United States Government Accountability Office

Report to Congressional Requesters

April 2021

RETIREMENT SECURITY

Debt Increased for Older Americans over Time, but the Implications Vary by Debt Type

Accessible Version

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GAO-21-170

GAO Highlights

Highlights of GAO-21-170, a report to congressional requesters

April 2021

RETIREMENT SECURITY

Debt Increased for Older Americans over Time, but the Implications Vary by Debt Type

Why GAO Did This Study

GAO reported in 2019 that an estimated 20 percent of older American households aged 55 or older had less than $22,000 in income in 2016 and GAO reported in 2015 that about 29 percent of older households had neither retirement savings accounts (such as a 401(k) plan) nor a defined benefit plan in 2013. Older Americans held nearly half of the total outstanding debt in 2020—and these debts may affect retirement security. The Census Bureau projects the number of older Americans will increase.

GAO was asked to report on debt held by older Americans. This report examines (1) how the types, levels, and outcomes of debt changed for older Americans over time, including for different demographic and economic groups; (2) how the types and levels of debt held by the same older Americans changed as they aged, including for those in different demographic groups; and (3) the implications of these debt trends for the general retirement security of older Americans and their families.

GAO analyzed data from two nationally representative surveys–the SCF (1989 through 2016 data) and the HRS (1992 through 2016 longitudinal data)–and nationally representative administrative data from the Federal Reserve Bank of New York's CCP (2003 through 2019). These datasets were the most recent available at the time of GAO's analyses. GAO also reviewed studies and interviewed experts that GAO identified from these studies to further analyze the relationship between debt and retirement security.

View GAO-21-170. For more information, contact Kris Nguyen, (202) 512-7215 or NguyenTT@gao.gov.

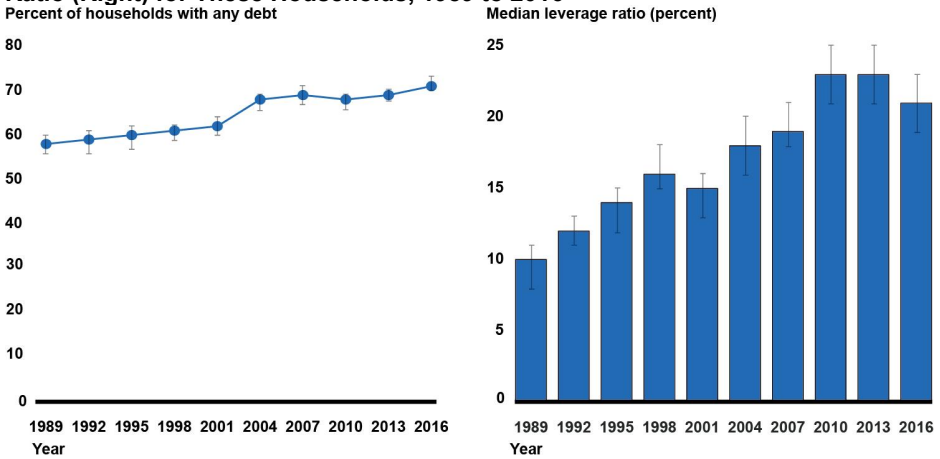
What GAO Found

Americans age 50 or older had significantly more debt in 2016 than in 1989, according to GAO's analysis of Survey of Consumer Finances (SCF) data.

- **Debt.** The share of older households with debt was 71 percent in 2016 compared to 58 percent in 1989 (see figure). The median debt amount for older households with debt was about three times higher in 2016 ($55,300) than in 1989 ($18,900 in real 2016 dollars) and the share of older households with home, credit card, and student loan debt was significantly higher in 2016 than in 1989.
- **Debt stress.** The median ratio of debt to assets—known as the leverage ratio, a measure of debt stress—for older households was twice as high in 2016 than in 1989.
- **Adverse debt outcomes.** Measures of older individuals' adverse debt outcomes, including their share of mortgage and credit card debt that was late by at least 90 days, generally followed economic trends, peaking after the Great Recession of 2007-2009, according to GAO's analysis of Consumer Credit Panel (CCP) data from 2003 to 2019. However, the share of student loan debt that was late was significantly higher for older individuals in 2019 than in 2003.

These trends in debt, debt stress, and adverse debt outcomes varied by older Americans' demographic and economic characteristics, including their age, credit score, and state of residence. For example, from 2003 to 2019, individuals in their late 70s often had higher shares of credit card and student loan debt that was late than those aged 50-74. In addition, older individuals with credit scores below 720—including those with subprime, fair, or good credit—had median student loan debt amounts that were more than twice as high in 2019 as in 2003. Further, older individuals in the Southeast and West had much higher median mortgage and student loan delinquency rates, in 2019 than in 2003.

Percent of Households Age 50 or Older with Any Debt (Left) and Median Leverage Ratio (Right) for These Households, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Percent of Households Age 50 or Older with Any Debt (Left) and Median Leverage Ratio (Right) for These Households, 1989 to 2016

Left line chart

Year	Percent of households with any debt	Confidence intervals low	Confidence intervals high
1989	58	56	60
1992	59	56	61
1995	60	57	62
1998	61	59	62
2001	62	60	64
2004	68	66	69
2007	69	67	71
2010	68	66	69
2013	69	68	70
2016	71	70	73

Right bar chart:

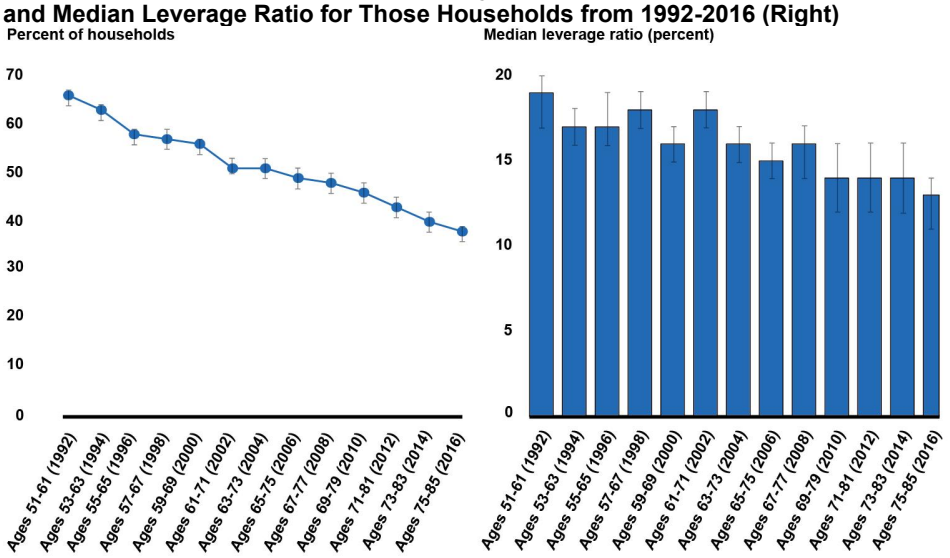
Year	Median leverage ratio (percent)	Confidence intervals low	Confidence intervals high
1989	10	8	11
1992	12	11	13
1995	14	12	15
1998	16	15	18
2001	15	13	16
2004	18	16	20
2007	19	18	21
2010	23	21	25
2013	23	21	25
2016	21	19	23

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: The bars above and below the lines represent the bounds of 95 percent confidence intervals.

While older Americans' overall debt and debt stress decreased as they aged, those in low-income households experienced greater debt stress according to GAO's analysis of Health and Retirement Study (HRS) data, a nationally representative survey that follows the same individuals over time. The share of older households in this cohort that had debt continuously decreased as they aged, from about 66 percent of households in 1992 to 38 percent in 2016, and the median leverage ratio declined from about 19 to 13 percent over this period (see figure). However, low-income households in this cohort consistently had greater levels of debt stress than high-income households. This disparity in debt stress increased as these households aged.

Estimated Percent of Households with Any Debt for Those Born in 1931-1941 (Left) and Median Leverage Ratio for Those Households from 1992-2016 (Right)



Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Data table for Estimated Percent of Households with Any Debt for Those Born in 1931-1941 (Left) and Median Leverage Ratio for Those Households from 1992-2016 (Right)

Left line chart

	Percent of households	Confidence Intervals-low	Confidence Intervals-high
Ages 51-61 (1992)	66	64	67
Ages 53-63 (1994)	63	61	64
Ages 55-65 (1996)	58	56	59
Ages 57-67 (1998)	57	55	59
Ages 59-69 (2000)	56	54	57
Ages 61-71 (2002)	51	50	53
Ages 63-73 (2004)	51	49	53
Ages 65-75 (2006)	49	47	51
Ages 67-77 (2008)	48	46	50
Ages 69-79 (2010)	46	44	48
Ages 71-81 (2012)	43	41	45
Ages 73-83 (2014)	40	38	42
Ages 75-85 (2016)	38	36	39

Right bar chart:

	Median leverage ratio	Confidence Intervals-low	Confidence Intervals-high
Ages 51-61 (1992)	19	17	20
Ages 53-63 (1994)	17	16	18
Ages 55-65 (1996)	17	16	19

	Median leverage ratio	Confidence Intervals-low	Confidence Intervals-high
Ages 57-67 (1998)	18	17	19
Ages 59-69 (2000)	16	15	17
Ages 61-71 (2002)	18	17	19
Ages 63-73 (2004)	16	15	17
Ages 65-75 (2006)	15	14	16
Ages 67-77 (2008)	16	14	17
Ages 69-79 (2010)	14	12	16
Ages 71-81 (2012)	14	12	16
Ages 73-83 (2014)	14	12	16
Ages 75-85 (2016)	13	11	14

Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Notes: The lines overlapping the bars represent 95 percent confidence intervals.

According to experts GAO interviewed, differences in debt type (that is, credit card versus housing debt) and debt stress levels will have varying effects on the retirement security of different groups. For example, experts noted that credit card debt has negative implications for older Americans' retirement security because credit cards often have high, variable interest rates and are not secured by any assets. In contrast, an increase in mortgage debt may have positive effects on retirement security because a home is generally a wealth-building asset. Experts also said that older individuals with lower incomes and unexpected health expenses are likely to experience greater debt stress, which can negatively affect retirement security. Similarly, experts noted that the increased debt stress faced by low-income households is also faced by non-White households. Further, GAO's analysis of data from the Survey of Consumer Finances found that in 2016, debt stress levels were about two times higher for Black, Hispanic/Latino, and Other/multiple-race households than for White households.

Experts GAO interviewed noted it is too early to evaluate the retirement security implications of the recession caused by the COVID-19 pandemic, in part because CARES Act provisions suspend or forbear certain debt payments. However, as with past recessions, the COVID-19-related recession may reveal any economic fragility among older Americans who, for example, lost jobs or cannot work because of the pandemic.

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Abbreviations

APR	Annual Percentage Rate
CCP	Consumer Credit Panel
COVID-19	Coronavirus Disease 2019
CPI-U-RS	Consumer Price Index for All Urban Consumers Research Series
DB	defined benefit
DC	defined contribution
Federal Reserve	Board of Governors of the Federal Reserve System
FRBNY	Federal Reserve Bank of New York
HRS	Health and Retirement Study
IRA	individual retirement account
IRC	Internal Revenue Code
LTV	Loan-to-Value ratio
SCF	Survey of Consumer Finances
VRPA	Vanguard Retirement Plan Access

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April 16, 2021

The Honorable Robert P. Casey, Jr
Chairman
The Honorable Tim Scott
Ranking Member
Special Committee on Aging
United States Senate

The Honorable Susan M. Collins
United States Senate

We previously reported that in 2016 an estimated 20 percent of older American households had less than $22,000 in income and in 2013 about 29 percent of older households had neither retirement savings accounts (such as a 401(k) plan or an IRA) nor a defined benefit plan.[1] These are potentially concerning statistics for the retirement security of some households.[2] In addition to income and savings, debt also determines financial security in retirement–especially for low-income and low-wealth older households. Over the last decade, the amount of debt held by older Americans has grown and this may affect their retirement security. Further, the share of the elderly population is expected to increase. The Census Bureau projects that from 2010 to 2050, the number of Americans aged 65 and older will more than double—from 40.2 million to an estimated 88.5 million.

From December 2009 to December 2019, the total outstanding debt held by individuals 50 or older increased from $6.0 trillion to $6.5 trillion,

[1] For our analysis of disparities in income of older Americans, see GAO, *Retirement Security: Income and Wealth Disparities Continue through Old Age,* GAO-19-587 (Washington, D.C.: Aug. 9, 2019). For this analysis, older households referred to those in which the survey respondent or any spouses or partners were aged 55 or older in the year of the survey. For our analysis of the 2013 Survey of Consumer Finances, see GAO, *Retirement Security: Most Households Approaching Retirement Have Low Savings,* GAO-15-419 (Washington, D.C.: May 12, 2015). For this analysis, older households referred to those in which the household head was age 55 or older. In this report, we refer to older households and older Americans as those 50 or older.

[2] Retirement security is not a well-defined concept and has been described quantitatively in various ways. These include poverty rates (the percent of a group that has income below an amount intended to represent a level of economic privation) and target replacement rates (the percentage of pre-retirement income needed to maintain a standard of living in retirement).

according to data from the Federal Reserve Bank of New York's Consumer Credit Panel.[3] Moreover, individuals 50 or older held nearly half of the total debt outstanding in 2020. These trends coincide with the growing expectation over the past 40 years that individuals are responsible for planning and managing their own retirements rather than relying on employers to take a substantial role as employers moved from offering defined benefit plans (e.g., pensions) to offering defined contribution plans (e.g., 401(k)s).[4] A growing or unmanageable debt burden in older age could derail an otherwise well-planned retirement and put significant financial stress on an individual, such as from the diminishment of retirement assets or bankruptcy. For these reasons, it is important to understand debt's implications for retirement security broadly and how various debt types differ for different sub-groups of older Americans.

You asked us to report on the trends in debt held by older Americans and the implications for retirement security. This report examines (1) how have the types, levels, and outcomes of debt held by older Americans changed over time, including for different demographic and economic groups; (2) how the types and levels of debt held by the same older Americans changed as they aged, including for those in different demographic groups; and (3) what are the implications of debt trends for the general retirement security of older Americans and their families.

To examine the types and levels of debt held by older Americans over time, we analyzed data from the 1989 through 2016 Survey of Consumer Finances (SCF), a nationally representative survey of U.S. households produced by the Board of Governors of the Federal Reserve System (Federal Reserve).[5] A different group of households is interviewed every 3 years about their debt, assets, and income, among other topics. We analyzed trends in the share of older households in the SCF that had debt (including primary home, credit card, and student loan debt), the median amount of their debt, and the median ratio of their debt to both their assets and incomes, including disaggregated by household age. We

[3] For December 2009, we adjusted for inflation to December 2019 real dollars using the Consumer Price Index for All Urban Consumers Research Series (CPI-U-RS).

[4] We previously reported on risks facing certain defined benefit plans. See GAO, *Central States Pension Fund: Investment Policy Decisions and Challenges Facing the Plan*, GAO-18-106 (Washington, D.C.: June 4, 2018).

[5] Data from the 2016 survey were the most recent available at the time of our analysis.

defined “older households” as those in which either the head or spouse/partner was 50 years or older.[6] Unless otherwise noted, all comparisons between survey years and groups (e.g., the difference in the percentage of households with any debt from 1989 to 2016) are statistically significant at the 95 percent confidence level.

Additionally, to examine debt levels and adverse debt outcomes for older Americans over time, we analyzed aggregate Consumer Credit Panel (CCP) data from the Federal Reserve Bank of New York (FRBNY) from the fourth quarter of 2003 through the fourth quarter of 2019.[7] The CCP is a nationally representative sample of detailed credit report data from the credit bureau Equifax for a unique longitudinal quarterly panel of individuals. For this report, FRBNY provided aggregate data specifically for individuals age 50-79.[8] We used this CCP data to look at trends in older individuals’ median debt amounts (including mortgage, credit card, and student loan debt), the share of their debt that was late (delinquent) by 90 days or more, and the number of bankruptcies and foreclosures that first appeared on their credit reports during the prior 3 months. We disaggregated these trends by demographic and economic characteristics, such as age, credit score, and state of residence.[9]

To analyze how the types and levels of debt held by older Americans changed as they aged, we examined data from 1992 through 2016 for a cohort of individuals born between 1931 and 1941 using the Health and

[6] While there is no agreed upon age for the term older American, we chose 50 since it provides insight into debt holdings prior to common retirement ages. For example, 62 is the earliest retirement age for Social Security, and defined benefit pensions often calculate annuities that begin at age 65.

[7] Data from the fourth quarter of 2019 were the most recent available at the time of our analysis. We chose 2003 as our starting point because, while the CCP’s mortgage and credit card data goes back to 1999, 2003 was the first year it included student loan data.

[8] Because the CCP follows sampled individuals over time, individuals may age into and out of our study’s age range (50-79) from 2003 to 2019.

[9] We requested CCP data by age because it is key to our study’s focus on older Americans; on credit score because it is available in the CCP data; and on state of residence because CCP’s large sample size allows us to present precise state-level estimates.

Retirement Study (HRS) dataset.[10] Specifically, we estimated trends in the percent of households that have any amount of debt (total, housing, and non-housing debt), as well as the median amount of debt, conditional on having any debt, as they aged, for each type of debt.[11] We also estimated trends in the median and share with high debt stress metrics (e.g., debt-to-asset and home loan-to-value ratios) conditional on having any debt. We compared these trends in debt and debt stress metrics across income and asset quartiles.

Last, to help identify major debt trends and their impact on retirement security we interviewed experts on debt using a semi-structured interview protocol. These 10 experts included academics; representatives of advocacy groups, trade associations, and research institutions; and agency officials. We supplemented certain information with our analysis of SCF and CCP data by age, race and ethnicity, and income. We also identified and reviewed relevant literature from which we identified debt experts to interview.[12]

We conducted this performance audit from June 2019 to April 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[10] The cohort was ages 51 to 61 in 1992 and ages 75 to 85 in 2016. The survey is administered by the University of Michigan and is supported by the National Institute on Aging and the Social Security Administration. The HRS is a biennial, nationally representative, longitudinal survey of adults over age 50 that began in 1992. The 2016 survey is the most recently published survey at the time of our analysis.

[11] For SCF and HRS, we adjusted for inflation to 2016 real dollars using the CPI-U-RS. For CCP, we adjusted for inflation to December 2019 real dollars, also using the CPI-U-RS. All comparisons are statistically significant—unless otherwise noted—using 95 percent confidence intervals. All SCF and HRS analyses use survey weights to ensure the estimates are representative of the entire U.S. population.

[12] For more detail on our data sources and methodology, see appendix I.

Background

Key Debt Types and Their Attributes

Common types of debt include mortgages, credit cards, and student loans, among others (see table 1). Individuals may use these loans for large purchases.[13] For example, mortgages are for the purchase of a home, and student loans are to help finance education expenses. In general, debt types have various attributes that characterize the terms of a given loan.

- **Secured loan.** A loan backed by collateral—assets owned by the borrower, such as a home or car—that can be used as payment to the lender if the borrower does not pay back the loan. Lenders require collateral against a secured loan to incentivize borrowers to repay the loan on time and compensate lenders for nonpayment.
- **Installment loan.** A loan, typically used for a single large purchase (e.g., car, house, or education), in which the borrower receives a lump sum and repays the loan over a set term in periodic payments, or installments. Installment loans contrast with revolving credit, such as with credit cards, which provide a credit line to borrow continuously from rather than a single amount to repay. Revolving credit allows the money to be borrowed again once it is paid off, whereas an installment loan account is closed once it is repaid.
- **Fixed interest rate loan.** A loan in which the interest rate remains the same for the life of the loan, no matter how market interest rates behave over the life of the loan. This contrasts with variable rate loans in which the interest rate charged on the outstanding balance of the loan varies as market interest rates change. The variable interest rate charged is often linked to a benchmark index, for example, the federal funds rate.

[13] In general, individuals with higher incomes and better debt payment histories qualify for larger loan amounts.

Table 1: Typical Debt Attributes for Key Debt Types

	Secured	Installment	Fixed interest rate
Mortgage	Yes[a]	Yes	Yes[c]
Credit card	No	No	No
Student loan	No[b]	Yes	Yes[d]
Auto debt	Yes	Yes	Yes[e]
Payday loan	No	No	Yes[f]

Source: GAO analysis of Equifax and Consumer Financial Protection Bureau information. | GAO-21-170

[a]In addition to mortgages, lenders can extend lines of credit to borrowers based on the amount of equity they have accumulated (called home equity lines of credit, also known as HELOCs). For more information, see GAO, *Housing Finance System: A Framework for Assessing Potential Changes*, GAO-15-131 (Washington, D.C.: Oct. 7, 2014).

[b]Student loans are generally not dischargeable in bankruptcy and are subject to Social Security benefit offsets. For more information, see GAO, *Older Americans: Inability to Repay Student Loans May Affect Financial Security of a Small Percentage of Retirees*, GAO-14-866T (Washington, D.C.: Sept. 10, 2014).

