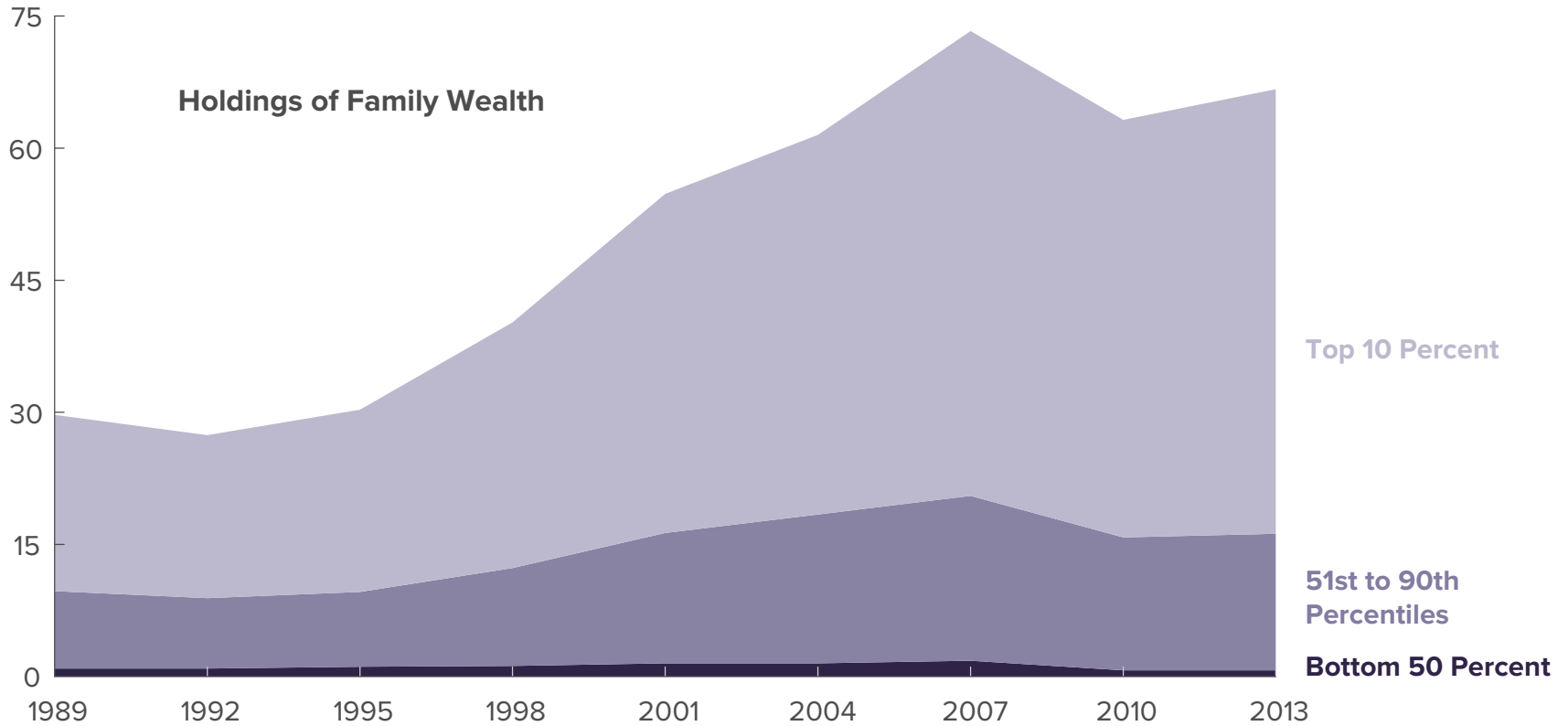


# CBO

## Trends in Family Wealth, 1989 to 2013

Trillions of 2013 Dollars



AUGUST 2016

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## Notes

Numbers in the text and exhibits may not sum to totals because of rounding.

Unless otherwise specified, all dollar amounts are reported in thousands of 2013 dollars. Family wealth over time is adjusted for inflation using the price index for personal consumption expenditures as calculated by the Bureau of Economic Analysis.

The analysis for this report used data from the Survey of Consumer Finances, a triennial survey of U.S. families sponsored by the Board of Governors of the Federal Reserve System in cooperation with the Department of the Treasury. In some places, those data were supplemented with information from *Forbes* magazine's list of the nation's wealthiest 400 people.

Shaded vertical bars in some exhibits indicate periods of recession, which extend from the peak of a business cycle to its trough. Annual statistics from the data taken from the Survey of Consumer Finances are positioned with August of each year as the midpoint of the collection period.

Supplemental data for this report are available on CBO's website ([www.cbo.gov/publication/51846](http://www.cbo.gov/publication/51846)).

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# Trends in Family Wealth, 1989 to 2013

### Summary and Introduction

In 2013, aggregate family wealth in the United States was \$67 trillion (or about four times the nation's gross domestic product) and the median family (the one at the midpoint of the wealth distribution) held approximately \$81,000, the Congressional Budget Office estimates. For this analysis, CBO calculated that measure of wealth as a family's assets minus its debt. CBO measured wealth as marketable wealth, which consists of assets that are easily tradable and that have value even after the death of their owner. Those assets include home equity, other real estate (net of real estate loans), financial securities, bank deposits, defined contribution pension accounts, and business equity. Debt is nonmortgage debt, including credit card debt, auto loans, and student loans, for example.

### How Is the Nation's Wealth Distributed?

In 2013, families in the top 10 percent of the wealth distribution held 76 percent of all family wealth, families in the 51st to the 90th percentiles held 23 percent, and those in the bottom half of the distribution held 1 percent. Average wealth was

about \$4 million for families in the top 10 percent of the wealth distribution, \$316,000 for families in the 51st to 90th percentiles, and \$36,000 for families in the 26th to 50th percentiles. On average, families at or below the 25th percentile were \$13,000 in debt.

There are significant differences in wealth among different age and education groups. In 2013, the median family wealth of families headed by someone who was age 65 or older—\$211,000—was more than 3½ times the median wealth of families headed by someone between the ages of 35 and 49. Similarly, median wealth of families headed by someone with a college degree—\$202,000—was almost four times the median wealth of families headed by someone with a high school diploma.

### How Did the Distribution of Wealth Change From 1989 to 2013?

Over the period from 1989 through 2013, family wealth grew at significantly different rates for different segments of the U.S. population. In 2013, for example:

- The wealth of families at the 90th percentile of the distribution was 54 percent greater than the wealth at the 90th percentile in 1989, after adjusting for changes in prices.
- The wealth of those at the median was 4 percent greater than the wealth of their counterparts in 1989.
- The wealth of families at the 25th percentile was 6 percent less than that of their counterparts in 1989.

The distribution of wealth among the nation's families was more unequal in 2013 than it had been in 1989. For instance, the difference in wealth held by families at the 90th percentile and the wealth of those in the middle widened from \$532,000 to \$861,000 over the period (in 2013 dollars). The share of wealth held by families in the top 10 percent of the wealth distribution increased from 67 percent to 76 percent, whereas the share of wealth held by families in the bottom half of the distribution declined from 3 percent to 1 percent.

Two developments contributed to the change in the distribution of wealth: Compared with families in the top half of the distribution, families in the bottom half experienced disproportionately slower growth in wealth between 1989 and 2007, and they had a disproportionately larger decline in wealth after the recession of 2007 to 2009.

Estimates of the trends in wealth dispersion at the very top of the distribution differ depending on data set and methodology. Estimates based on data from the Survey of Consumer Finances (SCF), supplemented with data on the nation's 400 wealthiest families, suggest that the share of wealth held by those in the top 1 percent increased by 6 percentage points—from 31 percent to 37 percent—between 1989 and 2013. By contrast, estimates based on other data and methodologies suggest that the share of wealth held by the top 1 percent increased by 14 percentage points—from 28 percent to 42 percent—between 1989 and 2012.<sup>1</sup>

CBO's analyses in this report—including that of trends in the share of wealth held by the top 10 percent of the distribution—are not very sensitive to the differences in estimates of wealth in the top 1 percent of the distribution. A detailed investigation of the sources of the differences in estimates of wealth held at the very top of the distribution

would have been a significant undertaking that was outside the scope of this analysis.

Changes in wealth over the period were not the same for families headed by people of different ages or with different amounts of education. Families headed by someone who was age 65 or older held greater median wealth in 2013 than their counterparts did in 1989, but the same was not true for families headed by a person younger than 65. Median wealth was greater in 2013 than it had been in 1989 for families headed by someone with at least a bachelor's degree; the opposite was true for their less educated counterparts. (Examining median wealth for those groups over time allowed CBO to avoid placing disproportionate weight on changes in wealth at the top of the distribution.)

### **How Did Changes in Families' Assets and Debt Contribute to Changes in the Wealth Distribution From 1989 to 2013?**

To explore changes in assets and debt, this report focuses on wealth held by those in the bottom 90 percent of the wealth distribution. A detailed analysis of the categories of assets and debt held by families above the 90th percentile of the wealth distribution is not possible because information about the composition of wealth for the nation's 400 wealthiest families is incomplete. Also, estimates of the share of total wealth held by families in the bottom 90 percent and its change over time are generally consistent, regardless of data or methodology. (See the appendix for additional discussion.)

