the United States are excluded from sampling.[62]

Of the 5,783 interviews completed for the 2019 SCF, 4,291 were from the area-probability sample, and 1,492 were from the list sample; for 2016, 4,754 were from the area-probability sample, and 1,500 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)
2004	112.1
2007	116.1
2010	117.6
2013	122.5
2016	126.0
2019	128.6

Overall population growth between 2016 and 2019 was 1.5 percent, according to figures from the U.S. Census Bureau, down from the 2.2 percent growth rate between 2013 and 2016. Also according to U.S. Census Bureau estimates, the number of households increased 2.1 percent between 2016 and 2019—well below the rate of household formation between 2013 and 2016, which was 2.9 percent. With the population growing at a slightly slower rate than household formation, the average number of persons per household barely changed, from 2.56 people in 2016 to 2.55 in 2019.

[62] For more information, see Jesse Bricker, Alice Henriques, and Kevin Moore (2017), "Updates to the Sampling of Wealthy Families in the Survey of Consumer Finances," Finance and Economics Discussion Series 2017-114 (Washington: Board of Governors of the Federal Reserve System, November), https://dx.doi.org/10.17016/FEDS.2017.114.

The Interviews

Although questions have been modified and new questions added over time, the core of the survey questionnaire has changed in only minor ways since 1989. Changes to the questionnaire generally include instances in which the structure was altered to accommodate changes in financial behaviors; changes in types of financial arrangements available to families, including those with businesses that are not publicly traded; and changes in regulations covering data collection. In 2016, interview sections on educational attainment, education loans, payment methods, and financial institutions were revised, and additional questions addressing financial literacy among respondents, parental educational attainment, and decisions under hypothetical financial situations have also been included.[63] For all changes, every effort has been made to ensure the maximum degree of comparability 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 2019 SCF, the median interview length was about 100 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, with a small fraction of interviews conducted in the first four months of the next calendar 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.

For the 2019 SCF, about 200 area-probability interviews were conducted via a mixed mode strategy of web and in-person or telephone interviews. These cases were a test of the feasibility of offering the web as a potential mode for completing the SCF. Potential respondents were provided a personalized link to obtain access to the sections of the survey to complete via the web, with a follow-up in-person or telephone interview to complete the remainder of the interview. The questions for the web portion were nearly identical to those asked in the regular in-person or telephone interview, aside from formatting changes necessary for the web instrument.

The response rate in the area-probability sample is more than double that in the list sample. In 2019, about 60 percent of households selected for the area-probability sample actually completed interviews, down from 65 percent in 2016. The overall response rate in the list sample did not change in 2019 at 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.

[63] For a detailed list of all changes to the questionnaire in 2016, see https://www.federalreserve.gov/econres/files/2016_scf_changes.txt.

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 for both the systematic properties of the sample design and 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.[64]

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 by either increasing the size of a sample or, as is done in the SCF, 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.

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.[65] 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.

---

[64] 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" (Washington: Board of Governors of the Federal Reserve System, January), https://www.federalreserve.gov/econresdata/scf/scf_workingpapers.htm.

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