[c]The most common type of home mortgage is a 30-year fixed rate loan. However, some mortgages offer variable interest rates.

[d]While all federal student loans have fixed interest rates, certain private student loans may have variable interest rates.

[e]While auto loans usually have fixed interest rates, certain auto loans have variable interest rates.

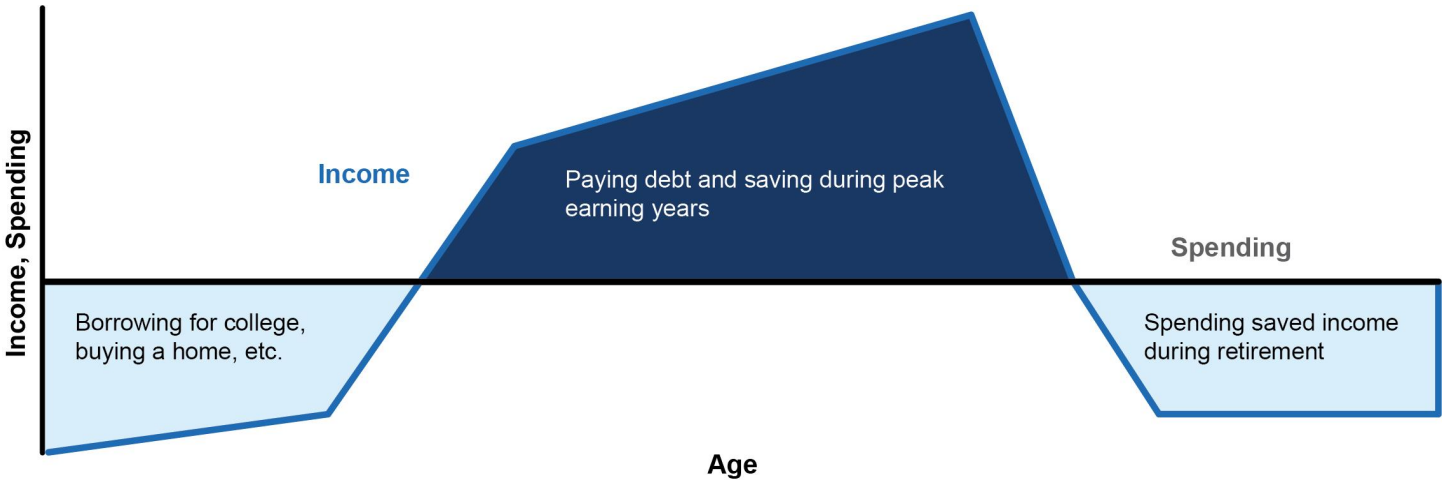
[f]Generally defined, a payday loan is a single payment, short-term loan based on a personal check held for future deposit or electronic access to a personal checking account. Payday lenders charge a flat fee for the loan, which, if converted to an annual percentage rate (i.e., annualized interest rate) can be relatively high. Some payday loans may be repaid in installments.

Theory of Debt over a Lifetime

The “life cycle” theory of spending and saving is a model used by economists to describe a representative person’s (or household’s) overall saving and spending behaviors. Lifetime income often follows a hump-shaped pattern. According to this theory, income is lower when a person is young, income rises and peaks during middle age, and income falls during retirement. If spending matched income, then spending would have a hump shape as well. However, this theory posits that people prefer a consistent level of spending over their lives. As figure 1 shows, a person will tend to borrow when they are younger and have relatively less income, but will then pay off debts when their income outpaces their spending. During middle age, income typically rises and the life cycle model suggests that people limit their spending to pay off debt such as student loans and mortgages and to save for retirement; this is called the saving phase. During retirement, when income generally falls, people

spend their retirement savings. Thus, both borrowing and saving help keep spending consistent over time.[14]

Figure 1. A Model of Saving and Spending: The Lifecycle Theory



Source: GAO analysis adapted from St. Louis Fed (S.A. Wolla), "Smoothing The Path: Balancing Debt, Income, and Saving for the Future," Page One Economics, (St. Louis, MO: Nov. 2014). | GAO-21-170

Text of Figure 1. A Model of Saving and Spending: The Lifecycle Theory

Income, spending, and age increases:

- Negative income: Borrowing for college, buying a home, etc.
- Positive income: Paying debt and saving during peak earning years
- Negative income: Spending saved income during retirement

Source: GAO analysis adapted from St. Louis Fed (S.A. Wolla), "Smoothing The Path: Balancing Debt, Income, and Saving for the Future," Page One Economics, (St. Louis, MO: Nov. 2014). | GAO-21-170

Note: the horizontal line shows a constant level of spending over a lifetime while income changes.

An implication of the lifecycle theory is some debts may be particularly worthwhile if they help an individual increase their total lifetime income. For example, borrowing for an education could increase a person's earning capacity. If the increased income from the education is greater than the cost of servicing the loan, then, on net, the person is adding to

[14] S.A. Wolla, "Smoothing the Path: Balancing Debt, Income, and Saving for the Future," *Page One Economics*, (St. Louis, Mo: Federal Reserve Bank of St. Louis, November 2014). Certain empirical studies have called into question some of the conclusions of the simple life cycle theory. For example, data suggest that retirees do not draw down their wealth as quickly as the model would predict. Moreover, spending is not consistent over people's lifetimes as it tends to rise through middle age and fall after retirement. See, Tim Sablik, "Jargon Alert: Life Cycle Hypothesis," *Econ Focus,* vol. 21, no. 3/4 (Richmond, Va: Federal Reserve Bank of Richmond, Third/Fourth Quarter 2016).

their total lifetime income and potential savings. The person could use those savings to spend more in retirement. Alternatively, borrowing could reduce spending in retirement if the cost of servicing the debt is particularly onerous (e.g., a very high interest rate) or if the asset being purchased quickly losses value.

Measures of Debt Stress and Adverse Debt Outcomes

Measures of debt stress reflect the relationship of an individual's debt to their assets or income, such as:

- Loan-to-Value (LTV) ratio is the home loan amount divided by home value.
- Leverage ratio is the amount of total debt divided by total assets.
- Payment-to-income ratio is the percentage of a borrower's total monthly income that goes toward total monthly debt obligations.

If the ratio of debt to assets or income is too high, individuals may not be able to repay the debt, resulting in adverse debt outcomes, such as:

- Delinquency occurs when a borrower is behind on payments. Common delinquency time frames are 30 days and 60 days past due.
- Foreclosure is a process initiated when a borrower defaults on their mortgage and the lender seeks to take ownership of the home. Generally, state foreclosure laws establish certain procedures that servicers must follow in conducting foreclosures and establish minimum time periods for various aspects of the foreclosure process.
- Bankruptcy is a federal court procedure designed to help individuals eliminate or adjust debts they cannot fully repay, as well as help creditors receive some payment in an equitable manner.

Trends in the Older Population

The number of older Americans is increasing faster than the population as a whole. For example, in 1990, about one in four people in the United States was aged 50 or older. By 2030, that number is expected to be almost two in five. The aging of baby boomers—that is, people born between 1946 and 1964—as well as increasing longevity and lower fertility have contributed to this trend. Life expectancy—especially for those ages 65 or older—has increased significantly over the past

century.[15] Another key driver is that fertility rates, which are the average number of children born to women during their childbearing years, are lower than previous generations, thus there are relatively fewer younger people. These trends, in conjunction with the aging baby boom generation has caused a demographic shift towards an "aging population."

Older Americans are engaged in various phases of life, with some retired while others continue to work. Notably, labor force participation among older workers has increased in the last decade, particularly for women aged 55 to 64 and men aged 65 and older.

Retirement System

The current retirement system in the United States is often described as resting on three main pillars: Social Security, employer-sponsored pensions and retirement savings plans, and individual savings.

- Social Security's Old-Age and Survivors Insurance program provides benefits to retired workers, their families, and survivors of deceased workers.
- Employer-sponsored pensions and retirement savings plans include traditional defined benefit (DB) plans, which typically provide a specified monthly benefit at retirement for the lifetime of the retiree, and employer-sponsored defined contribution (DC) plans, such as 401(k)s.[16] Both DB and DC plans receive certain tax preferences provided the plans comply with requirements outlined in the Internal Revenue Code (IRC).
- Individual savings are any other non-retirement plan savings and investments. For example, home equity (the difference between the value of a home and the amount owed on a mortgage) is an important financial resource for many households.

[15] Life expectancy is the average estimated number of years of life for a particular group of people at a given age. For example, a woman turning 65 in 2030 is expected to live, on average, to age 87.3, an additional 3.5 years compared to a woman who turned 65 in 1980, who was expected to live, on average to age 83.8.

[16] In 401(k)s, individuals accumulate tax-advantaged retirement savings in an individual account based on employee and/or employer contributions, and the investment returns (gains and losses) earned on the account.

Over the past 40 years, private sector employers have increasingly moved from offering DB plans to offering DC plans. As a result, some financial risks—such as poor investment returns, decreases in interest rates, and increases in longevity—have shifted from the employer to the employee, with important implications for individuals' retirement planning and security.[17]

The Share of Older Americans Who Have Debt, and the Stress of That Debt, Were Significantly Higher in 2016 Than in 1989

Older Households' Debt and Debt Stress Were Significantly Higher in 2016 Than in 1989

The share of older households with debt, and both the median amount and stress of that debt, were significantly higher in 2016 than they were in 1989. According to our analysis of SCF data, 58 percent of older households had debt in 1989, while 71 percent did in 2016 (see fig. 2).[18] In addition, the median amount of debt for older households with debt was about three times higher in 2016 ($55,300) than in 1989 ($18,900) (see fig. 20 in appendix II).[19] Older households in 2016 also had more debt stress than older households in 1989. Specifically, the median ratio

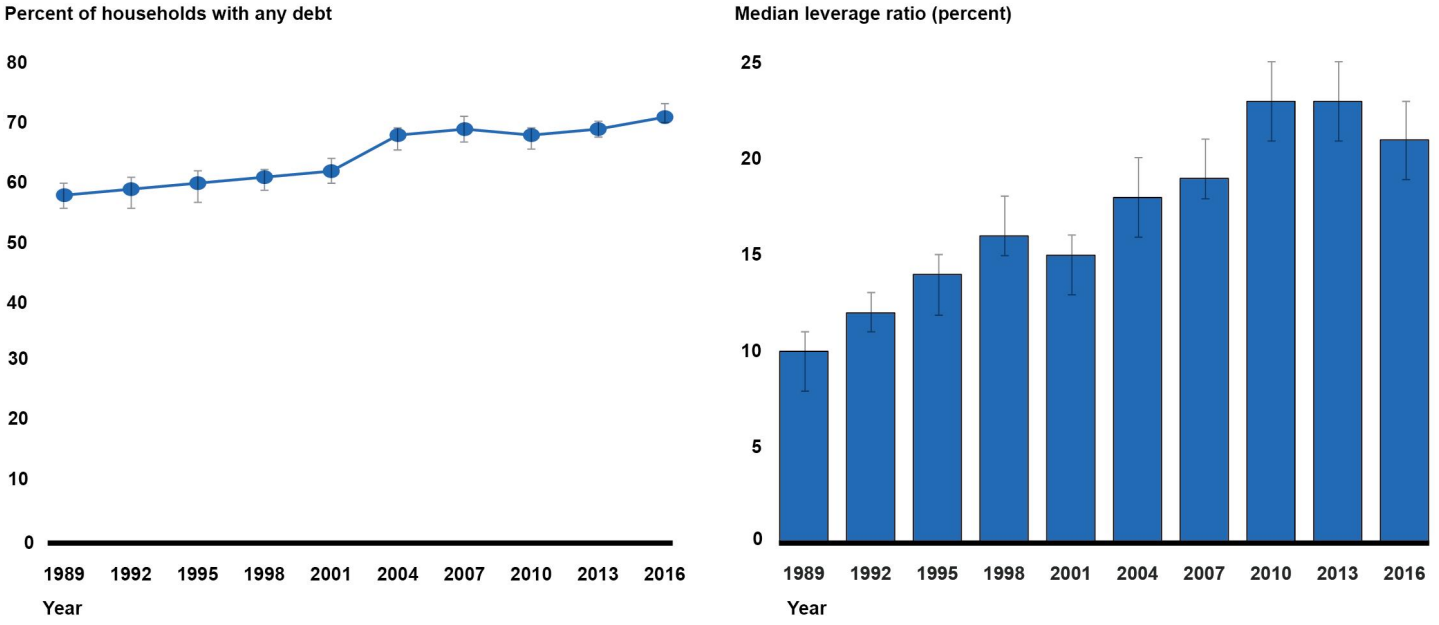
[17] In addition to the risk of increases in average longevity, individuals in DC plans also bear the risk that their own individual longevity will exceed the average because of the loss of the pooling of individual longevity risk that occurs in DB plans.

[18] We refer to older households as those in which the head of the household or the spouse of the head of the household was age 50 or older. Debt types include primary or secondary home debt, credit card debt, student loan debt, vehicle debt, and other debt. Unless otherwise noted, all comparisons using SCF data are statistically significant at the 95 percent confidence level. For more detail on our SCF methodology, see appendix I.

[19] All dollar amounts from the SCF data are adjusted for inflation to 2016 real dollars using the Consumer Price Index for All Urban Consumers Research Series.

of debt to assets—known as the leverage ratio—for older households was twice as high in 2016 as it was in 1989.[20]

Figure 2: Proportion of Older Households with Any Debt (Left) and Median Leverage Ratio (Right) for These Households, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Figure 2: Proportion of Older Households with Any Debt (Left) and Median Leverage Ratio (Right) for These Households, 1989 to 2016

Left line chart

Year	Percent of households with any debt	Confidence intervals low	Confidence intervals high
1989	58	56	60
1992	59	56	61

[20] For each year, for each older household with debt, we divided their debt by their assets to calculate their leverage ratio. Then for each year, we found the median leverage ratio among these households. In addition, the share of older households with a high leverage ratio was 13 percent in 1989 and 24 percent in 2016, peaking at 27 percent in both 2010 and 2013. We define high leverage ratio as being 50 percent or greater based on prior literature. See Lusardi, Annamaria, O. S. Mitchell, and N. Oggero. "The Changing Face of Debt and Financial Fragility at Older Ages." *AEA Papers and Proceedings*, vol. 108 (2018): pp.407-11. For our analysis of older Americans' net worth (assets minus debt) from 1989 to 2016, see GAO, *Retirement Security: Income and Wealth Disparities Continue through Old Age*, GAO-19-587 (Washington, D.C.: Aug. 9, 2019).

Year	Percent of households with any debt	Confidence intervals low	Confidence intervals high
1995	60	57	62
1998	61	59	62
2001	62	60	64
2004	68	66	69
2007	69	67	71
2010	68	66	69
2013	69	68	70
2016	71	70	73

Right bar chart:

Year	Median leverage ratio (percent)	Confidence intervals low	Confidence intervals high
1989	10	8	11
1992	12	11	13
1995	14	12	15
1998	16	15	18
2001	15	13	16
2004	18	16	20
2007	19	18	21
2010	23	21	25
2013	23	21	25
2016	21	19	23

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: The bars above and below the lines represent the bounds of 95 percent confidence intervals. "Any Debt" includes primary or secondary home debt, credit card debt, student loan debt, vehicle debt, and other debt. For each year, for each older household with debt, we divided their debt by their assets to calculate their leverage ratio as a percentage. Then for each year, we calculated the median leverage ratio among these households.

The ratio of monthly debt payments to monthly incomes was also higher for older households in 2016 than in 1989. Specifically, the median payment-to-income ratio for older households with debt was 12 percent in 1989 and 15 percent in 2016, reaching a high of 18 percent in both 2007 and 2010.[21] While the median payment-to-income ratio was 3 percentage

[21] For each year, for each older household with debt, we divided total monthly debt payments by monthly income to calculate their median payment-to-income ratio. Then for each year, we calculated the median payment-to income-ratio among these households.

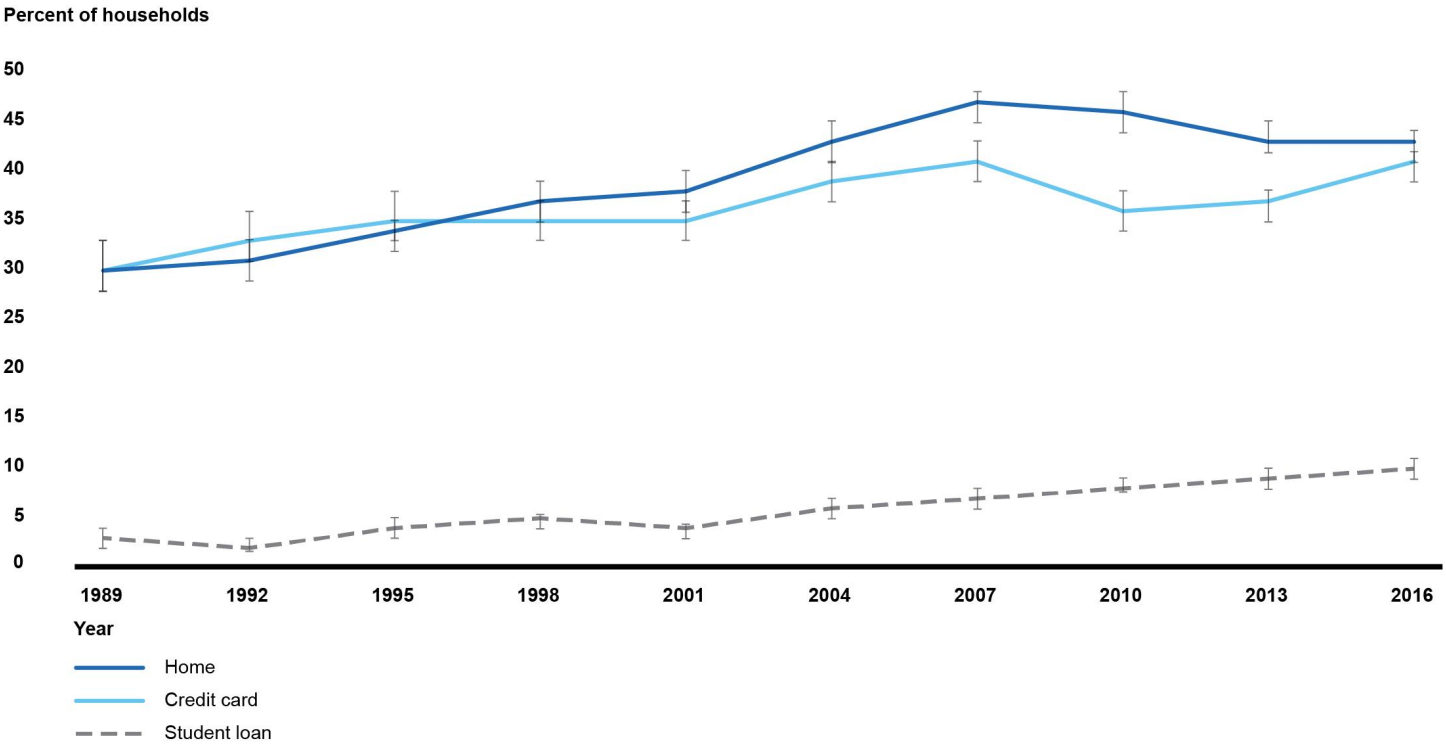
points higher in 2016 than in 1989, it was a 25 percent increase in debt stress for older households with debt. Similarly, the share of older households with any debt that had a high payment-to-income ratio peaked at 16 percent in 2007, but was statistically similar in 2016 (10 percent) compared to 1989 (9 percent).[22]

The share of older households with most types of debt was higher in 2016 than in 1989, especially the share with home debt, credit card debt, and student loan debt.[23] The proportion of older households with these debt types in 2016 was higher than in 1989 by 13, 11, and 7 percentage points, respectively (see fig. 3).

[22] We define a high payment-to-income ratio as being greater than 40 percent, meaning the household spends more than 40 percent of its monthly income on debt payments. Academic researchers and the Federal Reserve commonly use a payment-to-income ratio threshold of 40 percent to study borrowers' debt stress.

[23] To distinguish debt for primary homes from debt for secondary homes (e.g., vacation homes or timeshares) we refer to primary home debt as "home debt." SCF's home debt measure includes mortgages, home equity loans, and home equity lines of credit used to purchase a primary home. SCF's credit card debt measure includes the total balance owed on credit card accounts after the last payments were made. SCF's student loan measure includes federal and private student loan debt for all members living in the household, including the head, spouse, and any children. For trends in the share of older households with vehicle debt, secondary home debt, and other debt, see table 3 in appendix II.