In 2013, average wealth for families in the 51st to 90th percentiles was greater than it had been in

1989. In contrast, average wealth for families in the bottom half of the distribution was less in 2013 than in 1989. (Examining average wealth for various groups below the 90th percentile allowed CBO to assess the relative contributions of changes in assets and debt to the changes in those averages over time. Because those averages exclude the top 10 percent of the distribution, they are not influenced by the wealth at the top of the distribution.)

Although average wealth had increased for families in the 51st to 90th percentiles and for those in the 26th to 50th percentiles between 1989 and 2007, the decline in wealth associated with the recession more than offset earlier increases for the latter group. For those families, increases in home equity and in financial and other assets contributed to rising wealth between 1989 and 2007, and conversely, losses in home equity and in financial and other assets after 2007 contributed to the decline in average wealth over the period. Average wealth of families in the bottom 25 percent changed little between 1989 and 2007 but declined after 2007. Declines in home equity and increases in nonmortgage debt were among the factors contributing to the decline in average wealth for those families.

For those at the bottom of the distribution of wealth between 1989 and 2013, but especially after 2007, the share of families that had more debt than assets increased, as did their average indebtedness. For instance, 8 percent of families had more debt than assets in 2007, and they were, on average, \$20,000 in debt. By 2013, 12 percent of families had more debt than assets, and they were, on average, \$32,000 in debt.

1. See Emmanuel Saez and Gabriel Zucman, "Wealth Inequality in the United States Since 1913: Evidence From Capitalized Income Tax Data," *Quarterly Journal of Economics*, vol. 131, no. 2 (May 2016), pp. 519–578, <http://dx.doi.org/10.1093/qje/qjw004>.

### What Sources of Data Did CBO Use?

For this analysis, CBO examined the distribution of wealth chiefly using data from the Survey of Consumer Finances, supplemented with data from the Forbes 400 list, where necessary. That choice of data allowed CBO to examine trends in wealth for all families. The supplemented SCF covers the entire wealth distribution. The appendix presents a longer discussion of the data and methods used for this analysis. A list of definitions appears at the end of the publication.

This report provides a series of snapshots of family wealth; it does not provide information about

changes in the wealth of particular families over time. Because the SCF samples different families in each year of the survey, families in a particular group in one year will be different from their counterparts in an earlier or later survey.

The information presented in this report focuses on measures of family wealth—the stock of economic resources that a family holds at a point in time. In contrast, family (or household) income measures the economic resources that a family gains or loses during a particular period.<sup>2</sup> For a discussion of changes in the distribution of income and how they might relate to changes in the

distribution of wealth, see the appendix. Other factors also influence the distribution of wealth over time, including differences among families in inheritances and plans to leave bequests, propensities to save and rates of return on savings, investment skills and strategies, and composition of assets. ♦

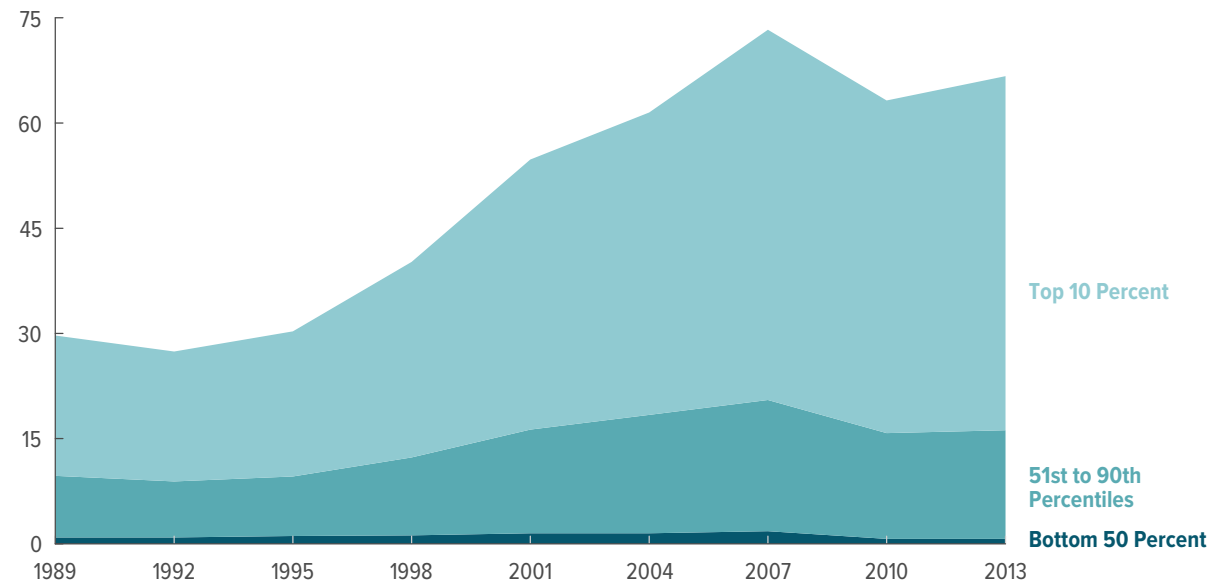
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2. In the past, CBO has examined trends in the distribution of income. See for example, Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2013* (June 2016), pp. 21–24, [www.cbo.gov/publication/51361](http://www.cbo.gov/publication/51361).

## Exhibit 1.

**Holdings of Family Wealth, by Wealth Group**

Trillions of 2013 Dollars



Source: Congressional Budget Office, using data from the Survey of Consumer Finances, supplemented with data from *Forbes* magazine's list of the nation's 400 wealthiest people.

The Survey of Consumer Finances is conducted every three years.

In 2013, total family wealth in the United States—that is, families' total assets minus their total debt—was nearly \$67 trillion, or about four times the size of the nation's gross domestic product, CBO estimates. After an adjustment for price changes over the period, that is more than double the amount of family wealth in 1989. The overall increase in wealth was different for families in different segments of the population, however. For instance, between 1989 and 2013, wealth held by families in the top 10 percent of the distribution increased by 153 percent, whereas wealth held by families in the bottom half of the distribution declined by 19 percent. (Families in the top 10 percent of the wealth distribution in 2013 were not necessarily the same as those in the top 10 percent in earlier years.)

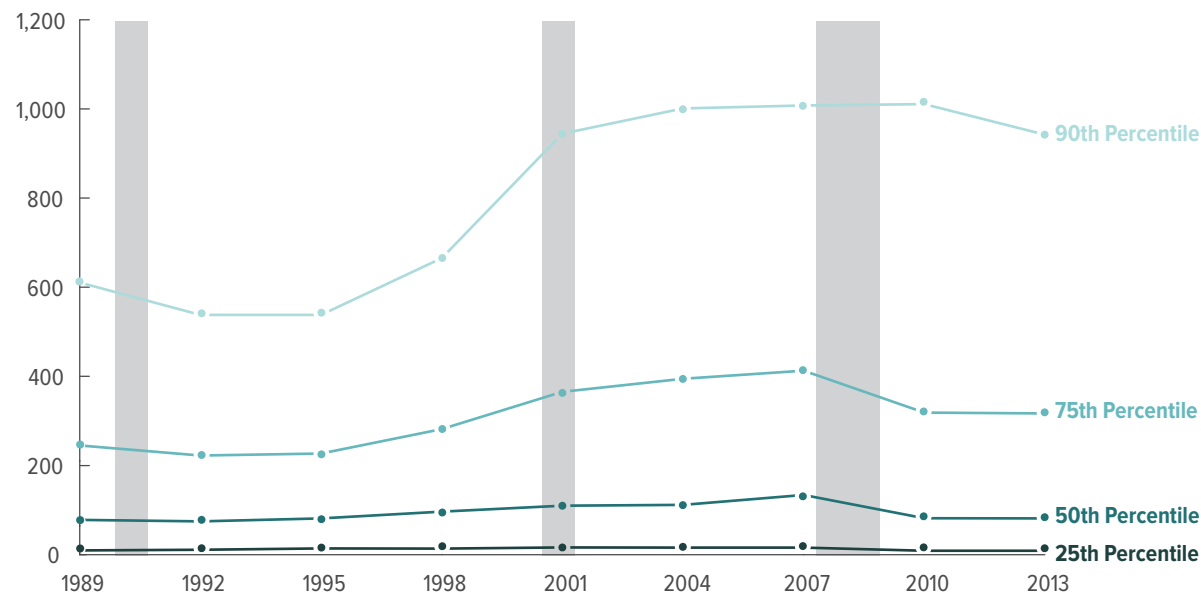
The distribution of wealth was more unequal in 2013 than it had been in 1989. In 2013, families in the top 10 percent held more than three-quarters of all family wealth, whereas in 1989, their counterparts had held two-thirds of all family wealth. Over the period, the share of wealth held by families in the 51st to the 90th percentiles declined from 30 percent to 23 percent, and the share of wealth held by families in the bottom half of the distribution declined from 3 percent to 1 percent. ♦



Exhibit 2.

**Wealth for Families at Selected Percentiles of the Distribution**

Thousands of 2013 Dollars



Source: Congressional Budget Office, using data from the Survey of Consumer Finances, supplemented with data from *Forbes* magazine's list of the nation's 400 wealthiest people.

The Survey of Consumer Finances is conducted every three years.

Between 1989 and 2013, family wealth (total assets minus total debt) grew at different rates for families at different points on the wealth distribution. In 2013, families at the 90th and 75th percentiles had significantly more wealth than their counterparts did in 1989: 54 percent and 29 percent more, respectively. Families at the median had 4 percent more in 2013 than in 1989, but families at the 25th percentile had 6 percent less than their counterparts did in 1989.

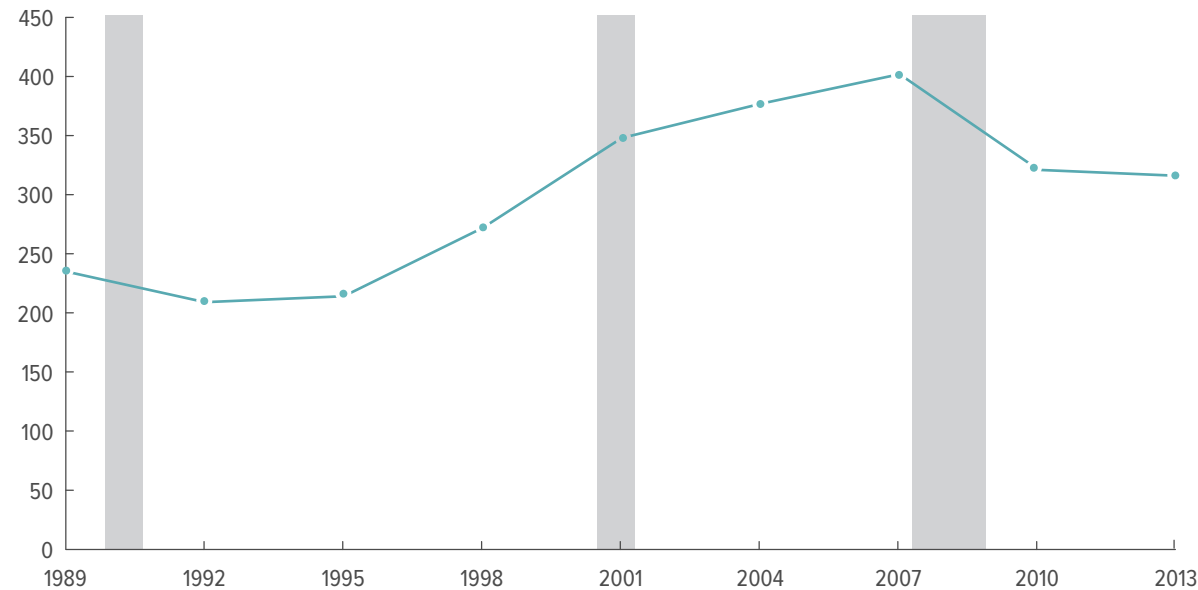
The changes from 1989 to 2013 generally reflect increases in wealth from 1989 to 2007 (before the start of the recession of 2007 to 2009) and decreases in more recent years. From 1989 through 2007, wealth grew similarly in percentage terms for families at the 25th, 50th, 75th, and 90th percentiles of the wealth distribution. During and after the recession, wealth declined for all groups, and by 2013 no group had regained its prerecession level. The decline was larger between 2007 and 2013 for families at the 25th, 50th, and 75th percentiles (44 percent, 39 percent, and 23 percent, respectively) than for families at the 90th percentile, whose wealth declined by 7 percent during that time.

Some of the growth in family wealth, particularly before the recession, can be attributed to the aging of the population and to rising educational attainment among all age groups: Older or more educated people tend to have more wealth than their younger or less educated counterparts (see Exhibit 10 and Exhibit 11). ♦

## Exhibit 3.

**Average Wealth for Families in the 51st to 90th Percentiles of the Wealth Distribution**

Thousands of 2013 Dollars



Source: Congressional Budget Office, using data from the Survey of Consumer Finances.

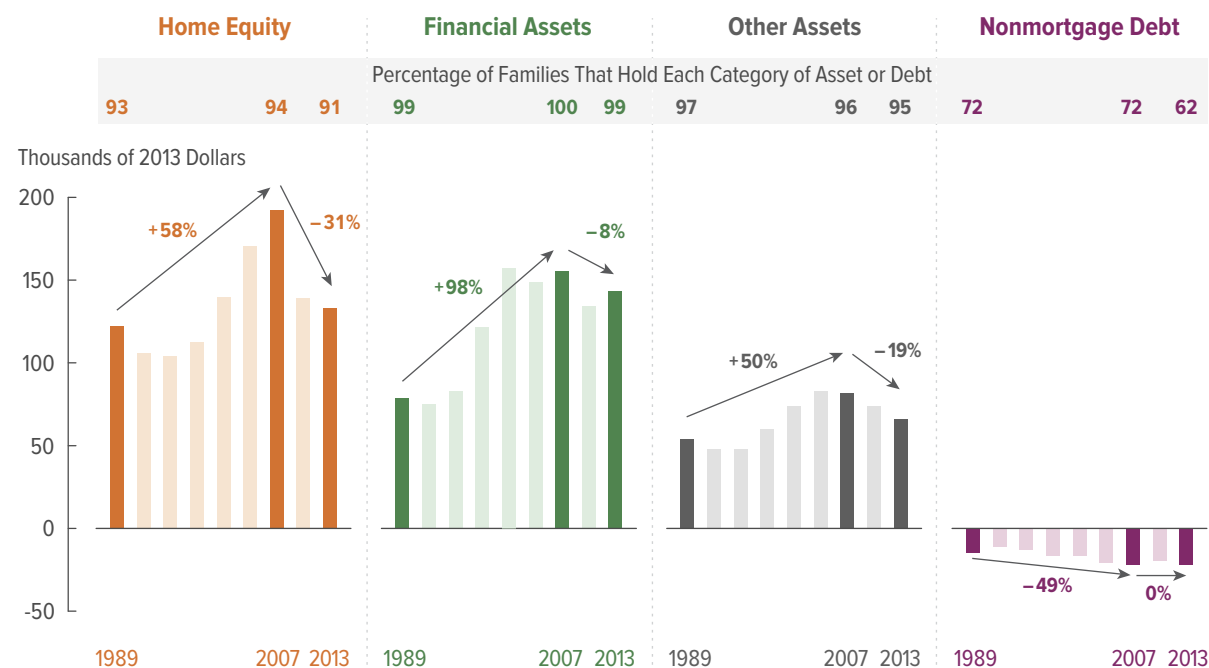
The Survey of Consumer Finances is conducted every three years.

For the group between the median and the top 10 percent of the nation's wealth distribution, average family wealth (measured as a family's total assets minus its total debt) was 35 percent higher in 2013 than it had been for their counterparts in 1989. The group's average wealth in 2007 was significantly above what it had been in 1989 but declined by about one-fifth between 2007 and 2013. The overall increase between 1989 and 2013 was the result of rising wealth before the recession of 2007 to 2009 but with partially offsetting decreases during the recession and its aftermath.

Increases in the value of home equity, financial assets, and other assets (such as other real estate and business assets) all contributed to the increase in wealth between 1989 and 2007 for families in this group. Those increases, however, were offset somewhat by rising non-mortgage debt over that period. The recession and its aftermath were marked by declines in all asset categories (see Exhibit 4). ♦

Exhibit 4.

**Changes in the Assets and Debt of Families in the 51st to 90th Percentiles of the Wealth Distribution**



Source: Congressional Budget Office, using data from the Survey of Consumer Finances.

The Survey of Consumer Finances is conducted every three years.

Positive percentages indicate an increase in assets or a decrease in debt; negative percentages indicate a decrease in assets or an increase in debt. Dollar amounts are average values for families that hold each category of asset or debt.

From 1989 until the recession of 2007 to 2009, increases in home equity and in the value of financial assets (such as retirement accounts and financial securities) and other assets (such as business assets and real estate other than a family’s primary residence) all contributed to rising wealth for families that were above the median but at or below the 90th percentile in the nation’s distribution of wealth. Those increases, however, were offset somewhat by rising nonmortgage debt over that time.

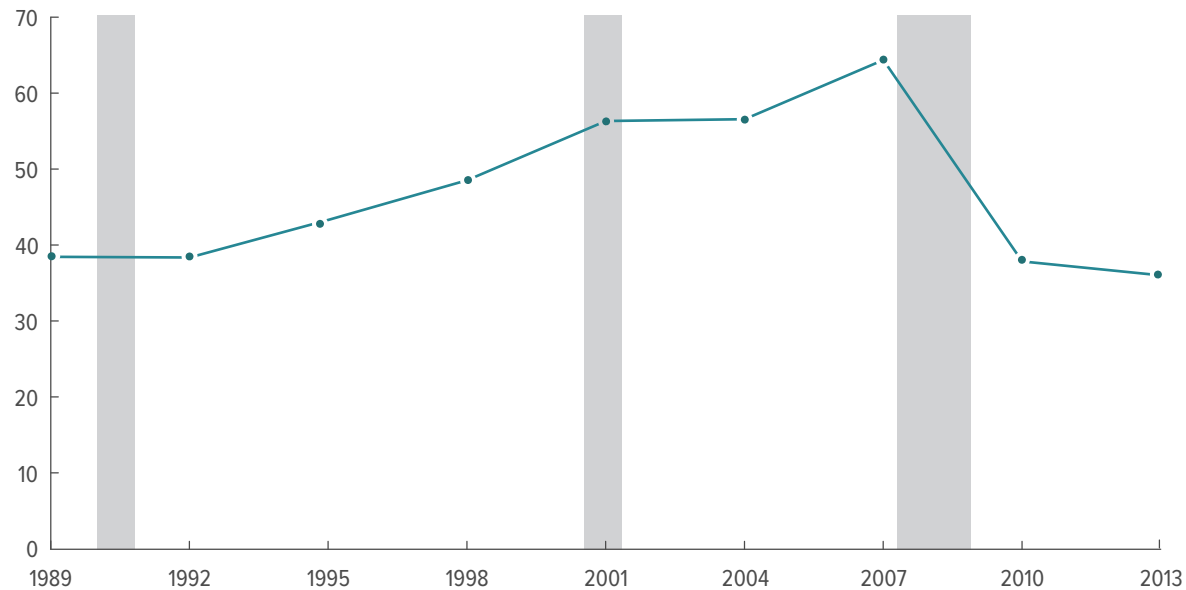
The recession and its aftermath were marked by declines in all asset categories for families in the 51st to 90th percentiles of the distribution. In particular, between 2007 and 2013, steep declines in home equity and losses in the value of financial assets precipitated notable declines in total family wealth. Additionally, a 14 percent drop in business equity (a subcategory of other assets consisting of holdings of privately owned businesses that is not shown in the exhibit) diminished the wealth of the roughly 15 percent of families that owned such assets.