Figure 3: Proportion of Older Households with Selected Types of Debt, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Figure 3: Proportion of Older Households with Selected Types of Debt, 1989 to 2016

Year	Percent of households with home debt	Confidence intervals-low	Confidence intervals-high
1989	30	28	33
1992	31	29	33
1995	34	32	35
1998	37	35	39
2001	38	36	40
2004	43	41	45
2007	47	45	48
2010	46	44	48
2013	43	42	45
2016	43	41	44

Year	Percent of households with credit card debt	Confidence intervals-low	Confidence intervals-high
1989	30	28	33
1992	33	31	36
1995	35	33	38
1998	35	33	37
2001	35	33	37
2004	39	37	41
2007	41	39	43
2010	36	34	38
2013	37	35	38
2016	41	39	42

Year	Percent of households with student loan debt	Confidence intervals-low	Confidence intervals-high
1989	3	2	4
1992	2	2	3
1995	4	3	5
1998	5	4	5
2001	4	3	4
2004	6	5	7
2007	7	6	8
2010	8	8	9
2013	9	8	10
2016	10	9	11

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: The bars above and below the lines represent the bounds of 95 percent confidence intervals.

Homeownership Versus Renter Trends by Income, Assets, and Race

According to our analysis of SCF data, the share of older households who owned their primary home was the same in 2016 as it was in 1989—77 percent. Similarly, the share of older households who rented their home was the same in 2016 as it was in 1989—23 percent. Older households who rented their homes in 2016 generally had less income and assets than homeowners. In addition, while 18 percent of older White households rented their homes in 2016, the shares of renters among older Hispanic/Latino households (45 percent), Black households (39 percent), and Other (Asian, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander)/multiple-race households (27 percent) were significantly higher.

In addition, GAO has previously reported that for households of all ages, rental affordability declined from 2001 to 2017. See GAO, *Rental Housing: As More Households Rent, the Poorest Face Affordability and Housing Quality Challenges*, GAO-20-427 (Washington, D.C.: May 2020) for more information.

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Loan-to-Value (LTV) Ratios

In general, the LTV ratio is the amount of a home loan divided by the home's value. For example, a household with an $80,000 mortgage on a home valued at $100,000 has an LTV ratio of 80 percent.

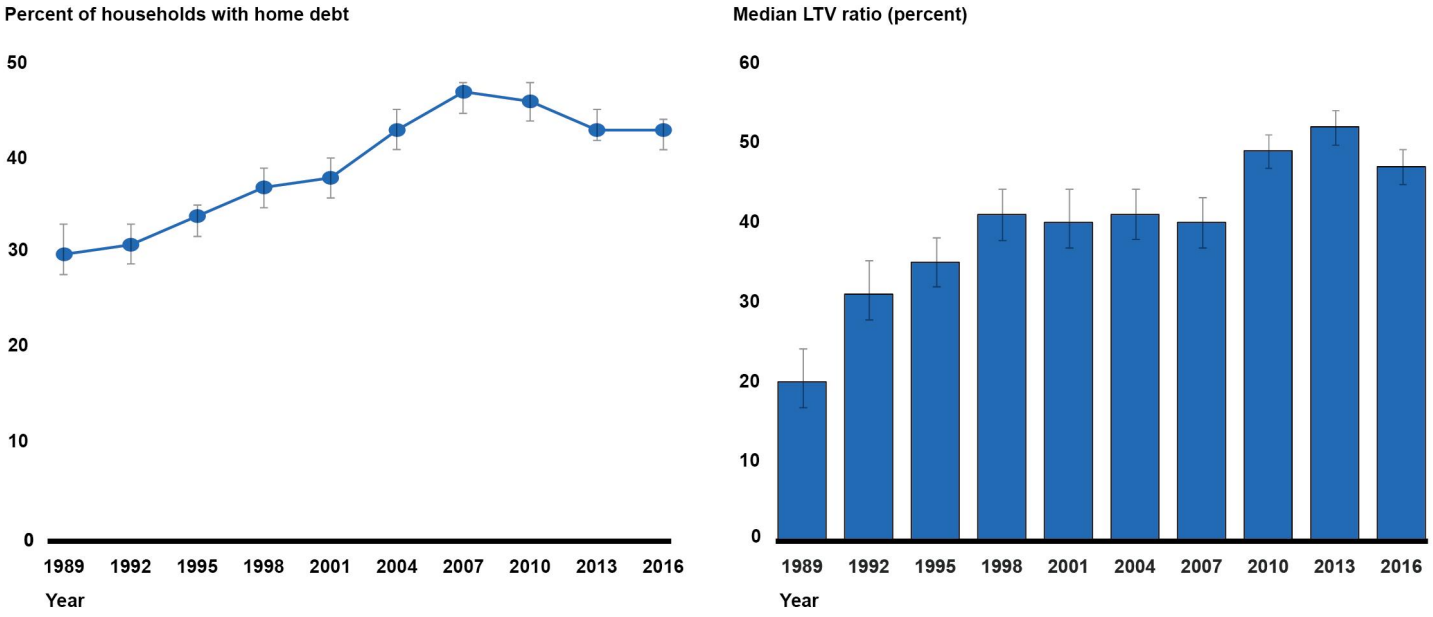
For households with debt for their primary home, we calculated the LTV ratio as the value of all mortgages, home equity loans, and home equity lines of credit on that home divided by the home's value.

Source: GAO analysis. | GAO-21-170

During the same period that the share of older households with home debt increased significantly, so did the median amount of home debt and the stress of that debt. Specifically, for older households with home debt, the median debt amount was about three times higher in 2016 ($93,600) than in 1989 ($30,600) (see fig. 21 in appendix II). Further, the median ratio of home debt to home value—known as the Loan-to-Value (LTV) ratio—for these households was about twice as high in 2016 as it was in 1989, even as home values more than doubled over this period (see fig. 4).[24]

[24] According to the Bureau of Labor Statistics, the Consumer Price Index for owners' equivalent rent of primary residence increased by 116 percent from 1989 to 2016.

Figure 4: Proportion of Older Households with Home Debt (Left) and Median Loan-to-Value (LTV) Ratio for These Households (Right), 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Figure 4: Proportion of Older Households with Home Debt (Left) and Median Loan-to-Value (LTV) Ratio for These Households (Right), 1989 to 2016

Left line chart

Year	Percent of households with home debt	Confidence intervals-low	Confidence intervals-high
1989	30	28	33
1992	31	29	33
1995	34	32	35
1998	37	35	39
2001	38	36	40
2004	43	41	45
2007	47	45	48
2010	46	44	48
2013	43	42	45
2016	43	41	44

Right bar chart

Year	Median loan to value ratio (percent)	Confidence intervals-low	Confidence intervals-high
1989	20	17	24
1992	31	28	35
1995	35	32	38
1998	41	38	44
2001	40	37	44
2004	41	38	44
2007	40	37	43
2010	49	47	51
2013	52	50	54
2016	47	45	49

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: The bars above and below the lines represent the bounds of 95 percent confidence intervals. For each year, for each older household with debt for their primary home, we divided the value of all mortgages, home equity loans, and home equity lines of credit on that home by the home's value to calculate their LTV ratio as a percentage. Then for each year, we calculated the median LTV ratio among these households.

In addition to significant increases in median home debt, older households in 2016 carried significantly higher median credit card and student loan debt amounts than older households in 1989.[25] Specifically, the median credit card debt amount for older households with credit card debt was about twice as high in 2016 ($2,500) as it was in 1989 ($1,300), while the median student loan debt amount for households with student loan debt was about three times as high in 2016 ($16,800) as it was in 1989 ($6,700) (see fig. 22 in appendix II).[26]

[25] For trends in the median amount of older households' vehicle debt, secondary home debt, and other debt, see table 3 in appendix II.

[26] According to the Bureau of Labor Statistics, the Consumer Price Index for higher education tuition and fees increased by 407 percent from 1989 to 2016.

Older Individuals' Adverse Debt Outcomes Generally Peaked Just after the Great Recession

Measures of older individuals' adverse debt outcomes, including the share of outstanding mortgage and credit card debt that was late (delinquent) by 90 days or more, generally followed broad economic trends, peaking just after the Great Recession of 2007-2009 and declining from then until 2019. However, older individuals' share of outstanding student loan debt that was delinquent by 90 days or more peaked in 2018 and 2019.[27] According to our analysis of data from the Consumer Credit Panel (CCP) from 2003 to 2019, the share of outstanding mortgage debt delinquent by 90 days or more for older individuals was at its highest in 2009 and 2010 (see fig. 5).[28] Our prior work found that housing debt played a major role in the Great Recession, during which many older individuals lost their jobs and had difficulty repaying housing and other types of debt.[29] Similarly, the share of outstanding credit card debt delinquent by 90 days or more for older individuals peaked in 2010.[30] In contrast to these trends, the share of student loan debt delinquent by 90 days or more for older individuals rose to 12 percent in 2012, becoming

[27] For information on the share of older individuals' auto debt, home equity lines of credit, and other debt that was delinquent by 90 days or more, see fig. 23 in appendix II.

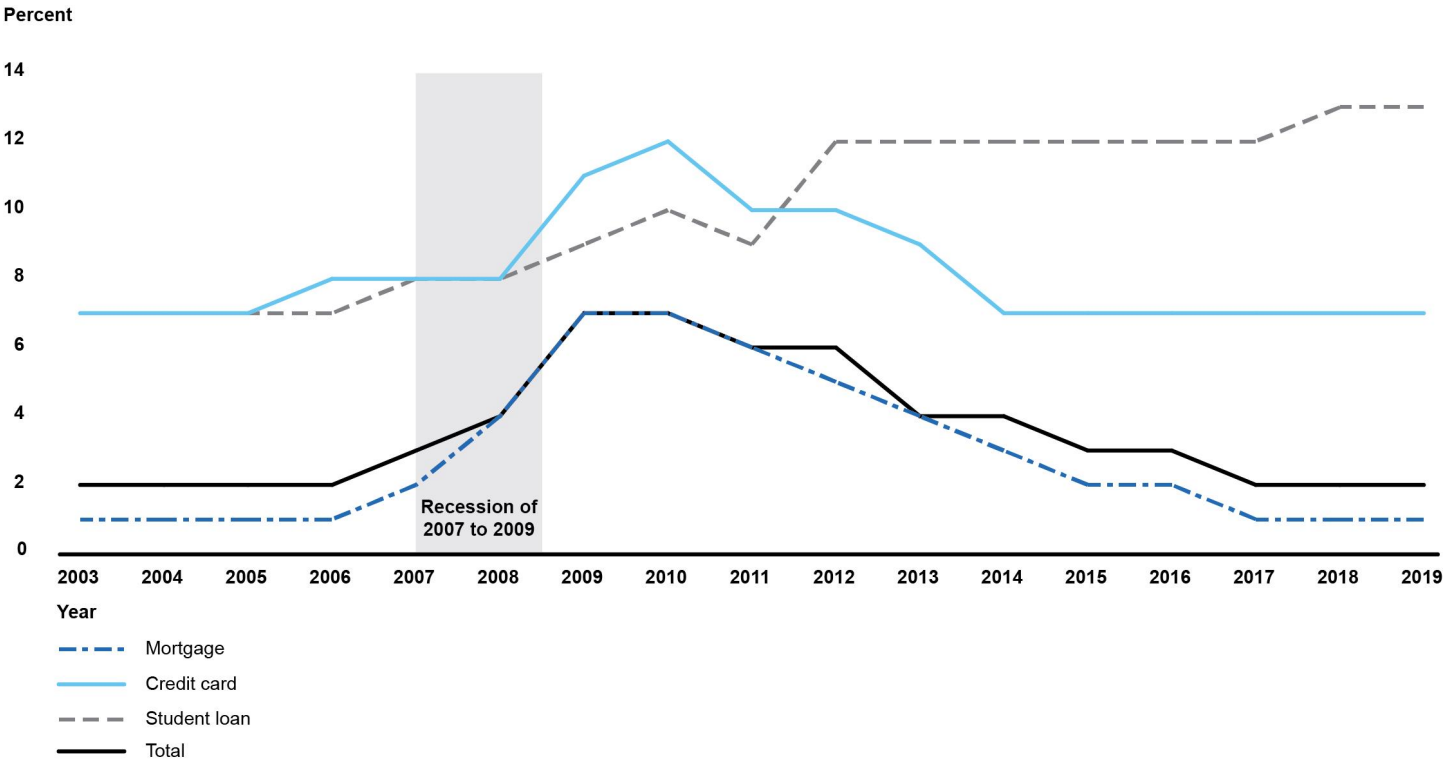
[28] CCP data is collected at the individual level rather than at the household level like the SCF. Older individuals are those who are aged 50-79. In addition, while the SCF classifies mortgages, home equity loans, and home equity lines of credit as used to purchase primary or secondary homes, the CCP does not make this distinction. Therefore, the CCP's mortgage debt data includes debt for primary and secondary homes. For more detail on CCP sample design and our analysis methodology, see appendix I.

[29] For more information, see GAO, *Housing Finance System: A Framework for Assessing Potential Changes*, GAO-15-131 (Washington, D.C.: October 2014) and GAO, *Unemployed Older Workers: Many Experience Challenges Regaining Employment and Face Reduced Retirement Security*, GAO-12-445 (Washington, D.C.: April 2012).

[30] While the SCF's credit card debt measure includes the total balance owed on credit card accounts after the last payments were made, the CCP data on credit card debt includes the total outstanding balance on individuals' credit card accounts as of December 31 of each year.

the debt type with the highest delinquency rate, and peaked at 13 percent in 2018 and 2019.[31]

Figure 5: Percent of Outstanding Loan Balance Delinquent by 90 Days or More for Individuals Age 50-79, by Selected Debt Types, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

[31] While the SCF's student loan measure includes federal and private debt for all members living in the household, CCP measures federal and private student loan debt only for the individual. Regarding student loan delinquency rates trending higher, research based on focus groups with student loan borrowers, including those in their 50s, points to potential reasons for this trend, including that student loans are easy to obtain, monthly payments are easy to postpone, and borrowers assign a lower priority to student loan payments than to home or car payments because there is no asset to repossess. Delisle, Jason and Holt, Alexander. "*Why Student Loans Are Different: Findings from Six Focus Groups of Student Loan Borrowers*." New America (2015).

Data table for Figure 5: Percent of Outstanding Loan Balance Delinquent by 90 Days or More for Individuals Age 50-79, by Selected Debt Types, December 2003 to December 2019

Year	Percent of mortgage balance late by 90 days or more	Percent of credit card balance late by 90 days or more	Percent of student loan balance late by 90 days or more	Percent of total balance late by 90 days or more
2003	1	7	7	2
2004	1	7	7	2
2005	1	7	7	2
2006	1	8	7	2
2007 (recession year)	2	8	8	3
2008 (recession year)	4	8	8	4
2009 (recession year)	7	11	9	7
2010	7	12	10	7
2011	6	10	9	6
2012	5	10	12	6
2013	4	9	12	4
2014	3	7	12	4
2015	2	7	12	3
2016	2	7	12	3
2017	1	7	12	2
2018	1	7	13	2
2019	1	7	13	2

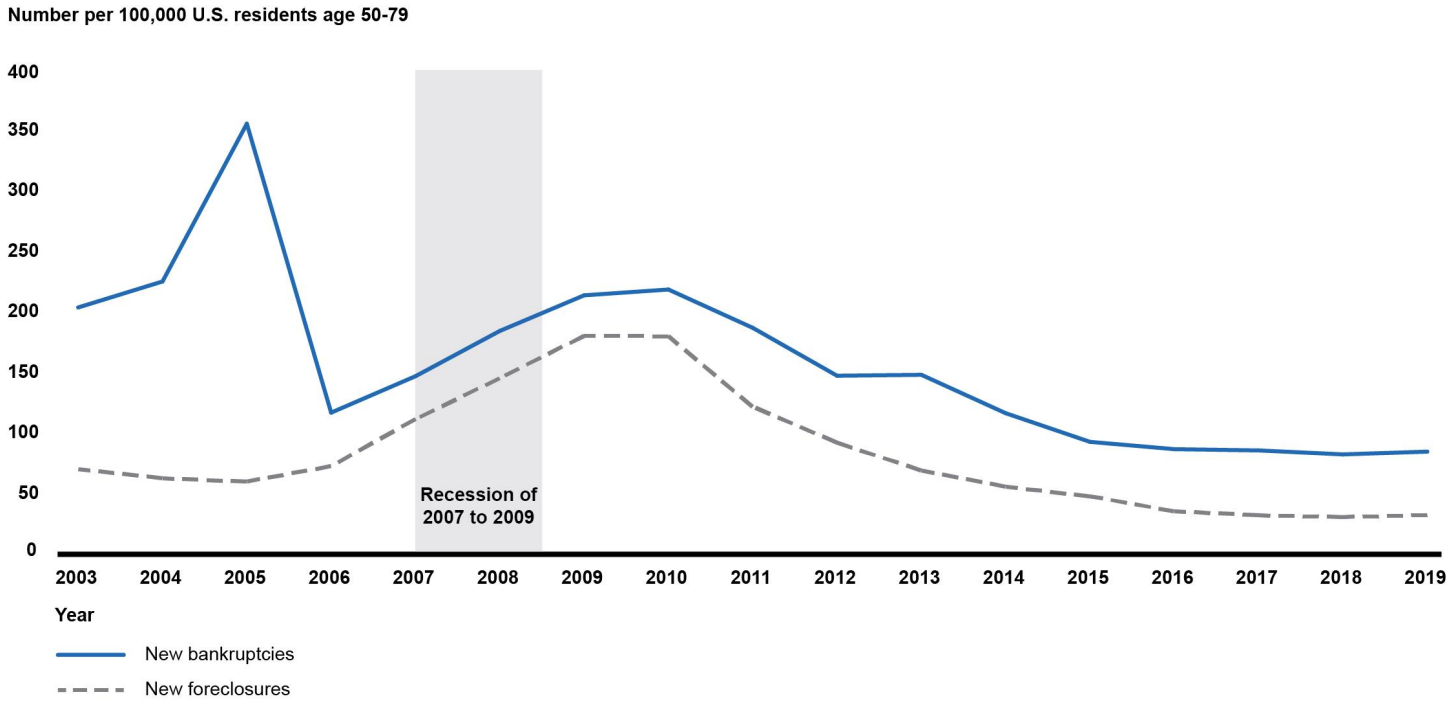
Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Note: The shaded area represents the period of the Great Recession, December 2007-June 2009. Because the Consumer Credit Panel data the Federal Reserve Bank of New York provided are as of December of each year, the shaded area ranges from 2007 to halfway between 2008 and 2009.

In addition to mortgage and credit card delinquency rates, the rate of older individuals with new bankruptcies and foreclosures followed broad economic trends. Specifically, from 2003 to 2019, the rate of new bankruptcies and foreclosures for older individuals rose during the Great

Recession and peaked in 2010, according to our analysis of CCP and Census Bureau data (see fig. 6).[32]

Figure 6: New Bankruptcies and Foreclosures for Individuals Age 50-79 per 100,000 U.S. Residents Age 50-79, 4th Quarter of 2003 to 4th Quarter of 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data and Census Bureau data. | GAO-21-170

Data table for Figure 6: New Bankruptcies and Foreclosures for Individuals Age 50-79 per 100,000 U.S. Residents Age 50-79, 4th Quarter of 2003 to 4th Quarter of 2019

Year	Number of new bankruptcies per 100,000 U.S. residents age 50-79	Number of new foreclosures per 100,000 U.S. residents age 50-79
2003	203.35	69.78
2004	224.81	62.20

[32] New bankruptcies and new foreclosures are those that first appeared on older individuals' credit reports in the fourth quarter of each year. Regarding the spike in the rate of new bankruptcies in 2005, in the months leading up to the effective date for most of the provisions of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (October 17, 2005), bankruptcy filings rose dramatically because many consumers believed it would be more difficult to receive bankruptcy protection once the act went into effect. Immediately after the act went into effect, bankruptcy filings fell substantially. For more information, see GAO, *Bankruptcy Reform: Dollar Costs Associated with the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005*, GAO-08-697 (Washington, D.C.: June 2008).

Year	Number of new bankruptcies per 100,000 U.S. residents age 50-79	Number of new foreclosures per 100,000 U.S. residents age 50-79
2005	355.08	59.61
2006	116.50	72.31
2007 (recession year)	146.56	111.09
2008 (recession year)	183.95	144.93
2009 (recession year)	213.38	179.91
2010	218.18	179.57
2011	186.53	121.36
2012	146.97	91.65
2013	147.73	68.68
2014	116.02	55.27
2015	92.34	47.39
2016	86.32	34.97
2017	85.27	31.65
2018	82.00	30.24
2019	84.28	31.81

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data and Census Bureau data. | GAO-21-170

Note: New bankruptcies and new foreclosures are those that first appeared on older individuals' credit reports in the fourth quarter of each year. The shaded area represents the period of the Great Recession, December 2007-June 2009. Because the Consumer Credit Panel data the Federal Reserve Bank of New York provided are as of the fourth quarter of each year, the shaded area ranges from 2007 to halfway between 2008 and 2009. In contrast to the Consumer Credit Panel data, the Census Bureau's annual U.S. population estimates are not limited to those with debt.