The declines in assets were moderated by reductions in the number of families with nonmortgage debt in 2013 relative to their counterparts in 2007: The share of families holding nonmortgage debt declined from 72 percent to 62 percent between 2007 and 2013. For the families that held such debt, the amount of debt remained about the same, on average. ♦

## Exhibit 5.

**Average Wealth for Families in the 26th to 50th Percentiles of the Wealth Distribution**

Thousands of 2013 Dollars



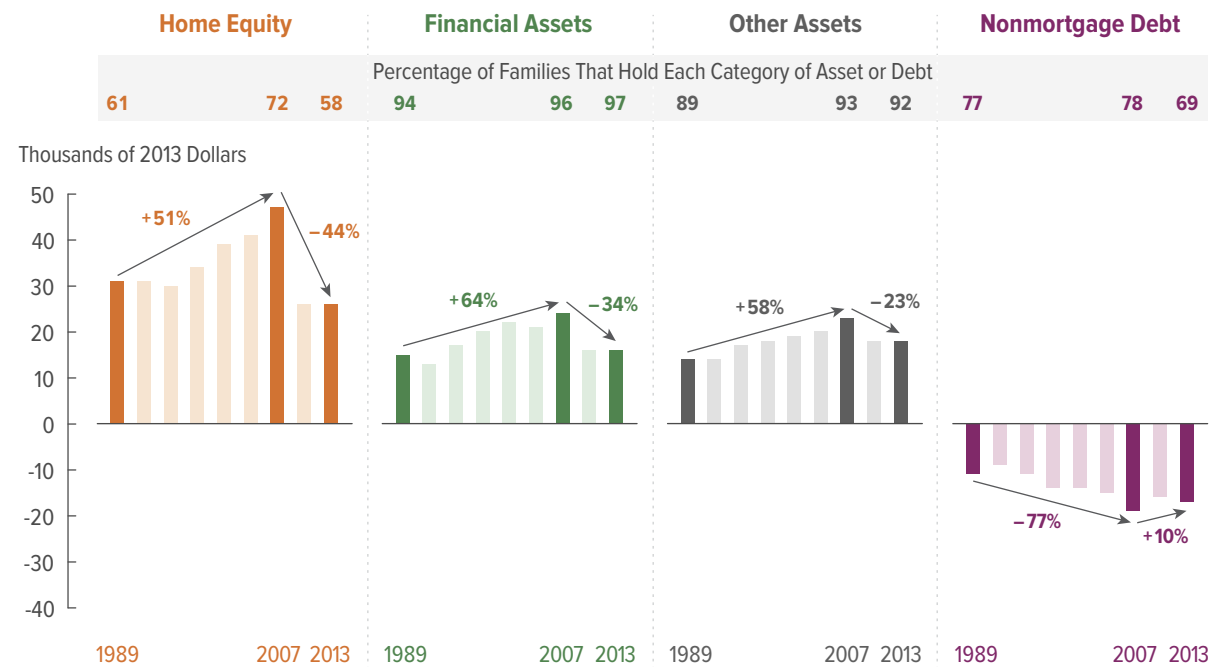
Source: Congressional Budget Office, using data from the Survey of Consumer Finances.

The Survey of Consumer Finances is conducted every three years.

Average family wealth (total assets minus total debt) for families in the 26th through 50th percentiles of the wealth distribution increased between 1989 and 2007, but declines in wealth for that group during and after the recession of 2007 to 2009 more than offset those gains. In 2013, average wealth held by those families was \$36,000, or 6 percent less than that of their counterparts in 1989, whereas in 2007, that group's wealth was about 68 percent greater than that of their counterparts in 1989. Increases in home equity and in the value of financial assets (such as retirement accounts and bank deposits), and other assets (such as vehicles and real estate other than a primary residence) all contributed to rising wealth, although a rise in the average amount of debt for those families between 1989 and 2007 somewhat offset those gains (see Exhibit 6). ♦

Exhibit 6.

**Changes in the Assets and Debt of Families in the 26th to 50th Percentiles of the Wealth Distribution**



Source: Congressional Budget Office, using data from the Survey of Consumer Finances.

The Survey of Consumer Finances is conducted every three years.

Positive percentages indicate an increase in assets or a decrease in debt; negative percentages indicate a decrease in assets or an increase in debt. Dollar amounts are average values for families that hold each category of asset or debt.

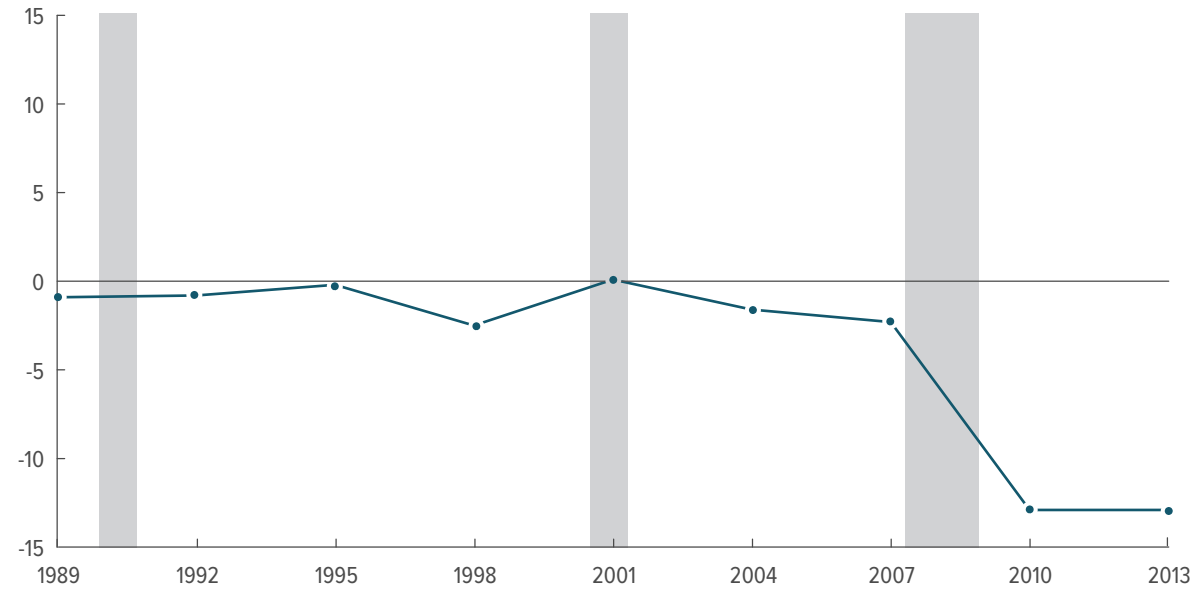
Over the period from 1989 to 2007, increases in home equity and in the value of financial assets (such as financial securities and retirement accounts) and other assets (such as vehicles and real estate other than a family’s primary residence) contributed to rising wealth for families in the 26th to 50th percentiles of the wealth distribution. The share of families that owned a primary residence increased by 11 percentage points, to 72 percent, and their home equity increased by 51 percent, on average, over the period. An increase between 1989 and 2007 in the average amount of nonmortgage debt (such as credit card balances, lines of credit, and student loans) somewhat offset the increases in the value of their assets.

In the aftermath of the recession of 2007 to 2009, declining home equity contributed significantly to the loss of wealth for that group. The share of families that owned their primary residence fell (from 72 percent to 58 percent) and so did their average home equity (by 44 percent). The share of homeowners whose mortgage debt exceeded their homes’ value rose from 1 percent to 8 percent, and losses in the value of financial and other assets also contributed to declining wealth. Those losses were offset somewhat by declines in the share of families in the group with nonmortgage debt and in the average amount of that debt. ♦

Exhibit 7.

**Average Wealth for Families in the Bottom 25 Percent of the Wealth Distribution**

Thousands of 2013 Dollars



Source: Congressional Budget Office, using data from the Survey of Consumer Finances.