Debt, Debt Stress, and Adverse Debt Outcomes Varied by Age, Credit Score, and State of Residence

Older Americans' debt, debt stress, and adverse debt outcomes varied by their demographic and economic characteristics, including age, credit score, and state of residence.

Age

Median debt stress and home debt amounts were higher in 2016 than in 1989 for all households aged 50-74, while the shares of households with home debt and credit card debt were higher for most households aged 60 or older. In addition, individuals in their late 70s often had higher shares of credit card and student loan debt delinquent than those aged 50-74. According to our analysis of SCF data from 1989 to 2016, median home debt, median LTV ratios, and median leverage ratios were significantly

higher in 2016 than in 1989 for older households aged 50-74. However, the share of households with home debt was higher in 2016 than in 1989 for households aged 60 or older and the share of households with credit card debt was higher in 2016 than in 1989 particularly for households aged 70 or older. For example, the share of households aged 60 or older with home debt was 15 to 20 percentage points higher in 2016 than in 1989. Similarly, the share of households age 70-74 with credit card debt was 20 percentage points higher in 2016 than in 1989, and 16 percentage points higher for households aged 75 or older. In addition, the share of credit card and student loan debt delinquent was often higher for those aged 75-79 than those aged 50-74, according to our analysis of CCP data from 2003 to 2019. For example, the share of credit card debt delinquent was consistently higher for those aged 75-79 than any other age group over this period (see fig. 24 in appendix II). In addition, the share of student loan debt delinquent was consistently higher for those aged 75-79 than any other age group from 2011-2016.

Credit Score

Median mortgage and student loan debt amounts were higher for older individuals in 2019 than for older individuals in 2003 for all credit score groups, and median credit card debt amounts were higher for those with the highest credit scores, according to estimates from the CCP sample data we analyzed.[33] For mortgage debt, the differences in median debt amounts were largest for individuals with the highest credit scores (760 or higher) (see fig. 7).[34] While individuals with higher credit scores generally qualify for larger loan amounts than those with lower scores, we found the second largest difference in median mortgage debt from 2003 to 2019 was for those with the lowest credit scores (less than 620), which are generally considered subprime. Further, median mortgage debt for older individuals with the lowest credit scores in 2010 was dramatically higher than it was for older individuals with the lowest credit scores in 2003—from the lowest amount of any credit score group to the highest—just prior to and during the Great Recession.[35] By 2019, older individuals with the lowest credit scores had the lowest median mortgage debt amount of any credit score group.

Credit Scores

The three nationwide credit bureaus—Equifax, Experian, and TransUnion—each develop credit score models based on consumers' financial transaction data. For example, Equifax uses a proprietary algorithm to create its Equifax Risk Score 3.0, which is based on borrowers' payment history, proportion of available credit used, variety of credit used, recent requests for new credit, and length of credit history. Equifax's credit scores range from 280 to 850. Lenders use credit scores to decide whether to loan money to prospective borrowers and at what terms. For example, a prospective borrower with a history of on-time payments would typically have a higher score and represent a better lending risk than a borrower with a history of late payments, and would typically have a lower score. According to officials at the Federal Reserve Bank of New York, Equifax credit scores below 620 are considered subprime.

The CCP credit score data we analyzed for this report is the Equifax Risk Score 3.0.

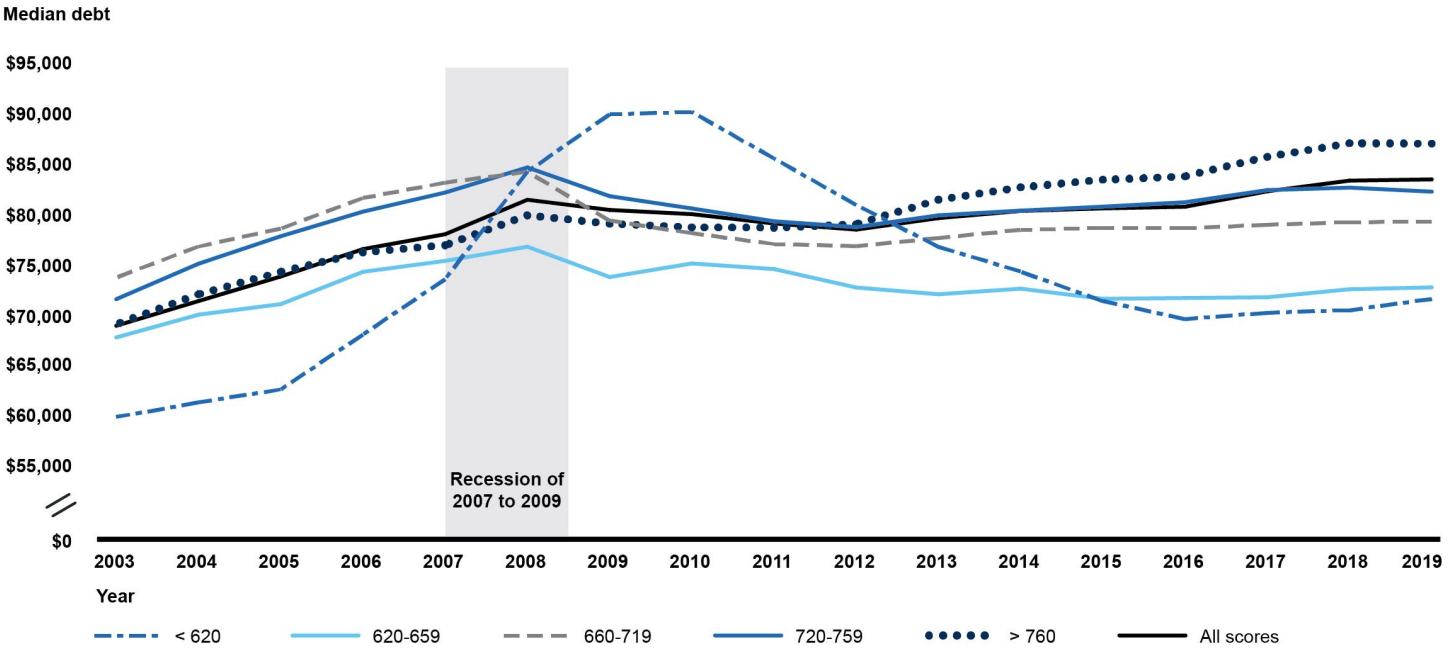
Source: GAO analysis of documentation and FRBNY Consumer Credit Panel / Equifax Data. | GAO-21-170

[33] All dollar amounts from the CCP data are adjusted for inflation to December 2019 real dollars using the Consumer Price Index for All Urban Consumers Research Series. In general, individuals with good debt payment histories have higher credit scores and qualify for larger loan amounts than those with poor debt payment histories.

[34] According to our analysis of CCP data, the median credit score for older individuals was higher in 2019 (770) than in 2003 (753). Over this period, about 15 percent of older individuals had scores less than 620, and about half had scores of 760 or higher. For more information, see fig. 25 in appendix II.

[35] Our prior work found that the composition of the mortgage market changed dramatically in the early to mid-2000s. During that period, the volume of subprime and near-prime mortgage originations grew rapidly and peaked in 2006, accounting for nearly 40 percent of mortgage originations that year. These market segments contracted sharply in mid-2007, but the balance of already-originated subprime loans not paid off remained outstanding. GAO, *Mortgage Reform: Potential Impacts of Provisions in the Dodd-Frank Act on Homebuyers and the Mortgage Market,* GAO-11-656 (Washington, D.C.: July 2011).

Figure 7: Median Mortgage Debt for Individuals Age 50-79 with Mortgage Debt, By Equifax Credit Score, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Data table for Figure 7: Median Mortgage Debt for Individuals Age 50-79 with Mortgage Debt, By Equifax Credit Score, December 2003 to December 2019

Year	Median debt – less than 620	Median debt - 620-659	Median debt - 660-719	Median debt - 720-759	Median debt - 760 and up	Median debt – all scores
2003	$60,207	$68,127	$74,106	$71,936	$69,437	$69,292
2004	$61,660	$70,393	$77,162	$75,460	$72,424	$71,747
2005	$62,955	$71,439	$78,952	$78,192	$74,648	$74,189
2006	$68,426	$74,652	$81,990	$80,638	$76,586	$76,911
2007 (recession year)	$73,918	$75,743	$83,522	$82,538	$77,292	$78,395
2008 (recession year)	$84,602	$77,152	$84,611	$85,034	$80,276	$81,822
2009 (recession year)	$90,312	$74,136	$79,733	$82,181	$79,444	$80,807
2010	$90,557	$75,484	$78,493	$80,954	$79,074	$80,391
2011	$85,940	$74,928	$77,413	$79,683	$79,045	$79,462
2012	$81,296	$73,093	$77,211	$79,107	$79,402	$78,854
2013	$77,139	$72,422	$78,006	$80,276	$81,815	$79,996
2014	$74,674	$72,978	$78,823	$80,743	$83,058	$80,708
2015	$71,727	$71,968	$79,020	$81,136	$83,810	$80,965
2016	$69,952	$72,051	$78,984	$81,575	$84,153	$81,128

Year	Median debt – less than 620	Median debt - 620-659	Median debt - 660-719	Median debt - 720-759	Median debt - 760 and up	Median debt – all scores
2017	$70,591	$72,123	$79,330	$82,783	$86,097	$82,662
2018	$70,834	$72,919	$79,597	$83,028	$87,436	$83,725
2019	$71,954	$73,107	$79,617	$82,626	$87,414	$83,847

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

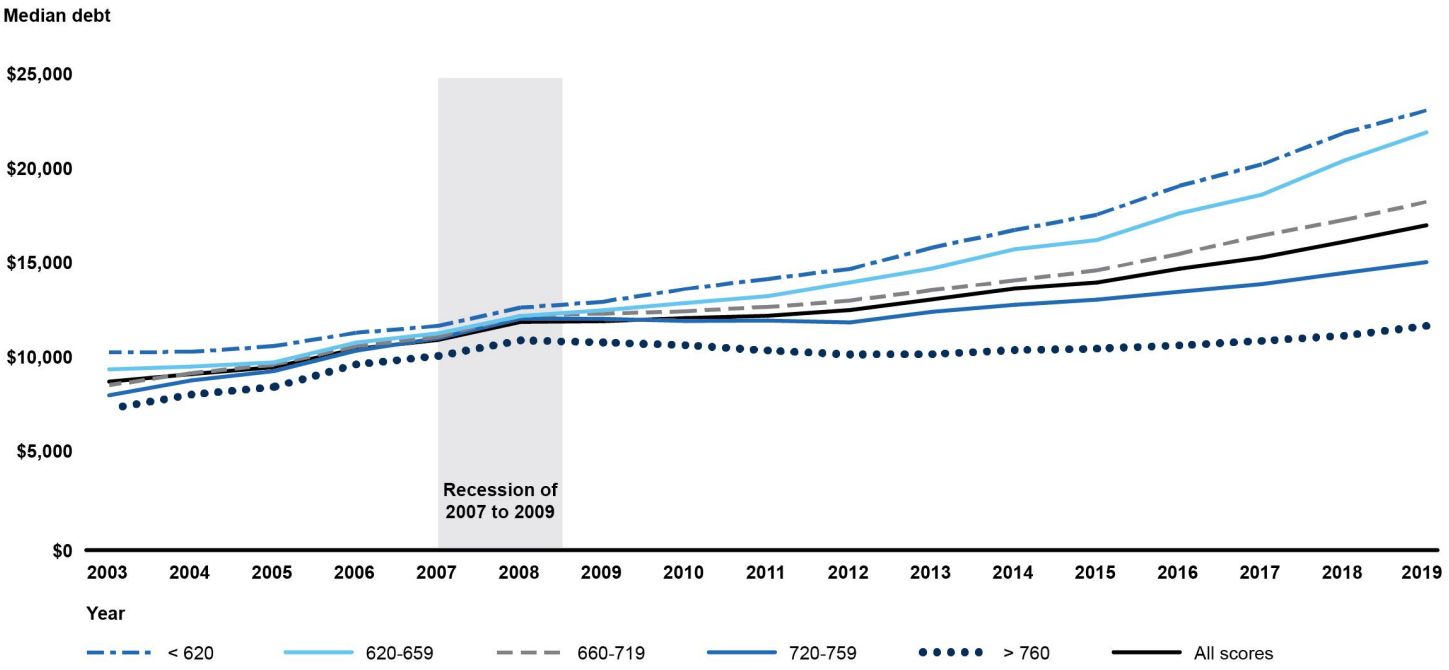
Note: All dollar figures are in December 2019 dollars. Equifax credit scores shown are as of December 2019 rather than as of mortgage origination. According to officials at the Federal Reserve Bank of New York, Equifax credit scores below 620 are considered subprime. The shaded area represents the period of the Great Recession, December 2007-June 2009. Because the Consumer Credit Panel data the Federal Reserve Bank of New York provided are as of December of each year, the shaded area ranges from 2007 to halfway between 2008 and 2009.

Median credit card debt was higher in 2019 than in 2003 for older individuals in the two highest credit score groups. Specifically, median credit card debt was 17 percent higher for older individuals with credit scores of 720-759 and 72 percent higher for older individuals with credit scores of 760 or higher (see fig. 26 in appendix II). In contrast, median credit card debt was lower in 2019 than in 2003 for older individuals in the lowest three credit score groups (credit scores less than 720).

Median student loan debt was higher in 2019 than in 2003 for older individuals in all credit score groups, but it more than doubled for those in the lowest three groups, with credit scores less than 720 (see fig. 8). This may be explained by the fact that the U.S. Department of Education—which makes the vast majority of student loans—generally does not evaluate prospective borrowers' credit scores when deciding whether to issue them student loans, in keeping with its goal to expand access to postsecondary education.[36]

[36] As of September 2020, federal student loans made up over 90 percent of the outstanding balance of all student loans. The U.S. Department of Education only evaluates prospective borrowers' credit scores for Parent PLUS loans, which allow parents to borrow for their children's education, and Graduate PLUS loans, which help finance students' graduate or professional education.

Figure 8: Median Student Loan Debt for Individuals Age 50-79 with Student Loan Debt, By Equifax Credit Score, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Data table for Figure 8: Median Student Loan Debt for Individuals Age 50-79 with Student Loan Debt, By Equifax Credit Score, December 2003 to December 2019

Year	Median debt – less than 620	Median debt - 620-659	Median debt - 660-719	Median debt - 720-759	Median debt - 760 and up	Median debt – all scores
2003	$10,469	$9,565	$8,725	$8,194	$7,477	$8,917
2004	$10,494	$9,712	$9,370	$8,982	$8,231	$9,316
2005	$10,789	$9,935	$9,817	$9,472	$8,632	$9,683
2006	$11,499	$10,983	$10,797	$10,553	$9,823	$10,645
2007 (recession year)	$11,862	$11,475	$11,313	$11,226	$10,279	$11,128
2008 (recession year)	$12,826	$12,392	$12,401	$12,256	$11,100	$12,074
2009 (recession year)	$13,148	$12,692	$12,518	$12,239	$10,989	$12,115
2010	$13,822	$13,075	$12,643	$12,124	$10,847	$12,277
2011	$14,343	$13,440	$12,870	$12,146	$10,558	$12,400
2012	$14,887	$14,165	$13,212	$12,049	$10,354	$12,703
2013	$16,008	$14,906	$13,757	$12,612	$10,366	$13,270
2014	$16,931	$15,919	$14,263	$12,981	$10,587	$13,842
2015	$17,754	$16,407	$14,804	$13,255	$10,659	$14,160
2016	$19,266	$17,818	$15,685	$13,671	$10,840	$14,888

Year	Median debt – less than 620	Median debt - 620-659	Median debt - 660-719	Median debt - 720-759	Median debt - 760 and up	Median debt – all scores
2017	$20,409	$18,803	$16,640	$14,075	$11,071	$15,486
2018	$22,068	$20,609	$17,462	$14,665	$11,347	$16,315
2019	$23,268	$22,100	$18,425	$15,237	$11,862	$17,187

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

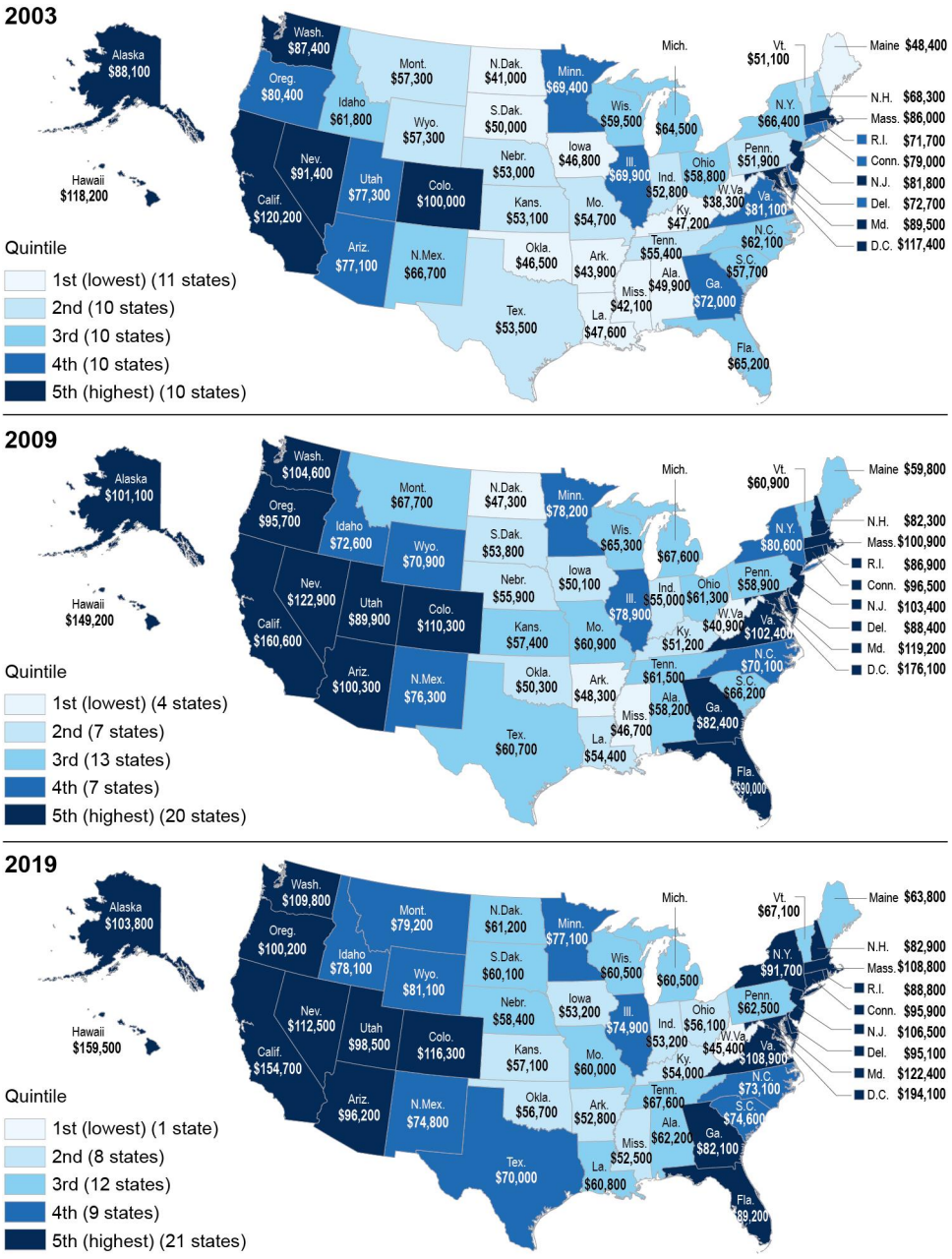
Note: All dollar figures are in December 2019 dollars. The shaded area represents the period of the Great Recession, December 2007-June 2009. Because the Consumer Credit Panel data the Federal Reserve Bank of New York provided are as of December of each year, the shaded area ranges from 2007 to halfway between 2008 and 2009. The Consumer Credit Panel's student loan debt measure includes all of an individual's federal and private student loan debt, including debt for their children's education. According to officials at the Federal Reserve Bank of New York, Equifax credit scores below 620 are considered subprime.

State of Residence

Median mortgage, credit card, and student loan debt, as well as the share of student loan debt that was delinquent, were higher in 2019 than in 2003 for older individuals in most areas within the United States. In addition, the share of mortgage and credit card debt delinquent generally followed broad economic trends, increasing from 2003 to 2009 (through the Great Recession of 2007-2009) and falling for the rest of the period across the country. According to estimates from the CCP sample data we analyzed, estimated median mortgage debt for older individuals with mortgage debt was higher in 2019 than in 2003 in most states and the District of Columbia (see fig. 9).[37] The increases were especially large in the South, West, and Northeast. The largest increases in estimated median mortgage debt in these regions were 65 percent for older individuals living in the District of Columbia, 42 percent for those in Wyoming, and 38 percent for those in New York.

[37] Regional variation in home values affects mortgage debt amounts.