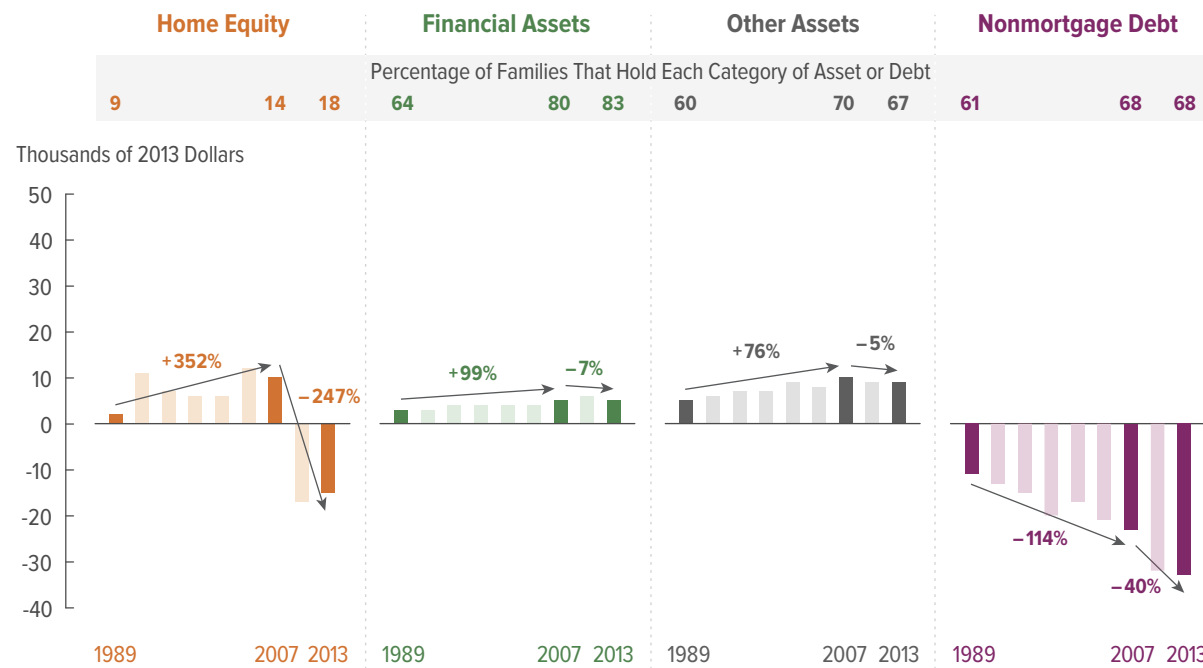
The Survey of Consumer Finances is conducted every three years.

Unlike families in other parts of the wealth distribution, those at or below the 25th percentile in the years between 1989 and 2013 held more in debt than they had in assets, on average. In 1989, families in that group were about \$1,000 in debt. By 2007, on average, that group was about \$2,000 in debt, but by 2013, they were about \$13,000 in debt, on average.

Between 1989 and 2007, financial assets (such as bank deposits) and other assets (such as vehicles) were generally the largest components of those families' asset holdings. But the amount of nonmortgage debt they held (in credit card balances, consumer loans, and student loans, for example), on average, exceeded the value of their assets. After the recession of 2007 to 2009, the decline in average wealth for those families was mainly attributable to declines in home equity and to rising nonmortgage debt (see Exhibit 8). ♦

Exhibit 8.

**Changes in the Assets and Debt of Families in the Bottom 25 Percent of the Wealth Distribution**



Source: Congressional Budget Office, using data from the Survey of Consumer Finances.

The Survey of Consumer Finances is conducted every three years.

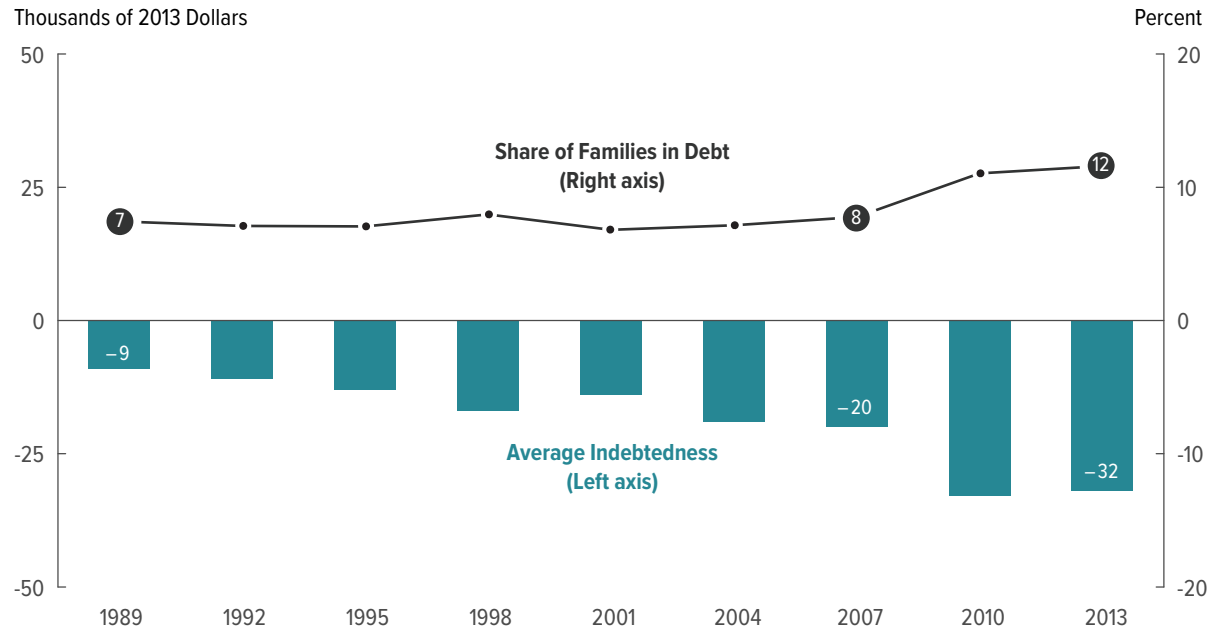
Positive percentages indicate an increase in assets or a decrease in debt; negative percentages indicate a decrease in assets or an increase in debt. Dollar amounts are average values for families that hold each category of asset or debt.

Although, on average, the value of assets increased for families in the bottom 25 percent of the wealth distribution between 1989 and 2007, that rise was offset by the group’s burgeoning nonmortgage debt over the same period. During the recession of 2007 to 2009, average wealth for families in that group declined precipitously (see Exhibit 7) for two main reasons: the loss in home equity experienced by the group’s homeowners and the continued growth of their nonmortgage debt. Average home equity for primary residences was about 250 percent lower in 2013 than in 2007. In 2007, 10 percent of the group’s homeowners had negative home equity; by 2013, that share had reached 57 percent.

Although the percentage of the group’s families holding nonmortgage debt remained unchanged between 2007 and 2013, the average debt increased from \$23,000 to \$33,000, much of it in student loans. Over that period, the share of families with student debt increased from 25 percent to 36 percent, and the average amount increased from \$24,000 to \$36,000. In contrast, the share of families with credit card debt declined from 41 percent to 33 percent, and the average amount of that debt remained relatively constant at \$6,000. ♦

Exhibit 9.

**Share of Families in Debt and Average Indebtedness for Those Families**



Source: Congressional Budget Office, using data from the Survey of Consumer Finances.

The Survey of Consumer Finances is conducted every three years.

The share of families in debt (those whose total debt exceeded their total assets) remained almost unchanged between 1989 and 2007 and then increased by 50 percent between 2007 and 2013. In 2013, those families were more in debt than their counterparts had been either in 1989 or in 2007. For instance, 8 percent of families were in debt in 2007 and, on average, their debt exceeded their assets by \$20,000. By 2013, in the aftermath of the recession of 2007 to 2009, 12 percent of families were in debt and, on average, their debt exceeded their assets by \$32,000.

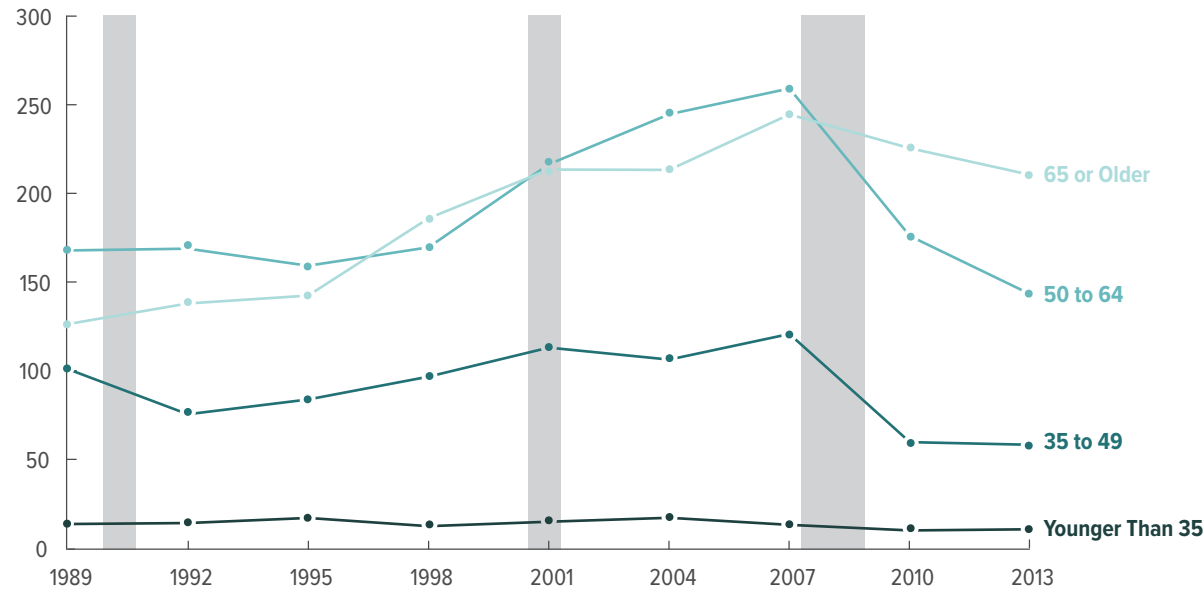
The increase in average indebtedness between 2007 and 2013 for families in debt was mainly the result of falling home equity and rising student loan balances. In 2007, 3 percent of families in debt had negative home equity: They owed, on average, \$16,000 more than their homes were worth. In 2013, that share was 19 percent of families in debt, and they owed, on average, \$45,000 more than their homes were worth. The share of families in debt that had outstanding student debt rose from 56 percent in 2007 to 64 percent in 2013, and the average amount of their loan balances increased from \$29,000 to \$41,000. ♦



Exhibit 10.