Figure 9: Median Mortgage Debt for Individuals Age 50-79 with Mortgage Debt, By U.S. State, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data | GAO-21-170

Data table for Figure 9: Median Mortgage Debt for Individuals Age 50-79 with Mortgage Debt, By U.S. State, December 2003 to December 2019

2003

State	Median outstanding mortgage debt	Quintile
WV	$38,300	1st quintile (lowest) (11states)
ND	$41,000	
MS	$42,100	
AR	$43,900	
OK	$46,500	
IA	$46,800	
KY	$47,200	
LA	$47,600	
ME	$48,400	
AL	$49,900	
SD	$50,000	
VT	$51,100	2nd quintile (10 states)
PA	$51,900	
IN	$52,800	
NE	$53,000	
KS	$53,100	
TX	$53,500	
MO	$54,700	
TN	$55,400	
MT	$57,300	
WY	$57,300	
SC	$57,700	3rd quintile (10 states)
OH	$58,800	
WI	$59,500	
ID	$61,800	
NC	$62,100	
MI	$64,500	
FL	$65,200	
NY	$66,400	
NM	$66,700	
NH	$68,300	

State	Median outstanding mortgage debt	Quintile
MN	$69,400	4th quintile (10 states)
IL	$69,900	
RI	$71,700	
GA	$72,000	
DE	$72,700	
AZ	$77,100	
UT	$77,300	
CT	$79,000	
OR	$80,400	
VA	$81,100	
NJ	$81,800	5th quintile (highest) (10 states)
MA	$86,000	
WA	$87,400	
AK	$88,100	
MD	$89,500	
NV	$91,400	
CO	$100,000	
DC	$117,400	
HI	$118,200	
CA	$120,200	

2009

State	Median outstanding mortgage debt	Quintile
WV	$40,900	1st quintile (lowest) (4 states)
MS	$46,700	
ND	$47,300	
AR	$48,300	
IA	$50,100	2nd quintile (7 states)
OK	$50,300	
KY	$51,200	
SD	$53,800	
LA	$54,400	
IN	$55,000	
NE	$55,900	

State	Median outstanding mortgage debt	Quintile
KS	$57,400	3rd quintile (13 states)
AL	$58,200	
PA	$58,900	
ME	$59,800	
TX	$60,700	
MO	$60,900	
VT	$60,900	
OH	$61,300	
TN	$61,500	
WI	$65,300	
SC	$66,200	
MI	$67,600	
MT	$67,700	
NC	$70,100	4th quintile (7 states)
WY	$70,900	
ID	$72,600	
NM	$76,300	
MN	$78,200	
IL	$78,900	
NY	$80,600	
NH	$82,300	5th quintile (highest) (20 states)
GA	$82,400	
RI	$86,900	
DE	$88,400	
UT	$89,900	
FL	$90,000	
OR	$95,700	
CT	$96,500	
AZ	$100,300	
MA	$100,900	
AK	$101,100	
VA	$102,400	
NJ	$103,400	
WA	$104,600	
CO	$110,300	

State	Median outstanding mortgage debt	Quintile
MD	$119,200	
NV	$122,900	
HI	$149,200	
CA	$160,600	
DC	$176,100	

2019

State	Median outstanding mortgage debt	Quintile
WV	$45,400	1st quintile (lowest) (1 state)
MS	$52,500	2nd quintile (8 states)
AR	$52,800	
IA	$53,200	
IN	$53,600	
KY	$54,000	
OH	$56,100	
OK	$56,700	
KS	$57,100	
NE	$58,400	3rd quintile (12 states)
MO	$60,000	
SD	$60,100	
MI	$60,500	
WI	$60,500	
LA	$60,800	
ND	$61,200	
AL	$62,200	
PA	$62,500	
ME	$63,800	
VT	$67,100	
TN	$67,600	
TX	$70,000	4th quintile (9 states)
NC	$73,100	
SC	$74,600	
NM	$74,800	
IL	$74,900	

State	Median outstanding mortgage debt	Quintile
MN	$77,100	
ID	$78,100	
MT	$79,200	
WY	$81,100	
GA	$82,100	5th quintile (highest) (21 states)
NH	$82,900	
RI	$88,800	
FL	$89,200	
NY	$91,700	
DE	$95,100	
CT	$95,900	
AZ	$96,200	
UT	$98,500	
OR	$100,200	
AK	$103,800	
NJ	$106,500	
MA	$108,800	
VA	$108,900	
WA	$109,800	
NV	$112,500	
CO	$116,300	
MD	$122,400	
CA	$154,700	
HI	$159,500	
DC	$194,100	

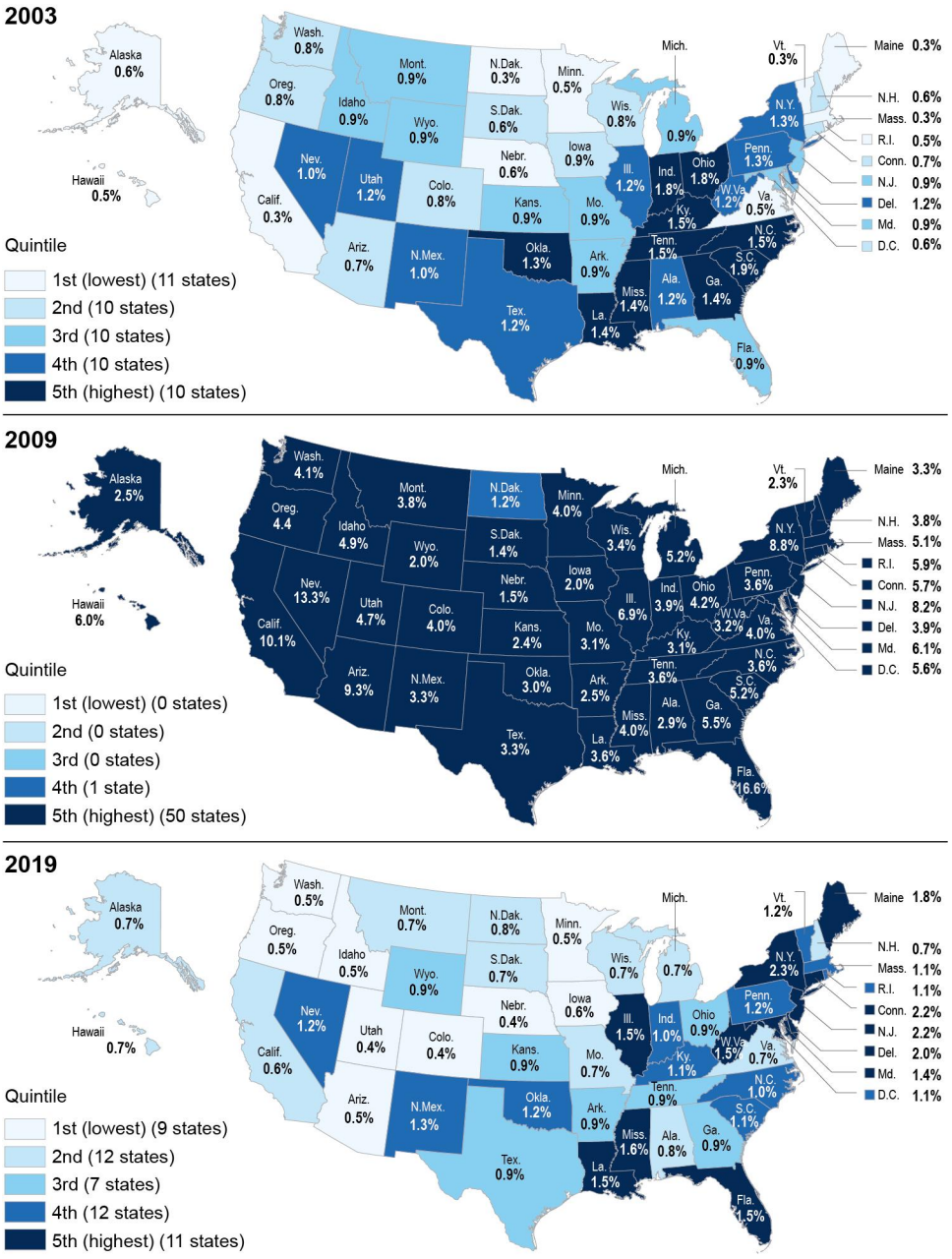
Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data | GAO-21-170

Note: All dollar figures are in December 2019 dollars. For 2003, we broke the 50 states and the District of Columbia into five even groups—quintiles—based on the median mortgage debt of older individuals living there. Then for 2009 and 2019, we compared states' median mortgage debt amounts to those quintile cutpoints for 2003.

During the same period, the share of older individuals' mortgage debt that was delinquent generally followed broad economic trends, rising from 2003 to 2009 and falling for the rest of the period in every state and the District of Columbia. The states with the largest estimated increases in the share of mortgage debt delinquent from 2003 to 2009 were Arizona, California, Florida, Nevada, New Jersey, and New York (see fig. 10). By

2019, the share of mortgage debt delinquent for most states was about the same as it was in 2003.

Figure 10: Percent of Outstanding Mortgage Balance Delinquent by 90 Days or More, for Individuals Age 50-79, by U.S. State, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data | GAO-21-170

Data table for Figure 10: Percent of Outstanding Mortgage Balance Delinquent by 90 Days or More, for Individuals Age 50-79, by U.S. State, December 2003 to December 2019

Year	State	Share of mortgage balance delinquent by 90+ days	Quintile
2003	MA	0.3%	1st quintile (lowest) (11 states)
	ME	0.3%	
	VT	0.3%	
	CA	0.3%	
	ND	0.3%	
	VA	0.5%	
	MN	0.5%	
	HI	0.5%	
	RI	0.5%	
	AK	0.6%	
	NE	0.6%	
	DC	0.6%	2nd quintile (10 states)
	NH	0.6%	
	SD	0.6%	
	CT	0.7%	
	AZ	0.7%	
	OR	0.8%	
	WI	0.8%	
	WA	0.8%	
	CO	0.8%	
	IA	0.9%	
	FL	0.9%	3rd quintile (10 states)
	NJ	0.9%	
	MD	0.9%	
	MT	0.9%	
	KS	0.9%	
	ID	0.9%	
	WY	0.9%	
	MO	0.9%	
	MI	0.9%	
	AR	0.9%	
	NV	1.0%	4th quintile (10 states)
	NM	1.0%	
	UT	1.2%	

Year	State	Share of mortgage balance delinquent by 90+ days	Quintile
	IL	1.2%	
	DE	1.2%	
	WV	1.2%	
	TX	1.2%	
	AL	1.2%	
	PA	1.3%	
	NY	1.3%	
	OK	1.3%	5th quintile (highest) (10 states)
	GA	1.4%	
	MS	1.4%	
	LA	1.4%	
	NC	1.5%	
	TN	1.5%	
	KY	1.5%	
	OH	1.8%	
	IN	1.8%	
	SC	1.9%	
2009	ND	1.2%	4th quintile (1 states)
	SD	1.4%	5th quintile (highest) (50 states)
	NE	1.5%	
	WY	2.0%	
	IA	2.0%	
	VT	2.3%	
	KS	2.4%	
	AR	2.5%	
	AK	2.5%	
	AL	2.9%	
	OK	3.0%	
	KY	3.1%	
	MO	3.1%	
	WV	3.2%	
	NM	3.3%	
	TX	3.3%	
	ME	3.3%	
	WI	3.4%	
	LA	3.6%	

Year	State	Share of mortgage balance delinquent by 90+ days	Quintile
	TN	3.6%	
	NC	3.6%	
	PA	3.6%	
	MT	3.8%	
	NH	3.8%	
	IN	3.9%	
	DE	3.9%	
	MN	4.0%	
	MS	4.0%	
	VA	4.0%	
	CO	4.0%	
	WA	4.1%	
	OH	4.2%	
	OR	4.4%	
	UT	4.7%	
	ID	4.9%	
	MA	5.1%	
	SC	5.2%	
	MI	5.2%	
	GA	5.5%	
	DC	5.6%	
	CT	5.7%	
	RI	5.9%	
	HI	6.0%	
	MD	6.1%	
	IL	6.9%	
	NJ	8.2%	
	NY	8.8%	
	AZ	9.3%	
	CA	10.1%	
	NV	13.3%	
	FL	16.6%	
2019	UT	0.4%	1st quintile (lowest) (9 states)
	CO	0.4%	
	NE	0.4%	
	ID	0.5%	

Year	State	Share of mortgage balance delinquent by 90+ days	Quintile
	MN	0.5%	
	OR	0.5%	
	WA	0.5%	
	AZ	0.5%	
	IA	0.6%	
	CA	0.6%	2nd quintile (12 states)
	AK	0.7%	
	MT	0.7%	
	MI	0.7%	
	WI	0.7%	
	VA	0.7%	
	MO	0.7%	
	NH	0.7%	
	SD	0.7%	
	HI	0.7%	
	ND	0.8%	
	AL	0.8%	
	KS	0.9%	3rd quintile (7 states)
	AR	0.9%	
	TX	0.9%	
	GA	0.9%	
	TN	0.9%	
	WY	0.9%	
	OH	0.9%	
	NC	1.0%	4th quintile (12 states)
	IN	1.0%	
	KY	1.1%	
	MA	1.1%	
	SC	1.1%	
	RI	1.1%	
	DC	1.1%	
	NV	1.2%	
	VT	1.2%	
	OK	1.2%	
	PA	1.2%	
	NM	1.3%	

Year	State	Share of mortgage balance delinquent by 90+ days	Quintile
	MD	1.4%	5th quintile (highest) (11 states)
	IL	1.5%	
	LA	1.5%	
	FL	1.5%	
	WV	1.5%	
	MS	1.6%	
	ME	1.8%	
	DE	2.0%	
	NJ	2.2%	
	CT	2.2%	
	NY	2.3%	

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data | GAO-21-170

Note: For 2003, we broke the 50 states and the District of Columbia into five even groups—quintiles—based on the percent of outstanding mortgage balance delinquent by 90 days or more for older individuals living there. Then for 2009 and 2019, we compared states' percent of outstanding mortgage balance delinquent to those quintile cutpoints for 2003.

In addition, median credit card debt for older individuals with credit card debt was higher in 2019 than in 2003 in most states, especially in the Midwest and Northeast (see fig. 27 in appendix II). Of the 12 states with the largest estimated increases in median credit card debt, 10 were in these two regions, including Iowa, Nebraska, and North Dakota, the states with the largest increases.

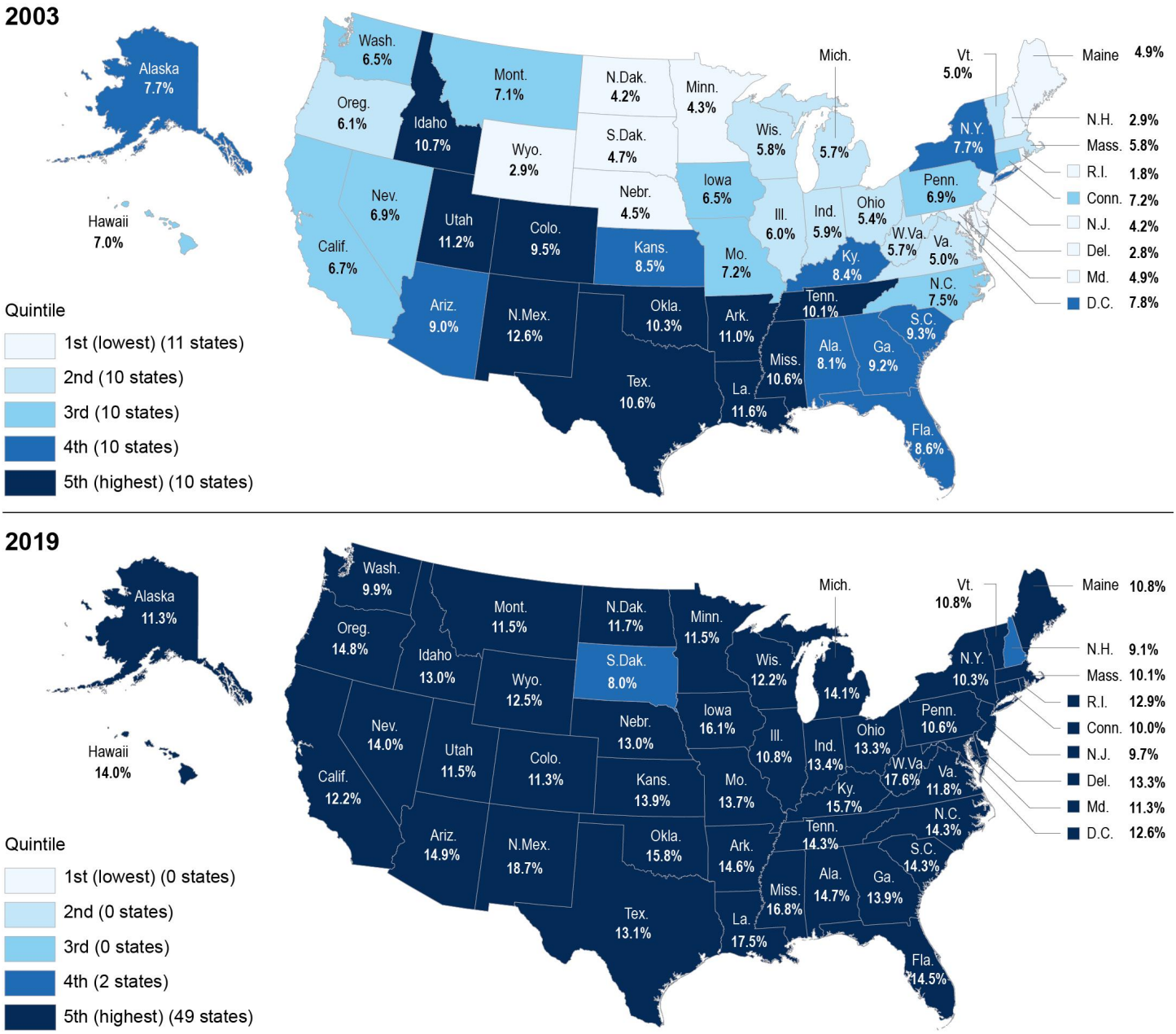
During the same period, older individuals' share of credit card debt delinquent generally followed broad economic trends, rising from 2003 to 2009 and falling for the rest of the period in most states. The states with the largest estimated increases in the share of credit card debt delinquent from 2003 to 2009 were Arizona, California, Florida, Massachusetts, Montana, and Nevada (see fig. 28 in appendix II). By 2019, the share of credit card debt delinquent for over half the states was about the same as it was in 2003.

Further, median student loan debt for older individuals with student loan debt was higher in 2019 than in 2003 in every state and the District of

Columbia. Specifically, estimated median student loan debt more than doubled in 16 states over the period, with the largest increases in Midwestern, Southern, and Western states (see fig. 29 in appendix II).

During the same period, older individuals' share of student loan debt delinquent was higher in 2019 than in 2003 in almost all states and the District of Columbia. States with the largest estimated increases were in the South, Midwest, Northeast, and West (see fig. 11).

Figure 11: Percent of Outstanding Student Loan Balance Delinquent by 90 Days or More, for Individuals Age 50-79, By U.S. State, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Data table for Figure 11: Percent of Outstanding Student Loan Balance Delinquent by 90 Days or More, for Individuals Age 50-79, By U.S. State, December 2003 to December 2019

Year	State	Share of student loan balance delinquent	Quintile
2003	RI	1.8%	1st quintile (lowest) (11 states)
	DE	2.8%	
	WY	2.9%	
	NH	2.9%	
	ND	4.2%	
	NJ	4.2%	
	MN	4.3%	
	NE	4.5%	
	SD	4.7%	
	MD	4.9%	
	ME	4.9%	
	VT	5.0%	2nd quintile (10 states)
	VA	5.0%	
	OH	5.4%	
	MI	5.7%	
	WV	5.7%	
	WI	5.8%	
	MA	5.8%	
	IN	5.9%	
	IL	6.0%	
	OR	6.1%	
	WA	6.5%	3rd quintile (10 states)
	IA	6.5%	
	CA	6.7%	
	NV	6.9%	
	PA	6.9%	
	HI	7.0%	
	MT	7.1%	
	MO	7.2%	
	CT	7.2%	
	NC	7.5%	
	NY	7.7%	4th quintile (10 states)
	AK	7.7%	
	DC	7.8%	

	AL	8.1%	
	KY	8.4%	
	KS	8.5%	
	FL	8.6%	
	AZ	9.0%	
	GA	9.2%	
	SC	9.3%	
	CO	9.5%	5th quintile (highest) (10 states)
	TN	10.1%	
	OK	10.3%	
	MS	10.6%	
	TX	10.6%	
	ID	10.7%	
	AR	11.0%	
	UT	11.2%	
	LA	11.6%	
	NM	12.6%	
2019	SD	8.0%	4th quintile (2 states)
	NH	9.1%	
	NJ	9.7%	5th quintile (highest) (49 states)
	WA	9.9%	
	CT	10.0%	
	MA	10.1%	
	NY	10.3%	
	PA	10.6%	
	ME	10.8%	
	VT	10.8%	
	IL	10.8%	
	MD	11.3%	
	AK	11.3%	
	CO	11.3%	
	MT	11.5%	
	UT	11.5%	
	MN	11.5%	
	ND	11.7%	
	VA	11.8%	
	WI	12.2%	
	CA	12.2%	

WY	12.5%
DC	12.6%
RI	12.9%
ID	13.0%
NE	13.0%
TX	13.1%
OH	13.3%
DE	13.3%
IN	13.4%
MO	13.7%
GA	13.9%
KS	13.9%
HI	14.0%
NV	14.0%
MI	14.1%
SC	14.3%
NC	14.3%
TN	14.3%
FL	14.5%
AR	14.6%
AL	14.7%
OR	14.8%
AZ	14.9%
KY	15.7%
OK	15.8%
IA	16.1%
MS	16.8%
LA	17.5%
WV	17.6%
NM	18.7%

Note: For 2003, we broke the 50 states and the District of Columbia into five even groups—quintiles—based on the percent of outstanding student loan balance delinquent by 90 days or more for older individuals living there. Then for 2019, we compared states' percent of outstanding student loan balance delinquent to those quintile cutpoints for 2003. We do not include a 2009 map in this figure because the share of student loan debt delinquent was higher in 2019 than 2003, unlike the share of mortgage and credit card debt delinquent, which followed broad economic trends and peaked just after the Great Recession of 2007-2009.

Overall, a larger share of older Americans now has debt compared to 30 years ago, and their debt amounts generally have increased at a faster rate than their assets and incomes, causing added debt stress. While adverse debt outcomes for older Americans mostly followed broad

economic trends over the last 15 years, peaking just after the Great Recession, student loan delinquency rates were much higher in 2019 than they were in 2003. Breaking down these trends for older Americans in different demographic and economic groups highlights that some groups are particularly vulnerable. For example, higher shares of households aged 60 or older had home debt and credit card debt in 2016 than in 1989. Further, from 2003 to 2019, individuals aged 75-79 often had higher shares of credit card and student loan debt that was delinquent than those aged 50 to 74. Over this same period, older individuals with credit scores below 720—including those with subprime, fair, or good credit—had median student loan debt amounts that were more than twice as high in 2019 as in 2003. In addition, older individuals in the South and West had much higher median mortgage and student loan debt amounts, as well as student loan delinquency rates, in 2019 than in 2003. Examples like these raise concerns about the risks that recent increases in debt and debt stress pose for certain groups' retirement security.

Debt Stress for a Cohort of Older American Households Declined as They Aged, but Low-Income Households Had Greater Debt Stress

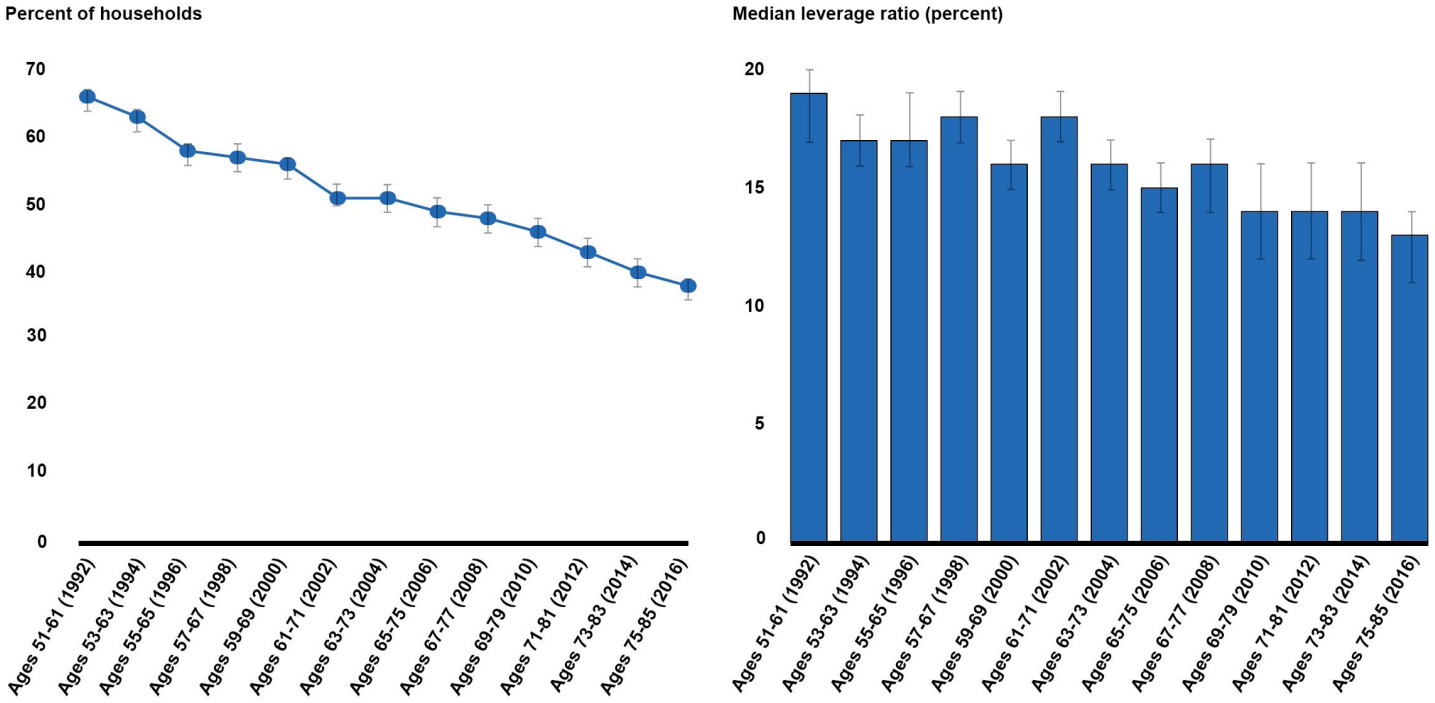
The Share of Older American Households in Our Cohort with Debt and the Stress of This Debt Decreased as They Aged

Our analysis of data from the Health and Retirement Study (HRS), which follows the same households over time, found that both the proportion of households with any type of debt as well as their median debt and median leverage ratio declined as they aged.[38] Specifically, for those born in 1931 to 1941, the share of older households with any debt continuously

[38] The cohort was ages 51 to 61 in 1992 and ages 75 to 85 in 2016. We examined the debt of the full sample each survey year, rather than limiting the sample to those who lived to 2016. Sample attrition may influence these debt trends since the sample size declines as the cohort ages. However, in sensitivity analyses, we limited the sample to those who lived to 2016, and their total debt estimates were not statistically significantly different from the full sample. We previously reported that older Americans with lower wealth or lower income had lower average longevity than those with higher wealth or income, which may affect debt-holding amounts among those who live to older ages. GAO-19-587.

declined from 1992 to 2016 even though a substantial proportion of households still had debt. As these households aged, the percentage of households with debt fell from about 66 to 38, while the median debt decreased from about $39,500 to $25,000 (see appendix II, fig. 30). Similarly, the median leverage ratio (total debt divided by total assets) declined from about 19 percent to 13 percent (see fig. 12). In contrast, the percentage of households with a high leverage ratio was statistically unchanged from about 19 to 20 over this period.[39]

Figure 12: Estimated Percent of Households with Any Debt for Those Born in 1931-1941 (Left) and Median Leverage Ratio for Those Households as They Aged from 1992-2016 (Right)



Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

[39] For the HRS data analyses, we used the threshold of greater than 50 percent as a "high-leverage ratio" following prior literature–as discussed previously.

Data table for Figure 12: Estimated Percent of Households with Any Debt for Those Born in 1931-1941 (Left) and Median Leverage Ratio for Those Households as They Aged from 1992-2016 (Right)

Left line chart

	Percent of households	Confidence Intervals-low	Confidence Intervals-high
Ages 51-61 (1992)	66	64	67
Ages 53-63 (1994)	63	61	64
Ages 55-65 (1996)	58	56	59
Ages 57-67 (1998)	57	55	59
Ages 59-69 (2000)	56	54	57
Ages 61-71 (2002)	51	50	53
Ages 63-73 (2004)	51	49	53
Ages 65-75 (2006)	49	47	51
Ages 67-77 (2008)	48	46	50
Ages 69-79 (2010)	46	44	48
Ages 71-81 (2012)	43	41	45
Ages 73-83 (2014)	40	38	42
Ages 75-85 (2016)	38	36	39

Right bar chart:

	Median leverage ratio	Confidence Intervals-low	Confidence Intervals-high
Ages 51-61 (1992)	19	17	20
Ages 53-63 (1994)	17	16	18
Ages 55-65 (1996)	17	16	19
Ages 57-67 (1998)	18	17	19
Ages 59-69 (2000)	16	15	17
Ages 61-71 (2002)	18	17	19
Ages 63-73 (2004)	16	15	17

	Median leverage ratio	Confidence Intervals-low	Confidence Intervals-high
Ages 65-75 (2006)	15	14	16
Ages 67-77 (2008)	16	14	17
Ages 69-79 (2010)	14	12	16
Ages 71-81 (2012)	14	12	16
Ages 73-83 (2014)	14	12	16
Ages 75-85 (2016)	13	11	14

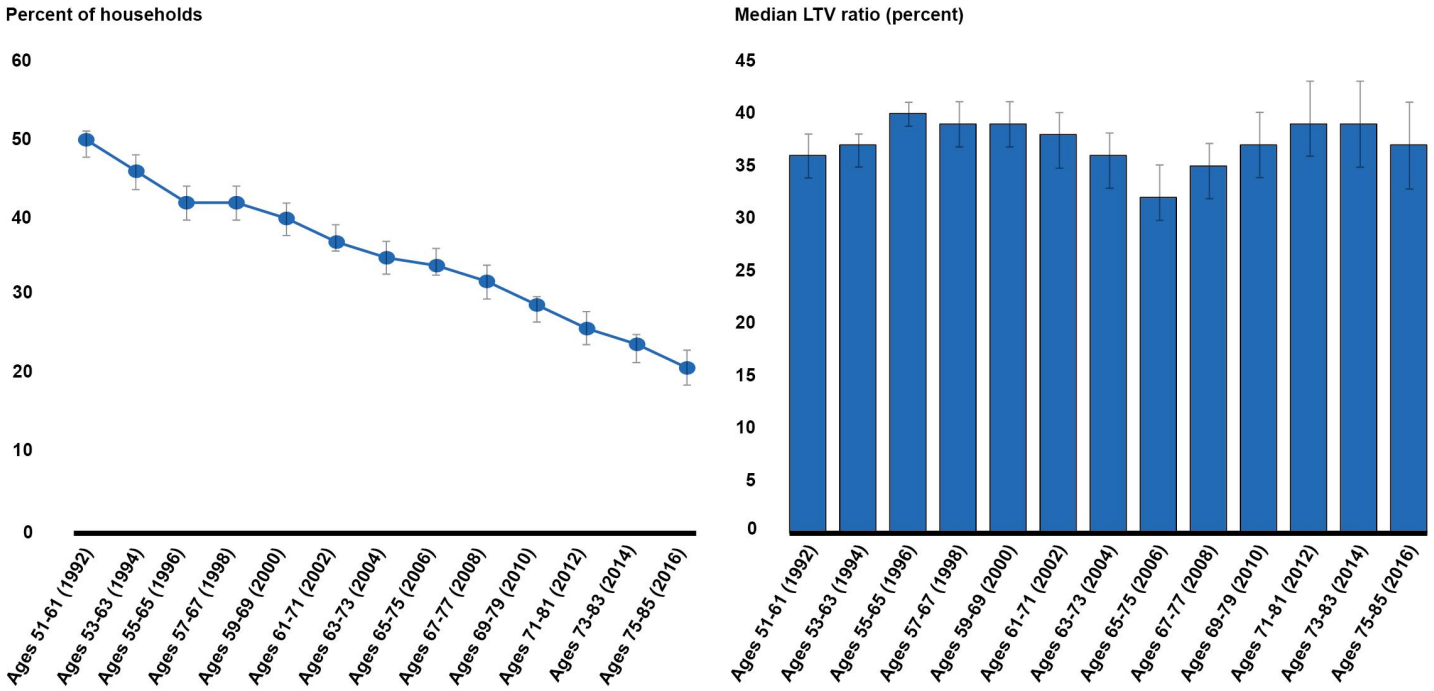
Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Notes: The lines overlapping the bars represent 95 percent confidence intervals.

As these households aged, the proportion with housing debt (e.g., mortgages) decreased as they gradually paid off their housing debt. However, as they aged, the median housing debt for those with debt any is higher at ages 75-85 than ages 51-61. Although, the primary home LTV ratio for those older households did not change due to a proportional rise in home values. Consistent with the life cycle theory that predicts people pay down debt by older ages, the majority of households no longer have housing debt by common retirement ages. Specifically, from 1992 to 2016, the percentage of households with any housing debt declined from about 50 to 21, while the median housing debt increased from about $55,500 to $80,000 (see appendix II, fig. 31). However, the median primary home LTV ratio remained statistically unchanged from about 36 percent to 37 percent due to a proportional rise in home values (see fig. 13). Furthermore, the percentage of households with a high LTV ratio increased from about 11 in 1992 to 16 in 2010 (the survey year capturing the Great Recession), but declined to 9 in 2016.[40]

[40] The proportion with an LTV ratio over 80 percent (a “high LTV ratio”) in 2016 was statistically unchanged from 1992. An 80 percent LTV ratio is a threshold commonly used by lenders for requiring private mortgage insurance.

Figure 13: Estimated Percent of Households with Any Housing Debt for those Born in 1931-1941 (Left) and Median Primary Home Loan-to-Value (LTV) Ratio for Those Households as They Aged from 1992-2016 (Right)



Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Data table for Figure 13: Estimated Percent of Households with Any Housing Debt for those Born in 1931-1941 (Left) and Median Primary Home Loan-to-Value (LTV) Ratio for Those Households as They Aged from 1992-2016 (Right)

Left line chart

	Percent of households	Confidence intervals-low	Confidence intervals-high
Ages 51-61 (1992)	50	48	51
Ages 53-63 (1994)	46	44	48
Ages 55-65 (1996)	42	40	44
Ages 57-67 (1998)	42	40	44
Ages 59-69 (2000)	40	38	42
Ages 61-71 (2002)	37	36	39
Ages 63-73 (2004)	35	33	37
Ages 65-75 (2006)	34	33	36

	Percent of households	Confidence intervals-low	Confidence intervals-high
Ages 67-77 (2008)	32	30	34
Ages 69-79 (2010)	29	27	30
Ages 71-81 (2012)	26	24	28
Ages 73-83 (2014)	24	22	25
Ages 75-85 (2016)	21	19	23

Right bar chart

	Median leverage ratio (percent)	Confidence intervals-low	Confidence intervals-high
Ages 51-61 (1992)	36	34	38
Ages 53-63 (1994)	37	35	38
Ages 55-65 (1996)	40	39	41
Ages 57-67 (1998)	39	37	41
Ages 59-69 (2000)	39	37	41
Ages 61-71 (2002)	38	35	40
Ages 63-73 (2004)	36	33	38
Ages 65-75 (2006)	32	30	35
Ages 67-77 (2008)	35	32	37
Ages 69-79 (2010)	37	34	40
Ages 71-81 (2012)	39	36	43
Ages 73-83 (2014)	39	35	43
Ages 75-85 (2016)	37	33	41

Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Notes: The lines overlapping the bars represent 95 percent confidence intervals.

As with overall debt, both the share of households with any non-housing debt and the median non-housing debt declined as they aged.[41] Non-

[41] Non-housing debt (i.e., HRS's "other debt") is the question if a household has "any debts that we haven't asked about, such as credit card balances, medical debts, life insurance policy loans, loans from relatives, and so forth?"

housing debt includes unsecured and variable interest rate debt, such as credit card debt. Specifically, from 1992 to 2016, the percentage of households with any non-housing debt fell from about 38 to 24, while the median non-housing debt declined from about $4,700 to $3,500.

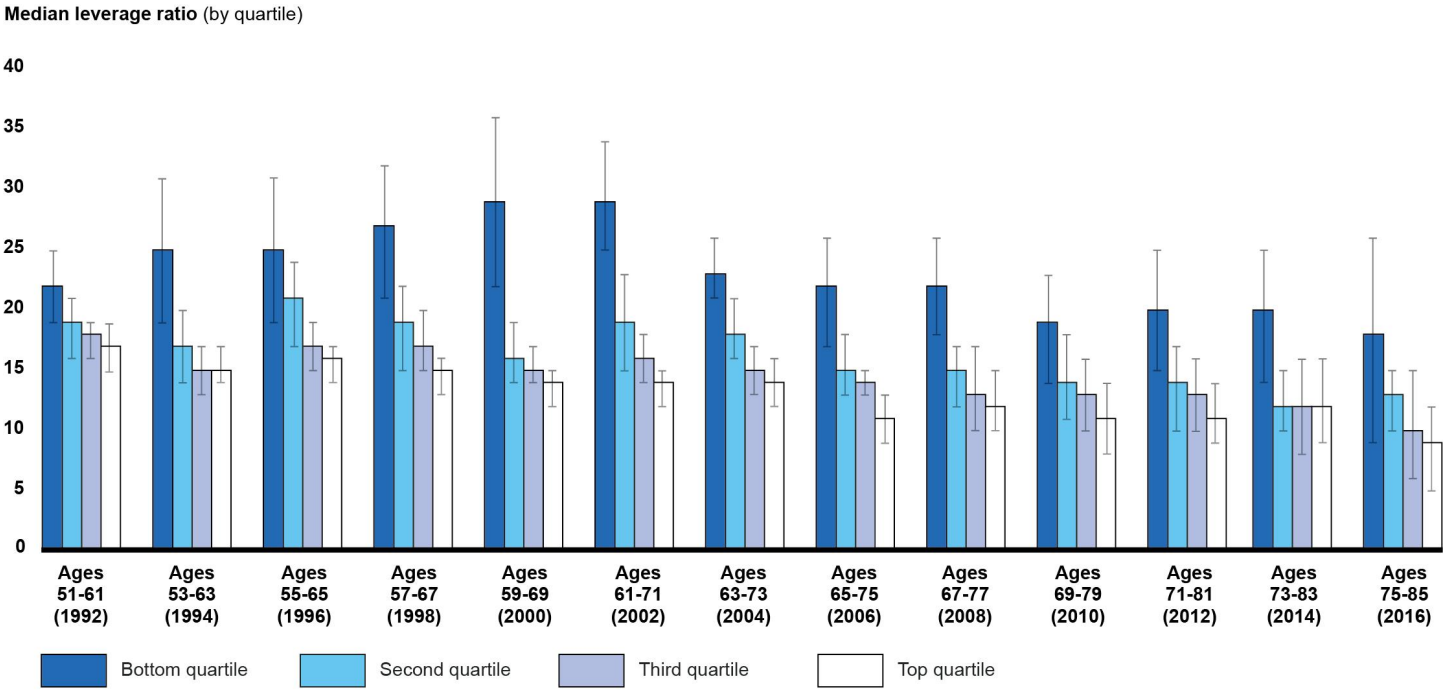
Low-Income Households in Our Cohort Had Greater Debt Stress Than High-Income Households and This Gap Widened as They Aged

Low-income households—those in the bottom income quartile—had greater leverage ratios than high-income households—those in the top income quartile—and this disparity expanded as they aged.[42] Specifically, leverage ratios for high-income households decreased as they aged while leverage ratios for low-income households did not.[43] For instance, in 1992, low-income households had a median leverage ratio of 22 percent and when measured again in 2016, it remained statistically unchanged at about 18 percent. In comparison, high-income households' median leverage ratio declined from about 17 to 9 percent over this same period. Moreover, low-income households' leverage ratio rose from about 1.3 times to 2.1 times the median leverage ratio of the high-income households (see fig. 14). Similarly, about 28 percent of low-income households in 1992 had a high leverage ratio and this was statistically unchanged at about 30 percent in 2016, while high-income households' share with a high leverage ratio declined from about 13 to 4 percent over this same period.

[42] We determine a household's income quartile separately for each survey year to account for any change in income over time so some households may change quartiles as they age. In 2016, low-income households reported a median income of about $16,500 versus about $173,000 for high-income households.

[43] For 10 of the 13 survey years, the median leverage ratio is statistically significantly greater for the low-income than for the high-income households. While the differences in leverage ratios in the other three survey years were not statistically significant, the estimates of leverage ratios for low-income households remained above high-income households.