**Median Family Wealth, by Age Group**

Thousands of 2013 Dollars



Source: Congressional Budget Office, using data from the Survey of Consumer Finances.

The Survey of Consumer Finances is conducted every three years.

The median wealth of families other than those headed by someone who was 65 or older was lower in 2013 than it had been for their counterpart families in 1989. From 1989 until 2007, median wealth increased for families headed by someone over age 50, rose somewhat for families headed by someone between 35 and 49, and stayed much the same for younger families. After 2007, median wealth declined for all groups.

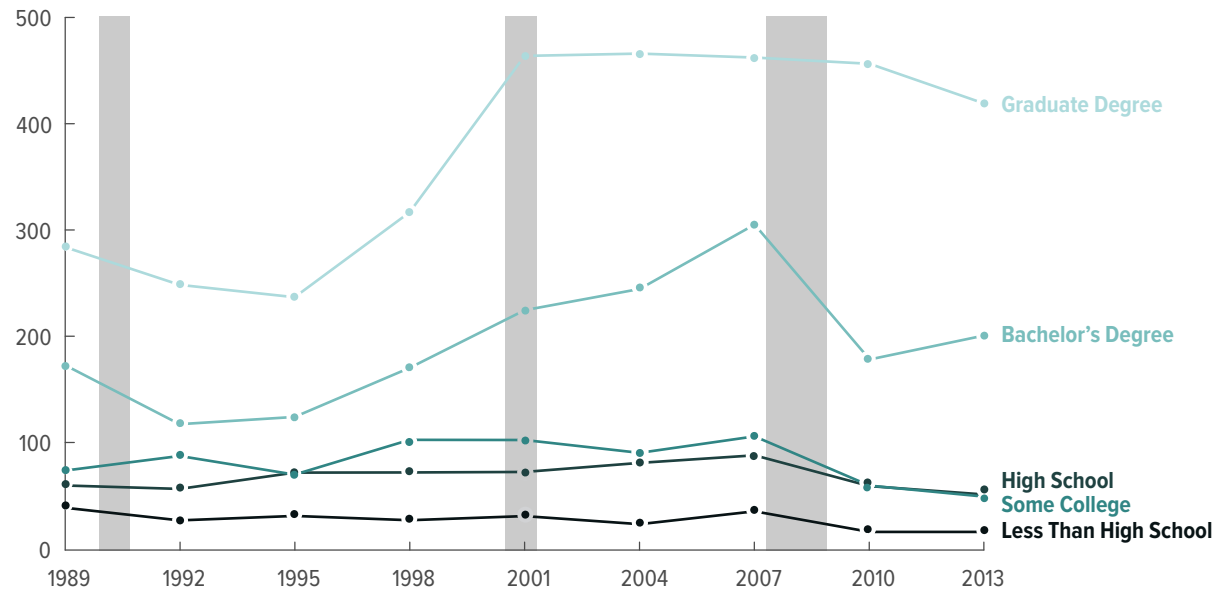
Marketable wealth—the measure used in this analysis—significantly understates the resources of a family that expects much of its retirement income to come from Social Security or defined benefit pension plans. (Defined benefit plans and Social Security are excluded from marketable wealth, but defined contribution plans are included. See the appendix.)

The aging of the population contributed to an increase in overall family wealth between 1989 and 2013 (see Exhibit 2). The older the family head, the more wealth the family tends to hold, and the average age of the population increased over the period. In 1989, 21 percent of families were headed by someone over the age of 65; in 2013, 24 percent were. Had the population not aged that way, median family wealth would have been 19 percent lower in 2013 than in 1989, CBO estimates. ♦

Exhibit 11.

**Median Family Wealth, by Education Group**

Thousands of 2013 Dollars



Source: Congressional Budget Office, using data from the Survey of Consumer Finances.

The Survey of Consumer Finances is conducted every three years.

Families headed by someone with a bachelor’s or graduate degree had higher median wealth in 2013 than their counterparts did in 1989; that was not true for families headed by someone with less education. Between 1989 and 2007, median wealth increased substantially for families headed by someone with at least a bachelor’s degree, increased moderately for families headed by someone with a high school diploma or some college, and remained relatively unchanged for families headed by someone with less than a high school diploma. During the recession of 2007 to 2009, median wealth declined for all groups.

Increases in the share of people with at least a college degree helped boost overall family wealth between 1989 and 2013 (see Exhibit 2). Historically, families headed by more educated people have held more wealth than those headed by less educated people, and the average educational attainment of the population increased during the period. (One exception was for families headed by someone with some college education: In some years, their wealth was on par with or slightly below that of families headed by a high school graduate, in part because the some-college group was more likely to have student debt.) In 1989, 23 percent of families were headed by someone with at least a bachelor’s degree; by 2013, 32 percent were. Had the average educational attainment of families in 1989 not changed, median family wealth would have been 16 percent lower in 2013 than in 1989, CBO estimates. ♦



## Appendix:

# Data, Measures of Wealth, and Previous Analyses of Income

The Congressional Budget Office drew on data from several sources for its examination of the distribution of wealth among U.S. families. This appendix describes the kinds of data used, explains CBO's approach to defining family wealth, and briefly describes the agency's previous work on the distribution of income.

### Sources of Data

In general, researchers look toward two main sources of data for analyses of family wealth: the Survey of Consumer Finances (SCF), a periodic cross-sectional survey of U.S. families and their finances that is sponsored by the Federal Reserve Board in cooperation with the Department of the Treasury, and federal tax returns. Each source offers advantages, but each has shortcomings as well. For example, the SCF data are collected only every three years, rather than annually. The lack of demographic information in the tax data precludes researchers from identifying the distribution of family wealth on the basis of age or education. Neither source fully identifies wealth across the nation's entire distribution of wealth.

The analysis for this report primarily used SCF data spanning the surveys from 1989 to 2013, the first and last years for which those data are consistently available (2013 is the most recent year for which those survey data are available). For the portion of the analysis that examined overall wealth, those data were augmented with information on the nation's 400 wealthiest people as listed by *Forbes* magazine (see Exhibit 1 and Exhibit 2).

### Survey of Consumer Finances and Data on the Forbes 400

Every three years, the SCF gathers information—including demographic data—on a sample of U.S. families that makes it possible to identify the distribution of wealth on the basis of age and education. The SCF data also include information on family balance sheets, income, and pensions.<sup>1</sup> Data for the 1989 SCF were collected between October 1989 and March 1990. For subsequent surveys, the data were collected between May and December of the

survey year, with August representing the midpoint of that range.

The SCF presents three particular limitations for use in an analysis such as this one. First, changes in sampling techniques have made it more practical to restrict analyses of SCF results to 1989 and later, so the sample years in this analysis needed to be confined to that period. Second, like other surveys that rely on self-reported information, the SCF is susceptible to measurement and reporting error. And third, because each iteration of the SCF samples a different group of families, the results analyzed for this report amount to snapshots of family wealth for every third year from 1989 through 2013; they do not provide information about changes in the wealth of specific families from one survey to the next. CBO's estimate that median wealth was 4 percent higher in 2013 than it was in 1989 therefore should be interpreted to mean that the wealth of a family at the median in 2013 (after adjusting for the effects of changes in prices) was 4 percent above the wealth of a family at the median in 1989. It should not be taken to mean that the wealth of the family at the median in 1989 increased by 4 percent over the next 24 years.

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1. For more information on the SCF, see Board of Governors of the Federal Reserve System, "Research Resources: Survey of Consumer Finances," (September 2014) <http://go.usa.gov/xx7x4>.

Although the SCF covers nearly the full distribution of family wealth, by design it does not include information on the nation's wealthiest people, as listed by *Forbes* magazine.<sup>2</sup> CBO supplemented the SCF data with the *Forbes* data to identify the shares of wealth held by different groups (Exhibit 1) and to calculate the various percentiles of family wealth (Exhibit 2).<sup>3</sup>

The *Forbes* data were not used for the analysis underlying the other exhibits in this report, except for defining family groups on the basis of wealth percentiles, because those data did not provide information on the various asset and debt categories (Exhibits 4, 6, and 8) or data on age (Exhibit 10) or education (Exhibit 11). Nonetheless, incorporating such demographic information for the people in the *Forbes* data would not have materially affected the results. In 2013, that group of 400 people constituted a share that was smaller than 0.001 percent of the nation's 123 million families. Adding them

2. One study placed the sum of the wealth of the Forbes 400 families at about 3 percent of total family wealth in 2013. See Jesse Bricker and others, "Measuring Income and Wealth at the Top Using Administrative and Survey Data," *Brookings Papers on Economic Activity* (March 2016), <http://tinyurl.com/zqyw46m>. For the 2015 *Forbes* list, see Kerry A. Dolan and Luisa Kroll, "Inside the 2015 Forbes 400," *Forbes* (September 29, 2015).