Figure 14: Estimated Median Leverage Ratio for Households Born in 1931-1941 with Debt, by Income Level as They Aged from 1992-2016



Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Data table for Figure 14: Estimated Median Leverage Ratio for Households Born in 1931-1941 with Debt, by Income Level as They Aged from 1992-2016

	Median leverage ratio bottom quartile (percent)	Confidence intervals-low	Confidence intervals-high
Ages 51-61 (1992)	22	19	25
Ages 53-63 (1994)	25	19	31
Ages 55-65 (1996)	25	19	31
Ages 57-67 (1998)	27	21	32
Ages 59-69 (2000)	29	22	36
Ages 61-71 (2002)	29	25	34
Ages 63-73 (2004)	23	21	26
Ages 65-75 (2006)	22	17	26
Ages 67-77 (2008)	22	18	26

	Median leverage ratio bottom quartile (percent)	Confidence intervals-low	Confidence intervals-high
Ages 69-79 (2010)	19	14	23
Ages 71-81 (2012)	20	15	25
Ages 73-83 (2014)	20	14	25
Ages 75-85 (2016)	18	15	25

	Median leverage ratio second quartile (percent)	Confidence intervals-low	Confidence intervals-high
Ages 51-61 (1992)	19	16	21
Ages 53-63 (1994)	17	14	20
Ages 55-65 (1996)	21	17	24
Ages 57-67 (1998)	19	15	22
Ages 59-69 (2000)	16	14	19
Ages 61-71 (2002)	19	15	23
Ages 63-73 (2004)	18	16	21
Ages 65-75 (2006)	15	13	18
Ages 67-77 (2008)	15	12	17
Ages 69-79 (2010)	14	11	18
Ages 71-81 (2012)	14	10	17
Ages 73-83 (2014)	12	10	15
Ages 75-85 (2016)	13	10	17

	Median leverage ratio third quartile (percent)	Confidence intervals-low	Confidence intervals-high
Ages 51-61 (1992)	18	16	19
Ages 53-63 (1994)	15	13	17
Ages 55-65 (1996)	17	15	19
Ages 57-67 (1998)	17	15	20

	Median leverage ratio third quartile (percent)	Confidence intervals-low	Confidence intervals-high
Ages 59-69 (2000)	15	14	17
Ages 61-71 (2002)	16	14	18
Ages 63-73 (2004)	15	13	17
Ages 65-75 (2006)	14	13	15
Ages 67-77 (2008)	13	10	17
Ages 69-79 (2010)	13	10	16
Ages 71-81 (2012)	13	10	16
Ages 73-83 (2014)	12	8	16
Ages 75-85 (2016)	10	10	16

	Median leverage ratio top quartile (percent)	Confidence intervals-low	Confidence intervals-high
Ages 51-61 (1992)	17	15	19
Ages 53-63 (1994)	15	14	17
Ages 55-65 (1996)	16	14	17
Ages 57-67 (1998)	15	13	16
Ages 59-69 (2000)	14	12	15
Ages 61-71 (2002)	14	12	15
Ages 63-73 (2004)	14	12	16
Ages 65-75 (2006)	11	9	13
Ages 67-77 (2008)	12	10	15
Ages 69-79 (2010)	11	8	14
Ages 71-81 (2012)	11	9	14
Ages 73-83 (2014)	12	9	16
Ages 75-85 (2016)	9	9	14

Notes: We use income quartiles to create four equally-sized groups of households. We determine a household's income quartile separately for each survey year so some households may change quartiles as they age. The lines overlapping the bars represent 95 percent confidence intervals.

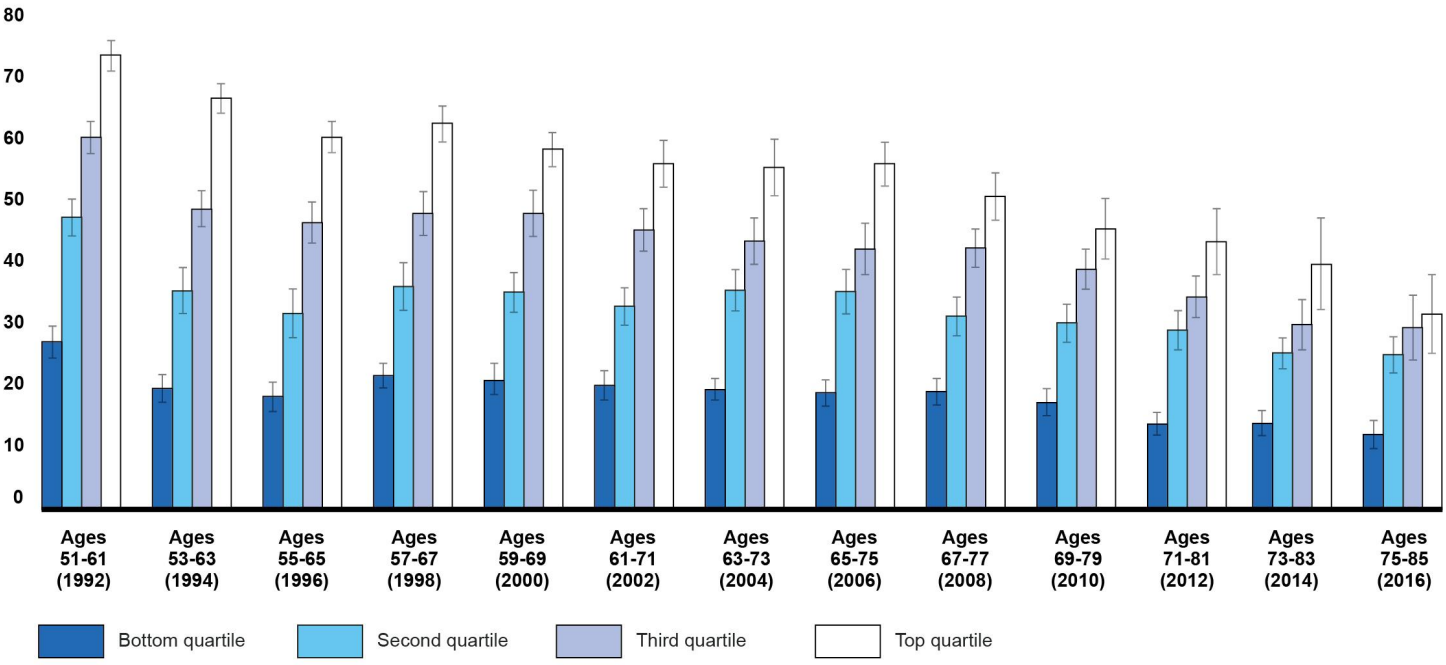
A greater percentage of high-income households tended to carry debt, and the amount of that debt tended to be larger than that of low-income households across ages. For both high- and low-income households, the share with any debt decreased while the median debt was statistically unchanged as they aged. Specifically, about 82 percent of high-income households had debt in 1992, which declined to 47 percent in 2016 and about 50 percent of low-income households had debt in 1992, which declined to 31 percent in 2016. Furthermore, in 2016, low-income households had a median debt of $8,000 while high-income households had a median of $128,000 (16 times more).[44]

The proportion of households with any housing debt was greater for high-income households and decreased for both high- and low-income households as they aged. These trends are consistent with the finding from our prior report that from 1992 to 2014, a greater percentage of high-income households had home equity compared to low-income households and that the homeownership rate for the poorest older households was significantly lower after the recession from 2007 to 2009 than before it.[45] For high-income households, 74 percent had housing debt in 1992 and this declined to about 32 percent in 2016. For low-income households, about 27 percent had housing debt in 1992 and this declined to 12 percent in 2016 (see fig. 15). Moreover, the gap in the share with any housing debt between high- and low-income households declined from about 47 to 20 percentage points as they aged (or from about 2.7 times to 2.6 times the share of the low-income).

[44] The median debt in 2016 was statistically similar to 1992 for both high- and low-income households.

[45] For more details on income and wealth disparities among older Americans, see GAO-19-587, page 32 and page 50.

Figure 15: Estimated Percent of Households Born in 1931-1941 with Any Housing Debt, by Income Level as They Aged from 1992-2016



Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Data table for Figure 15: Estimated Percent of Households Born in 1931-1941 with Any Housing Debt, by Income Level as They Aged from 1992-2016

	Percent of households bottom quartile	Confidence Intervals-low	Confidence Intervals-high
Ages 51-61 (1992)	27.3	24.7	29.8
Ages 53-63 (1994)	19.7	17.4	22.0
Ages 55-65 (1996)	18.4	16.0	20.7
Ages 57-67 (1998)	21.8	19.8	23.8
Ages 59-69 (2000)	21.0	18.7	23.8

	Percent of households bottom quartile	Confidence Intervals-low	Confidence Intervals-high
Ages 61-71 (2002)	20.2	17.8	22.6
Ages 63-73 (2004)	19.5	17.8	21.3
Ages 65-75 (2006)	19.0	16.8	21.1
Ages 67-77 (2008)	19.2	16.9	21.4
Ages 69-79 (2010)	17.4	15.2	19.7
Ages 71-81 (2012)	13.9	12.0	15.8
Ages 73-83 (2014)	14.0	12.0	16.1
Ages 75-85 (2016)	12.2	9.9	14.5

	Percent of households second quartile	Confidence Intervals-low	Confidence Intervals-high
Ages 51-61 (1992)	47.6	44.7	50.5
Ages 53-63 (1994)	35.6	31.9	39.4
Ages 55-65 (1996)	31.9	28.0	35.9
Ages 57-67 (1998)	36.3	32.4	40.2
Ages 59-69 (2000)	35.4	32.1	38.6
Ages 61-71 (2002)	33.1	30.0	36.1
Ages 63-73 (2004)	35.7	32.3	39.1

	Percent of households second quartile	Confidence Intervals-low	Confidence Intervals-high
Ages 65-75 (2006)	35.5	31.8	39.1
Ages 67-77 (2008)	31.5	28.2	34.7
Ages 69-79 (2010)	30.4	27.2	33.5
Ages 71-81 (2012)	29.2	26.0	32.4
Ages 73-83 (2014)	25.5	22.9	28.0
Ages 75-85 (2016)	25.2	22.2	28.2

	Percent of households third quartile	Confidence Intervals-low	Confidence Intervals-high
Ages 51-61 (1992)	60.6	57.9	63.3
Ages 53-63 (1994)	48.9	46.0	51.9
Ages 55-65 (1996)	46.7	43.3	50.1
Ages 57-67 (1998)	48.2	44.6	51.8
Ages 59-69 (2000)	48.2	44.5	52.0
Ages 61-71 (2002)	45.5	42.1	49.0
Ages 63-73 (2004)	43.7	39.9	47.5
Ages 65-75 (2006)	42.4	38.2	46.6
Ages 67-77 (2008)	42.6	39.4	45.7

	Percent of households third quartile	Confidence Intervals-low	Confidence Intervals-high
Ages 69-79 (2010)	39.1	35.8	42.4
Ages 71-81 (2012)	34.6	31.2	38.0
Ages 73-83 (2014)	30.1	26.0	34.2
Ages 75-85 (2016)	29.6	24.3	34.9

	Percent of households top quartile	Confidence Intervals-low	Confidence Intervals-high
Ages 51-61 (1992)	74.0	71.4	76.5
Ages 53-63 (1994)	67.0	64.5	69.4
Ages 55-65 (1996)	60.6	58.1	63.2
Ages 57-67 (1998)	62.9	59.9	65.8
Ages 59-69 (2000)	58.7	55.8	61.5
Ages 61-71 (2002)	56.3	52.5	60.1
Ages 63-73 (2004)	55.7	51.1	60.3
Ages 65-75 (2006)	56.3	52.7	59.8
Ages 67-77 (2008)	51.0	47.1	54.9
Ages 69-79 (2010)	45.7	40.7	50.7
Ages 71-81 (2012)	43.6	38.2	49.0

	Percent of households top quartile	Confidence Intervals-low	Confidence Intervals-high
Ages 73-83 (2014)	39.9	32.4	47.5
Ages 75-85 (2016)	31.8	25.4	38.2

Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Notes: We use income quartiles to create four equally-sized groups of households. We determine a household's income quartile separately for each survey year so some households may change quartiles as they age. The lines overlapping the bars represent 95 percent confidence intervals.

While housing debt increased for both high- and low-income households as they aged, housing debt was greater for high-income households every year. Specifically, high-income households had a median housing debt of about $95,100 in 1992, which increased to $196,000 in 2016. In comparison, low-income households had a median housing debt of about $33,600, which increased to $50,000 as they aged. Additionally, the gap between these households' median housing debt increased from about $61,500 to $146,000 among the declining proportion of households with any housing debt.

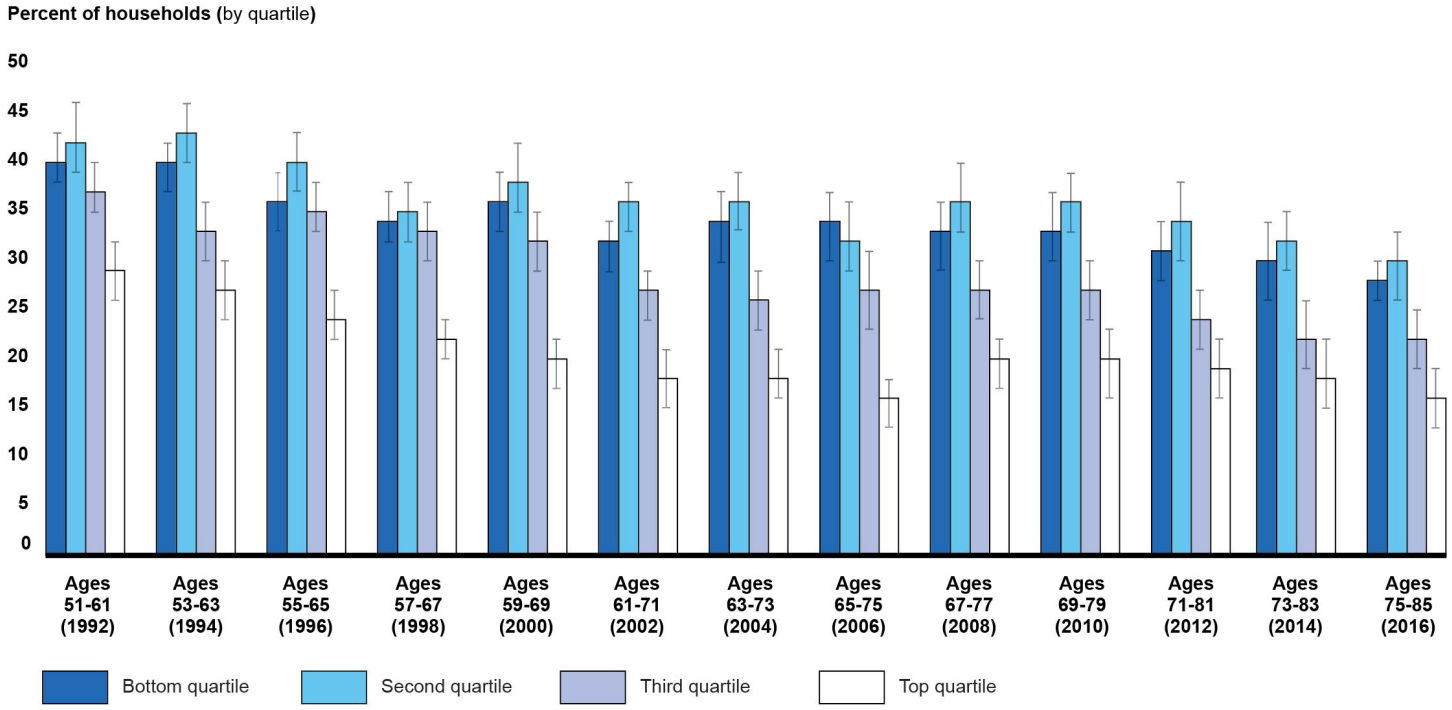
A Greater Share of Low-Wealth Households in Our Cohort Had Non-Housing Debt and This Disparity Remained as They Aged

The proportion of households with any non-housing debt was greater for low-wealth households than high-wealth households and this gap persisted as they aged. By "low-wealth" and "high-wealth" households, we mean those in the bottom and top asset quartiles, respectively.[46] In 1992, about 40 percent of low-wealth households had non-housing debt versus 29 percent of high-wealth households. In 2016, about 28 percent of low-wealth households had any non-housing debt versus 16 percent of high-wealth households. The difference between low- and high-wealth

[46] For this analysis, we defined wealth as total assets. We determine a household's wealth (i.e., asset) quartile separately from its income quartile, and for each survey year to account for any change over time so some households may change quartiles as they age. The value of total wealth includes the value of primary and secondary residences, as well as other assets. In 2016, low-wealth households had $6,500 in median total assets versus $1,288,000 for high-wealth households.

households' proportion with non-housing debt was essentially unchanged from about 11 to 12 percentage points as they aged (see fig. 16).

Figure 16: Estimated Percent of Older Households with Any Non-Housing Debt for Those Born in 1931-1941, by Wealth Level as They Aged from 1992-2016



Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Data table for Figure 16: Estimated Percent of Older Households with Any Non-Housing Debt for Those Born in 1931-1941, by Wealth Level as They Aged from 1992-2016

	Percent of households bottom quartile	Bottom quartile confidence intervals		Percent of households second quartile	Second quartile confidence intervals		Percent of households third quartile	Third quartile confidence intervals		Percent of households top quartile	Top quartile confidence intervals	
Ages 51-61 (1992)	40	38	43	42	39	46	37	35	40	29	26	32
Ages 53-63 (1994)	40	37	42	43	40	46	33	30	36	27	24	30
Ages 55-65 (1996)	36	33	39	40	37	43	35	33	38	24	22	27
Ages 57-67 (1998)	34	32	37	35	32	38	33	30	36	22	20	24
Ages 59-69 (2000)	36	33	39	38	35	42	32	29	35	20	17	22

	Percent of households bottom quartile	Bottom quartile confidence intervals		Percent of households second quartile	Second quartile confidence intervals		Percent of households third quartile	Third quartile confidence intervals		Percent of households top quartile	Top quartile confidence intervals	
Ages 61-71 (2002)	32	29	34	36	33	38	27	24	29	18	15	21
Ages 63-73 (2004)	34	30	37	36	33	39	26	23	29	18	16	21
Ages 65-75 (2006)	34	30	37	32	29	36	27	23	31	16	13	18
Ages 67-77 (2008)	33	29	36	36	33	40	27	24	30	20	17	22
Ages 69-79 (2010)	33	30	37	36	33	39	27	24	30	20	16	23
Ages 71-81 (2012)	31	28	34	34	30	38	24	21	27	19	16	22
Ages 73-83 (2014)	30	26	34	32	29	35	22	19	26	18	15	22
Ages 75-85 (2016)	28	26	30	30	26	33	22	19	25	16	13	19

Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Notes: We use asset quartiles to create four equally-sized groups of households. We determine a household's asset quartile separately for each survey year so some households may change quartiles as they age. The lines overlapping the bars represent 95 percent confidence intervals.

For most survey years, median non-housing debt was greater for high-wealth households than low-wealth households and this difference persisted as they aged.[47] For instance, in 1992, low-wealth households had a median non-housing debt of about $3,400 while high-wealth households had a median of about $6,700. In 2014, the median non-housing debt for low- and high-wealth households remained statistically unchanged from 1992 at about $3,000 and $6,100 respectively (i.e., the high-wealth still had two times the median non-housing debt as the low-wealth).[48]

Overall, these analyses show that disparities between low- and high-income and wealth households exist for these households' debt as they aged. Generally consistent with the lifecycle theory that predicts people

[47] For 8 of the 13 survey years, the median non-housing debt is statistically significantly greater for high-wealth than for low-wealth households, while they were statistically similar other survey years.

[48] The high- and low-wealth households had statistically similar median non-housing debt in 2016.

pay down debt by older ages, the share of households with debt and the median leverage ratio decreased as they aged. However, disparities remained in debt stress for low-income households and in the prevalence of non-housing debt for low-wealth households. The share of all households with any type of debt (total, housing, and non-housing) and the stress of this debt declined as the cohort aged from ages 51 to 61 (in 1992) to ages 75 to 85 (in 2016), though a substantial proportion held debt at ages 75 to 85. However, low-income households experienced greater leverage ratios than high-income households and this disparity increased as they aged – as lower income households are less able to pay off debts during the lifecycle theory's saving phase if their income does not sufficiently exceed spending. Moreover, a larger percent of low-wealth households than high-wealth households held non-housing debt (including credit card balances, medical debts, life insurance policy loans, etc.), which may be unsecured or have a variable interest rate, and this gap persisted as they aged. These low-income and low-wealth households may be less likely to have a secure retirement due to their debt.

Implications of Debt Trends Vary Depending on the Type of Debt and Individual and Economic Circumstances

Implications of the Increase in Debt for Retirement Security Varies Widely by the Debt Type

Experts we spoke to identified a number of debt trends—many of which were consistent with trends we also identified earlier in our report—that had a wide variety of implications for retirement security.[49] Experts cited trends in mortgage, credit card and student loan debt that suggest a range of both positive and negative implications for older Americans' ultimate retirement security.