3. See Jesse Bricker and others, "Measuring Income and Wealth at the Top Using Administrative and Survey Data," *Brookings Papers on Economic Activity* (March 2016), <http://tinyurl.com/zqyw46m>. Those authors also used the SCF and performed a similar adjustment with the Forbes 400 data in their analysis. For calculating percentiles and shares of wealth, CBO judged that the Forbes 400 families were at the top of the wealth distribution.

to the analysis would have made no discernible difference in the median wealth by age and education or for assets and debt held by those below the 90th percentile of the wealth distribution.

CBO also did not examine how the assets and debt of families in the top 10 percent of the wealth distribution changed over time because of the lack of information on the assets and debt among families on the Forbes 400 list. The supplemental data to this report contain information about average wealth over time for families in the top 10 percent of the distribution.

To calculate how much the aging of the population contributed to the change in median family wealth between 1989 and 2013, CBO applied a reweighting technique developed by John DiNardo and colleagues.<sup>4</sup> CBO used that approach to calculate a counterfactual outcome (median family wealth) in 2013 as though the age distribution of the population in 2013 was the same as the age distribution in 1989 (see the discussion of Exhibit 10). CBO applied the same method to calculate the degree to which an increase in educational attainment contributed to the change in median family wealth over the period (see the discussion of Exhibit 11).<sup>5</sup>

4. See John DiNardo, Nicole M. Fortin, and Thomas Lemieux, "Labor Market Institutions and the Distribution of Wages, 1973–1992: A Semiparametric Approach," *Econometrica*, vol. 64, no. 5 (September 1996), pp. 1001–1044, <http://dx.doi.org/10.2307/2171954>.

5. Because CBO did not have information on the age and education of families on the Forbes 400 list, those data were excluded from the calculation of the counterfactual outcomes.

## Tax Data

Instead of using information from the SCF, some researchers turn to data from income and estate tax returns when they are examining the distribution of wealth. To do so, however, analysts must impute the amount of wealth held by a family on the basis of the amount it pays in estate or income taxes.<sup>6</sup>

CBO did not use estate tax data for this analysis because those data capture only the top 1 percent or 2 percent of the wealth distribution. The estate tax reporting limits are quite high, and because very few people inherit enough to be affected by the estate tax laws, the resulting tax data do not account for most inherited wealth. Also, estate tax forms request virtually no demographic information of the kind useful for this analysis, so CBO could not examine wealth by age or education group using data from that source.

Similarly, CBO did not use income tax data for this analysis because those data include only limited demographic information. The agency therefore could not examine wealth by age or education group on the basis of income tax data.<sup>7</sup>

6. For more information on the use of estate tax data to estimate wealth, see, for example, Thomas Piketty, *Capital in the Twenty-First Century* (Harvard University Press, 2014); and Wojciech Kopczuk and Emmanuel Saez, "Top Wealth Shares in the United States, 1916–2000: Evidence From Estate Tax Returns," *National Tax Journal*, vol. 57, no. 2 (June 2004), pp. 445–487, <http://tinyurl.com/j9a4u83>.

7. CBO has used income tax data in reports that examine the distribution of household income and taxes. See for example, Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2013* (June 2016), [www.cbo.gov/publication/51361](http://www.cbo.gov/publication/51361).

The use of income tax data also requires analysts to estimate total wealth on the basis of annual income, an exercise known as the capitalization method. That method requires researchers to impute wealth arising from the asset categories that do not generate taxable income and to make assumptions concerning rates of return on capital.<sup>8</sup> Moreover, income tax data cannot account for people who do not file tax returns, and there would need to be a mechanism for including those people in the analysis of the distribution of wealth.

### Comparing Wealth Estimates Derived From Different Sources of Data

Regardless of the type of data used to identify the distribution of wealth in the United States, estimates consistently skew toward the top. Both the SCF and the tax data identify similar shares of wealth in the top 10 percent of the distribution. CBO estimates that families in the top 10 percent of the wealth distribution held 76 percent of wealth in 2013. Other researchers, using tax data, estimate that families in the top 10 percent of the wealth distribution in 2012—one year prior—held 77 percent of wealth. But estimates of the share of wealth held by those at the very top—families in the top 1 percent or the top 0.1 percent—differ depending on the data set and the method used, particularly after 1980. For example, estimates based on income tax data after 1980 show a steep increase in the share of wealth held by the top 1 percent. (For instance, one report shows an

increase from 28 percent in 1989 to 42 percent in 2012.)<sup>9</sup> Conversely, estimates based on estate tax data and the SCF show a smaller increase for that group over the same period. (For instance, data from the SCF show an increase in the share of wealth held by the top 1 percent from 31 percent in 1989 to 37 percent in 2013.)<sup>10</sup> Because of the strong assumptions and imputations needed for applying the capitalization method, some researchers have pointed to the SCF and the estate tax approach as more reliable for measuring trends.<sup>11</sup> That is an area of active research.

Differences in measurement among the three methods can arise for at least two reasons. One concerns the unit of analysis. Estimates that use estate tax data examine the wealth of individual people, those that use income tax data examine the wealth of tax units, and those that use data from the SCF examine the wealth of families. The second difference concerns underlying computational assumptions, including those about rates of return that are used to convert income amounts into wealth stocks under the capitalization method.

### Ways to Define Wealth

For this analysis, family wealth includes only marketable assets, which can be bought or sold and

can outlive an owner. Nonmarketable assets, such as defined benefit pension plans and future Social Security benefit payments, were not included. Measures that use nonmarketable wealth show somewhat less concentration at the top end of the distribution than those that do not include such wealth.

### Marketable Wealth

CBO defined family wealth as the difference between a family's assets and its debt. The former consists of all financial assets: bank deposits, financial securities, the cash value of life insurance policies, trust funds, defined contribution retirement accounts (including individual retirement accounts, Keogh plans, and 401(k)-type plans from current and past jobs), home equity and other real estate (net of real estate loans), vehicles, and business equity. Debt is nonmortgage debt, which consists of consumer debt (including credit card debt and auto loans) and other debt (including student loans). Wealth from defined contribution plans is measured as the reported account balances of survey respondents. CBO made no adjustments for potential early withdrawal fees or for future income taxes to be paid when funds are withdrawn. Because marketable wealth is based on categories of assets and debt that are readily available in the SCF data, it is straightforward to calculate such a measure from those data.<sup>12</sup>

8. For an analysis using income tax data and the capitalization method, see Emmanuel Saez and Gabriel Zucman, "Wealth Inequality in the United States Since 1913: Evidence From Capitalized Income Tax Data" *Quarterly Journal of Economics*, vol. 131, no. 2 (May 2016) pp. 519–578, <http://dx.doi.org/10.1093/qje/qjw004>.

9. Ibid.

10. For a discussion of such discrepancies, see Jesse Bricker and others, "Measuring Income and Wealth at the Top Using Administrative and Survey Data," *Brookings Papers on Economic Activity* (March 2016), <http://tinyurl.com/zqyw46m>.

11. See Wojciech Kopczuk, "What Do We Know About the Evolution of Top Wealth Shares in the United States?" *Journal of Economic Perspectives*, vol. 29, no. 1 (Winter 2015), pp. 47–66, <http://dx.doi.org/10.1257/jep.29.1.47>.

12. For a discussion of wealth categories that are not included in the SCF, such as human capital or income streams from annuities or trusts, see Arthur B. Kennickell, *Ponds and Streams: Wealth and Income in the U.S. 1989 to 2007*, Finance and Economics Discussion Series Paper 2009-13 (Board of Governors of the Federal Reserve System, March 2009), <http://go.usa.gov/x22rP>.

### Nonmarketable Wealth

An alternative definition of wealth also could account for sources of future income that would not retain value after their owner's death. In particular, that measure could include expected future income from defined benefit pension plans and Social Security.<sup>13</sup> Such a measure of wealth would be more difficult to construct and is beyond the scope of this report, but it could offer a more accurate representation of a person's expected resources during his or her lifetime.

Because pension benefits and Social Security payments are more equally distributed than is marketable wealth, CBO expects that an analysis that used such a measure would, at any point in time, increase the share of total family wealth identified for families at the bottom and middle of the distribution and decrease that held by families at the top.

One group of researchers has estimated the share of wealth in the top 10 percent of the distribution

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13. For an example of research that incorporates nonmarketable wealth with the SCF data and examines trends in wealth in the 1990s, see William G. Gale and Karen M. Pence, "Are Successive Generations Getting Wealthier, and If So, Why? Evidence From the 1990s," *Brookings Papers on Economic Activity* (Spring 2006), pp. 155–234, <http://tinyurl.com/zuus4v6>. For an example of research that incorporates expected streams of income from defined benefit plans and Social Security to study changes in wealth over time, see Edward N. Wolff, "U.S. Pensions in the 2000s: The Lost Decade?" *Review of Income and Wealth*, vol. 61, no. 4 (December 2015), pp. 599–629, <http://dx.doi.org/10.1111/roiw.12123>.

from its examinations both of marketable wealth and of expected income streams from defined benefit pensions (but not Social Security).<sup>14</sup> Their results indicate that, in 2013, the share of wealth held by families in the top 10 percent of the distribution was about 70 percent when expected income from defined benefit pensions was added to marketable wealth and about 76 percent when defined benefit pensions were excluded.

Projecting income streams from defined benefit pensions or Social Security is beyond the scope of this report. And because of changes in coverage under defined benefit plans and changes in Social Security benefits during the period examined here, it is difficult to predict the extent to which adding the two sources of wealth would change the trends in family wealth at various points of the distribution, or how it would change the trends in median family wealth by age and education.<sup>15</sup>

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14. Sebastian Devlin-Foltz, Alice Henriques, and John Sabelhaus, "Is the U.S. Retirement System Contributing to Rising Wealth Inequality?" *Russell Sage Journal of the Social Sciences* (forthcoming). The authors impute defined benefit pension wealth in SCF data to examine the effect of retirement assets on the share of wealth held by families at the top of the wealth distribution.

15. Defined benefit pension coverage has decreased and defined contribution coverage has increased over the examined period. Because defined contribution wealth is included in marketable wealth but defined benefit wealth is not, the measure of wealth used in this report understates the available resources of families in or near retirement, particularly for the earlier years of the SCF survey, and likely overstates the growth in family resources over time.

### CBO's Income Analyses

CBO has in the past examined the differential growth in income among various groups.<sup>16</sup> Changes in economic conditions, government transfer programs, and federal tax laws have resulted in differences in the growth rate of after-tax income across the income spectrum and over time. For households in the lowest quintile of before-tax income, inflation-adjusted after-tax income was 46 percent higher in 2013 than it was in 1979, CBO estimates, which is slightly greater than the 41 percent increase for households in the 21st to 80th percentiles for the same period. Cumulative growth in the inflation-adjusted after-tax income of households in the 81st to 99th percentiles and in the top percent of the before-tax income distribution was substantially greater—an estimated 70 percent and 192 percent, respectively (see Figure A-1).<sup>17</sup>

The unequal distribution of family wealth across the U.S. population is the result of several factors. Differences in family income, savings, rates of return on savings, inheritances, plans to leave bequests, and composition of assets all contribute. And at least some of the increases in the dispersion of wealth over time are the result of the dispersion of income. ♦

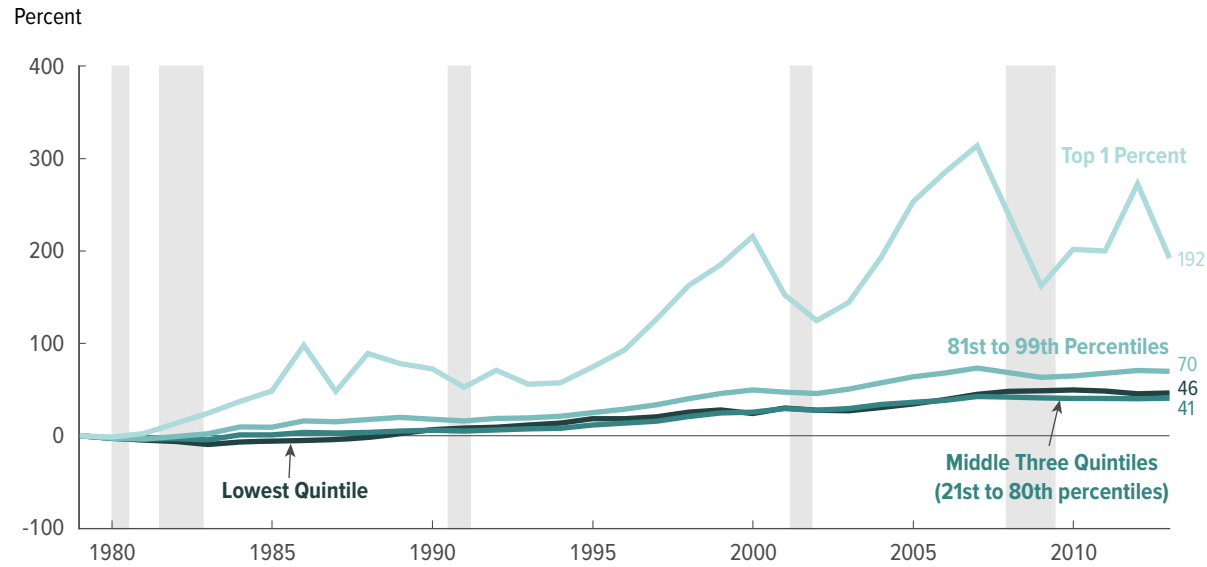
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16. For more on CBO's income analyses, see Congressional Budget Office, "Income Distribution," [www.cbo.gov/topics/income-distribution](http://www.cbo.gov/topics/income-distribution).

17. See Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2013* (June 2016), pp. 21–24, [www.cbo.gov/publication/51361](http://www.cbo.gov/publication/51361).

Figure A-1.

**Cumulative Growth in Average Inflation-Adjusted After-Tax Income, by Before-Tax Income Group, 1979 to 2013**



Source: Congressional Budget Office.

After-tax income is before-tax income minus federal taxes.

Before-tax income is market income plus government transfers. Market income consists of labor income, business income, capital gains (profits realized from the sale of assets), capital income excluding capital gains, income received in retirement for past services, and other sources of income. Government transfers are cash payments and in-kind benefits from social insurance and other government assistance programs. Those transfers include payments and benefits from federal, state, and local governments.

Federal taxes include individual income taxes, payroll taxes, corporate income taxes, and excise taxes.

Income is converted to 2013 dollars using the price index for personal consumption expenditures.

Income groups are created by ranking households by before-tax income, adjusted for household size. Quintiles (fifths) contain equal numbers of people; percentiles (hundredths) contain equal numbers of people as well.



## Definitions

**Age groups and education groups** were established for this report on the basis of the age or education of the head of the family, respectively.

**Assets** consist of financial assets, home equity, and other assets.

**Business equity**, a component of other assets, includes net worth in sole proprietorships, limited partnerships, other types of partnerships, S corporations and other types of corporations that are not publicly traded, limited liability companies, and other types of private businesses, including certain family farms and ranches.

**Family** is defined by the Survey of Consumer Finances as the primary economic unit in a household. A family, in this context, consists of a single person or a couple and all other people in the household who are financially interdependent with that person or couple.

**Family wealth** is a family's assets minus its debt; often referred to as net worth. The measure of wealth examined in this report is marketable wealth.

**Financial assets** include bank deposits, financial securities, the cash value of life insurance policies, and trust funds. Also included are defined

contribution retirement accounts, including individual retirement accounts, Keogh plans, 401(k) plans, and similar tax-deferred retirement accounts from current and past jobs. Excluded from financial assets in this report are defined benefit pensions and expected income from Social Security; both are forms of nonmarketable wealth.

**Head of a family** is defined by the Survey of Consumer Finances as the male in a mixed-sex couple or the older person in a same-sex couple. A single person is considered a family head.

**Home equity** is the value of the primary residence (if owned by the family) minus the amount owed on mortgages or home equity loans.

**Indebtedness** is the amount by which a family's debt exceeds its assets. In this report, a family is considered to be in debt if it has more debt than assets.

**Marketable wealth** consists of the difference between a family's assets that are easily tradable and that retain value after the death of the owner and that family's debt; in this report, usually called family wealth.

**Median wealth** is the wealth of a family at the midpoint of a distribution; half of all families have more and half have less wealth than does the family at the median.

**Mortgage debt** is subtracted from the value of the primary residence in the calculation of home equity.

**Nonmarketable wealth** consists of sources of future income that would not retain value after their owner's death, such as that from defined benefit pension plans and Social Security.

**Nonmortgage debt** consists of a family's consumer debt (including credit card debt and auto loans) and other debt (including student loans).

**Other assets** include real estate (net of real estate loans and excluding a family's primary residence), vehicles, and business equity.

**Wealth groups** were created for this report by ranking families by wealth (unadjusted for family size) from data taken from each year of the Survey of Consumer Finances, supplemented with data from *Forbes* magazine's list of the nation's 400 wealthiest people. ♦





## About This Document

This report was prepared at the request of the Ranking Member of the Senate Budget Committee. In keeping with the Congressional Budget Office's mandate to provide objective, impartial analysis, the report makes no recommendations.

Nadia Karamcheva prepared the report with guidance from Molly Dahl and Joseph Kile. Jessica Banthin, Jordan Berne, Philip Ellis, Ed Harris, Marina Kutuyavina, Lucille Msall, Chad Shirley, and Julie Topoleski provided comments. Katharine Abraham of the University of Maryland, Kevin Moore of the staff of the Board of Governors of the Federal Reserve System, and Gabriel Zucman of the University of California–Berkeley provided comments. The assistance of external reviewers implies no responsibility for the final product, which rests solely with CBO.

Wendy Edelberg, Mark Hadley, Jeffrey Kling, and Robert Sunshine reviewed the report; Kate Kelly edited it; and Jeanine Rees prepared it for publication. This report and supplemental data are available on CBO's website ([www.cbo.gov/publication/51846](http://www.cbo.gov/publication/51846)).

Keith Hall  
Director

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