[49] We interviewed 10 experts using a semi-structured set of questions on a range of topics related to debt. The experts had a variety of topical expertise on debt. These individuals (or institutions or organizations) represented a diversity of expertise across a range of affiliations. We interviewed four academics, representatives of two advocacy groups and two consulting or professional associations, and two government officials. See additional information on expert interviews in appendix I.

Measures of Retirement Security

Researchers measure retirement security using various methods. For example, some analyze retirement security through poverty rates (the percent of a group that has income below an amount intended to represent a level of economic privation) and related metrics. Further, researchers have assessed a retiree's ability to cover all the necessary expenses for financial security, incorporating geographic differences in the cost of living. Many researchers have also measured retirement security using target replacement rates—the percentage of pre-retirement income needed to maintain a certain standard of living in retirement. We previously reported that the replacement rate recommended in studies varies substantially, and that the percentage of working income needed to replace a prior standard of living in retirement depends on the circumstances of each individual household. In addition, retirees may have major debts to pay off. Debt accumulation (or reduction) could affect the replacement rate a household will need to maintain its standard of living and thus overall retirement security.

See GAO, *Retirement Security: Better Information on Income Replacement Rates Needed to Help Workers Plan for Retirement*, GAO-16-242 (Washington, D.C.: Mar. 1, 2016).

Source: GAO. | GAO-21-170

Mortgage Debt

Most experts we interviewed noted that many older Americans carry housing debt into retirement, but offered a range of views regarding its impact on retirement security. Most experts told us that mortgages are beneficial because they allow older households to own a home, which experts consider a wealth-building asset.[50] Some of these experts also noted that home equity can be an important source of retirement income for households that pay off their mortgages.[51] In addition, one expert also noted that carrying a mortgage in retirement may be a wise financial decision since other assets may have higher yields than mortgage interest rates, which have recently been at historic lows. Further, certain research found that older Americans are less likely to default on their

[50] Regarding home ownership and retirement security, we found that owning a home while having significant financial assets (e.g., bank accounts, retirement accounts, mutual funds, etc.) was associated with high retirement confidence among 2016 SCF households with women 70 or older. Specifically, owning a home was associated with two to three times higher odds of having high retirement confidence when the home did not constrain financial assets (also known as liquidity). See GAO, *Retirement Security: Older Women Report Facing a Financially Uncertain Future*, GAO-20-435 (Washington, D.C.: July 14, 2020).

[51] Specifically, the homeowner implicitly generates income by living in their home without paying rent. This is sometimes known as "imputed rent." Imputed rent is the return a homeowner receives by living in their home instead of paying rent to a landlord. Another way that a homeowner can generate retirement income is through a reverse mortgage. Reverse mortgages allow older American homeowners to convert part of their home equity into payments from a lender while still living in their homes. Reverse mortgages present both benefits and risks for older American homeowners as we previously reported in GAO, *Reverse Mortgages: FHA Needs to Improve Monitoring and Oversight of Loan Outcomes and Servicing*, GAO-19-702 (Washington, D.C.: Sept. 25, 2019).

mortgages than younger borrowers. For example, older Americans taking on a larger share of mortgage transactions may reflect lenders' preference for their creditworthiness, according to a paper by researchers affiliated with the Federal Reserve Bank of New York.[52]

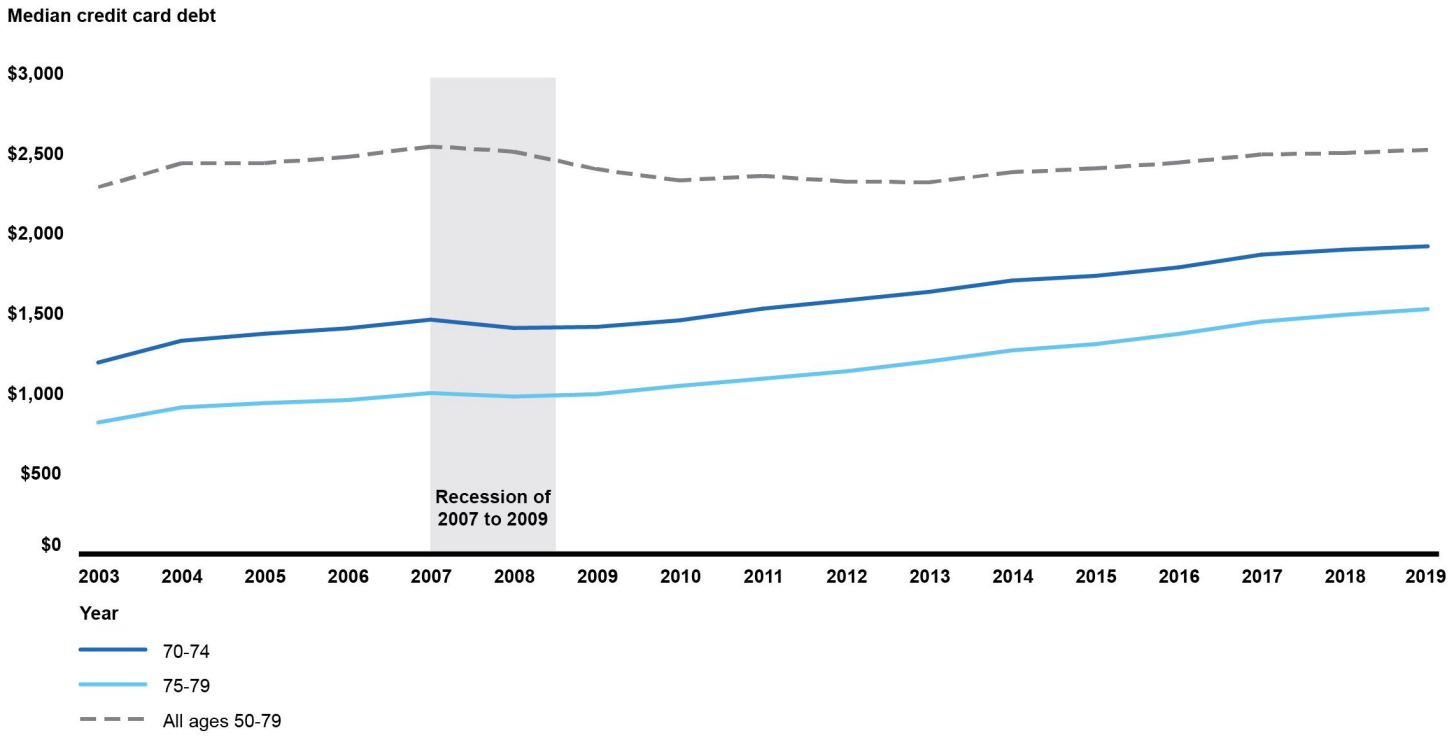
Experts also noted a potential downside of carrying mortgage into retirement. Some experts we heard from expressed concern about households increasing their housing debt amounts in retirement through refinancing to use their home equity for non-housing expenses, which could be costly to pay down.

Credit Card Debt

Some experts we spoke with identified a rise in prevalence and overall credit card debt for older Americans over time. Earlier in this report we highlighted a similar trend. Many experts noted such a rise in credit card debt could be especially problematic for lower income older Americans because that debt may reflect taking on emergency expenses. Additional data analysis of the CCP shows that the median amount of credit card debt has risen most precipitously for those in the higher age groups. For example, for those aged 75 to 79, the median balance of $839 in 2003 rose to $1,548 in 2019 (see fig. 17). Some experts noted that this trend is especially concerning as it could mean individuals are carrying balances well into retirement and likely have little income coming in from work.

[52] Meta Brown, Donghoon Lee, Joelle Scally, and Wilbert van der Klaauw, "The Graying of American Debt" (2019). *Wharton Pension Research Council Working Papers*. 531.

Figure 17: Median Credit Card Debt for Those with Credit Card Debt, All Individuals Age 50-79 and Those in Their 70s, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Data table for Figure 17: Median Credit Card Debt for Those with Credit Card Debt, All Individuals Age 50-79 and Those in Their 70s, December 2003 to December 2019

Year	Median credit card debt 70 to 74	Median credit card debt 75 to 79	Median credit card debt all ages 50 to 79
2003	1,214	839	2,311
2004	1,350	933	2,460
2005	1,394	960	2,462
2006	1,428	979	2,500
2007 (recession year)	1,482	1,023	2,566
2008 (recession year)	1,430	1,001	2,534
2009 (recession year)	1,437	1,016	2,423
2010	1,478	1,068	2,353
2011	1,551	1,113	2,381
2012	1,603	1,159	2,346
2013	1,656	1,221	2,342
2014	1,727	1,290	2,405

Year	Median credit card debt 70 to 74	Median credit card debt 75 to 79	Median credit card debt all ages 50 to 79
2015	1,756	1,329	2,428
2016	1,809	1,393	2,464
2017	1,889	1,470	2,515
2018	1,920	1,513	2,525
2019	1,941	1,548	2,545

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Note: All dollar figures are in December 2019 dollars. The shaded area represents the period of the Great Recession, December 2007-June 2009. Because the Consumer Credit Panel data the Federal Reserve Bank of New York provided are as of December of each year, the shaded area ranges from 2007 to halfway between 2008 and 2009.

Some experts we spoke with acknowledged that credit card debt has negative implications for older Americans' retirement security because credit cards often have high variable interest rates and are not secured by any underlying assets that can be sold to pay off the debt if they experience a financial shock. Many experts said this trend of increasing prevalence of credit card debt is concerning especially if such debt is taken on to buy things a household cannot afford (e.g., consumer goods that lose value) because these debt payments can leave older households financially vulnerable by limiting their ability to save and weather financial shocks.[53] Further, as credit cards have variable interest rates, the risk of increasing interest rates could make this type of debt relatively expensive to hold over time.

Some experts noted that credit card debt is becoming an issue for the lower income group who may have more debt stress and for those aged 75 and older, as once in retirement, they use credit card debt when they need something they cannot afford and there is little expectation of increasing income. A couple of experts noted the increase in debt among the very oldest households might reflect expenses from health shocks that they do not have income to offset. Last, an expert noted that credit card debt is the leading cause of filing for bankruptcy, which another expert said financial counselors describe as a last resort.

[53] In addition, carrying credit card debt may give the older individual a diminished sense of reported financial well-being. For example, the Consumer Financial Protection Bureau's Office of Financial Protection for Older Americans found that older adults (defined as those age 62-plus) with credit card debt had significantly lower average reported financial well-being than those who do not have such debts. See Consumer Financial Protection Bureau, *Financial Well-being of Older Americans*, (Washington, D.C.: December 2018).

Payday Loan Debt

An expert we interviewed noted that while few older Americans have payday loans, such loans may reflect a debt problem among those with lower incomes. In addition, the experts said that the effect of such loans can be severe as certain older Americans may have limited flexibility to increase their incomes by working. A couple of experts noted that payday loans could be problematic due to their high interest rates. Our analysis of SCF data found the proportion of older households with payday loans was higher in 2016 (3 percent) than in 2007 (1 percent). While few older Americans have payday loans, there is a large disparity in loan take-up for those in financial distress. For example, in 2016, older Americans who were more than 60 days behind on payments were about five times more likely to have taken out a payday loan. Moreover, some experts noted opportunities to express the fees for payday loans in terms of annual interest rates and to show differences in interest rates for payday lenders compared to traditional lenders. According to the Consumer Financial Protection Bureau in 2017, a payday loan fee of $15 per $100 dollars borrowed was common, which equated to an annual percentage rate (APR) of almost 400 percent for a loan that might have been for only 2 weeks. (Note: The APR does not include the effect of compounding interest. Using a compounded, annualized rate for this example, known as the annualized effective rate, yields an interest rate of just over 3,700 percent.) In addition, this base fee does not include any extension or late fees that would further increase the equivalent APR.

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances (SCF) data and Consumer Financial Protection Bureau literature. | GAO-21-170

Student Loan Debt

Our analysis of SCF data found increases in the prevalence and amount of student loan debt held by older Americans from 1989 to 2016, and experts we interviewed said these trends may affect retirement security in a variety of ways. Some experts noted student loan indebtedness increases might reflect individuals improving their earning potential (e.g., a college degree in a field where there is great demand)—though these increases could be an issue if the education financed by the loan does not increase income enough to pay off the debt. For example, a student who takes a loan later in life will have less time to pay it off and capitalize on their investment. Moreover, an expert noted those with student loan debt who do not graduate are worse off than those who do—as non-graduates are left with the burden of debt and without the benefit of a college degree. Another expert noted low interest rates have incentivized longer repayment periods for student loans. While a 10-year repayment period was previously common, people are now paying off their federal student loans for up to 20 years.[54] In addition, some experts noted the overall cost of education is increasing; education inflation is outpacing general inflation, which may explain the increasing amount of student

[54] Federal student loan borrowers are automatically enrolled in the Standard repayment plan if they do not choose another option, and generally make fixed monthly payments over a period of 10 years. However, a variety of Income-Driven Repayment (IDR) plans are available to eligible borrowers. IDR plans can ease repayment burden by setting monthly loan payments based on a borrower's income and family size and extending the repayment period up to 20 or 25 years, depending on the plan. See GAO, *Federal Student Loans: Education Needs to Verify Borrowers' Information for Income-Driven Repayment Plans*, GAO-19-347 (Washington, D.C.: June 25, 2019).

loan debt that might prevent households from accumulating retirement savings.

Many experts noted that student loans, although less common than some other debts, are the fastest growing debt type among older Americans, and experts are concerned that this trend could negatively affect retirement security since older Americans are more likely to default.[55] While increasingly common, student loans are still less prevalent among older Americans (10 percent in 2016) than primary home and credit card debt. However, the share of student loan debt delinquent (13 percent in 2019) is higher than for all other debt types—higher than it was during and just after the 2009 Great Recession—and reflects the stress of student loan debt on retirement security for certain older households. As noted earlier, student loan delinquency rates in recent years have been consistently higher for those in their late 70s than for those in their 50s, 60s, and early 70s. Defaulting on federal student loans can have serious implications for the retirement security of older Americans because their Social Security benefits may be reduced.[56]

Additionally, some older Americans may take out student loans for their children rather than themselves, which may affect their retirement security. Our analysis of 2016 SCF data found those 65 and older were significantly less likely to have a student loan (2 percent) than those aged 50-64 (17 percent). In addition, households aged 65 and older with student loan debt were significantly more likely to have student loan debt for a child (68 percent) rather than for themselves or their spouses (32 percent, see fig. 18). Some experts noted an increase in Parent PLUS loans, a type of federal loan that allows parents to borrow for their children's education. One of these experts cited research showing that parent defaults have increased in recent years and repayment rates have slowed, indicating some parents are taking on debt for their children that

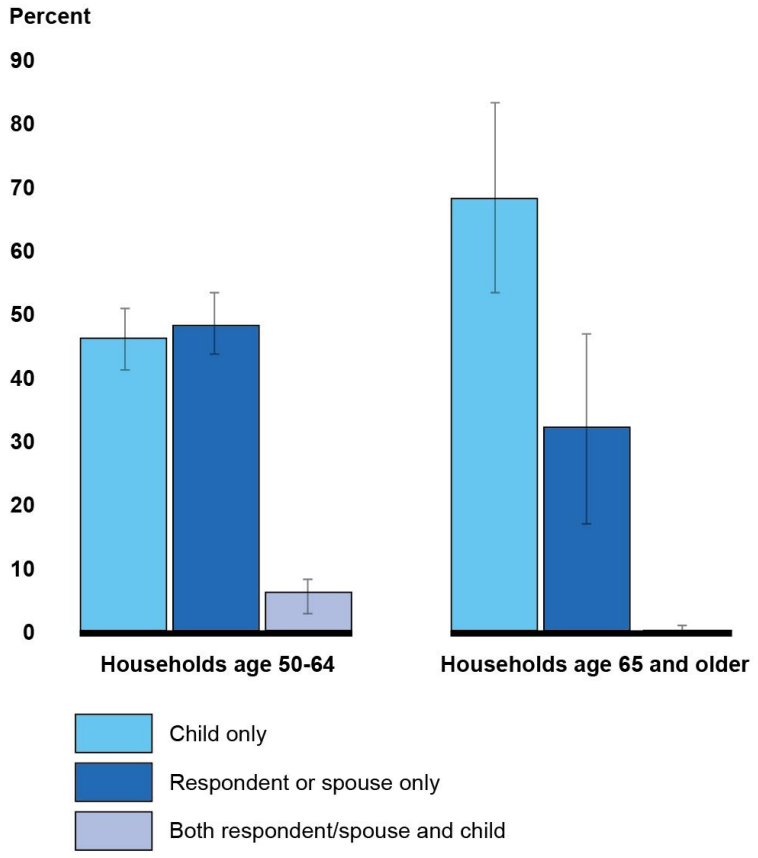
[55] According to the Bureau of Labor Statistics, the Consumer Price Index for higher education tuition and fees increased by 407 percent from 1989 to 2016.

[56] Specifically, we found that older borrowers who became subject to Social Security offsets predominately defaulted on loans for their own education. Among older borrowers subject to offset of their Social Security benefits, more than three-quarters had defaulted on loans for their own education rather than on loans for a child's education, known as Parent PLUS loans, according to our analysis of data from the Departments of Education and Treasury as well as the Social Security Administration. See GAO, *Social Security Offsets: Improvements to Program Design Could Better Assist Older Student Loan Borrowers with Obtaining Permitted Relief*, GAO-17-45 (Washington, D.C.: Dec. 19, 2016).

they cannot repay. A few experts said that incurring student loan debt to help finance an older American's own education could be a good investment if it increased their earnings by allowing them to work for more years, improve skills or change jobs. However, student loan held by an older American for their children's education will not increase the older American's income. Furthermore, some experts noted that debt used to be within a single person's lifecycle; they paid off debts and then started saving for retirement. However, experts described the trend of parents helping their children with student loans, which could affect whether those older households can save for their own retirement if they are now paying their children's loans instead.[57]

[57] An expert said that while the trend in older households with student loan debt likely results from parents cosigning for their children's student debt, it may also reflect SCF survey respondents answering about debt held by their children living in the same household. The SCF asks, "Do you (and your family living here) owe any money or have any student loans for educational expenses?" We found that even among older households (ages 50-64) with student loans that do not have children at home, 29 percent still considered these loans to be for their child/children only. This shows the debt trend is not due to children with student debt living in the same home, but rather to older Americans entering retirement with outstanding student loans for their own education as well as for their children's education.

Figure 18: Percent of Older Households with Student Loans, by Age of Household Head or Spouse and Whose Education the Student Loan Was For, 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Figure 18: Percent of Older Households with Student Loans, by Age of Household Head or Spouse and Whose Education the Student Loan Was For, 2016

	Child only (percent)	Confidence intervals		Respondent or spouse only (percent)	Confidence intervals		Both respondent/spouse and child (percent)	Confidence intervals	
Households age 50-64	46	41	50	48	44	53	6	3	8
Households age 65 and older	68	53	83	32	16	47	0	0	1

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: The lines overlapping the bars represent 95 percent confidence intervals.

Overall, the implications on retirement security of various debt trends will vary in their implications on retirement security. However, certain high-level implications emerged from our interviews. The rise in mortgage debt over time was viewed by the experts we interviewed as having positive implications for retirement security because a home is generally a wealth-building asset. Credit card debt, on the other hand, implied generally negative ramifications for retirement security. Some experts said credit card debt can reflect expenses that quickly become unmanageable, leaving lower income and older households, in particular, financially vulnerable. Experts' perspectives on the retirement security consequences of student loan debt were mixed. A few experts noted potentially positive outcomes when the debt is used to enhance the long-run earning power of the borrower. However, borrowers in their late 70s have seen higher default rates compared to younger older Americans. Defaults on student loans have direct, negative retirement security consequences as Social Security benefits can be reduced to offset delinquent student loan payments.

Older Americans' Demographic and Economic Circumstances Impact All Debt Implications for Retirement Security

Low-income Households

A couple of experts noted that older Americans with lower incomes are more likely to experience debt stress—as these households tend to spend a large portion of their income on debt repayment rather than on other retirement needs. Further, a couple of academic experts noted in their research that borrowers' ability to repay debt becomes progressively more sensitive to drops in income.[58] Our analysis of SCF data found that for every survey year from 1989 to 2016, the share of older households with payment-to-income ratios over 40 percent was significantly higher for low-income households than for high-income ones (see fig. 32 in

[58] For example, Annamaria Lusardi, O. S. Mitchell, and N. Oggero. "Debt and Financial Vulnerability on the Verge of Retirement" *NBER Working Paper Series*, (Cambridge, Ma: August 2017).

appendix II).[59] In contrast, a couple experts noted the highest income quartile generally does not exhibit stress when measured by debt-to-income and asset ratios, because these households have, over time, tended to have increasing incomes and assets by which to offset debts.[60] At the same time, lower income households have not seen increases to their incomes or assets in the same way. An expert noted that some older Americans with low incomes are going to have difficulty paying back their debt, which can carry over into retirement. While older Americans tend to have lower incomes and substantial assets overall, some experts noted those with the lowest incomes are likely to witness more debt stress—especially from auto loans and credit cards.

Race

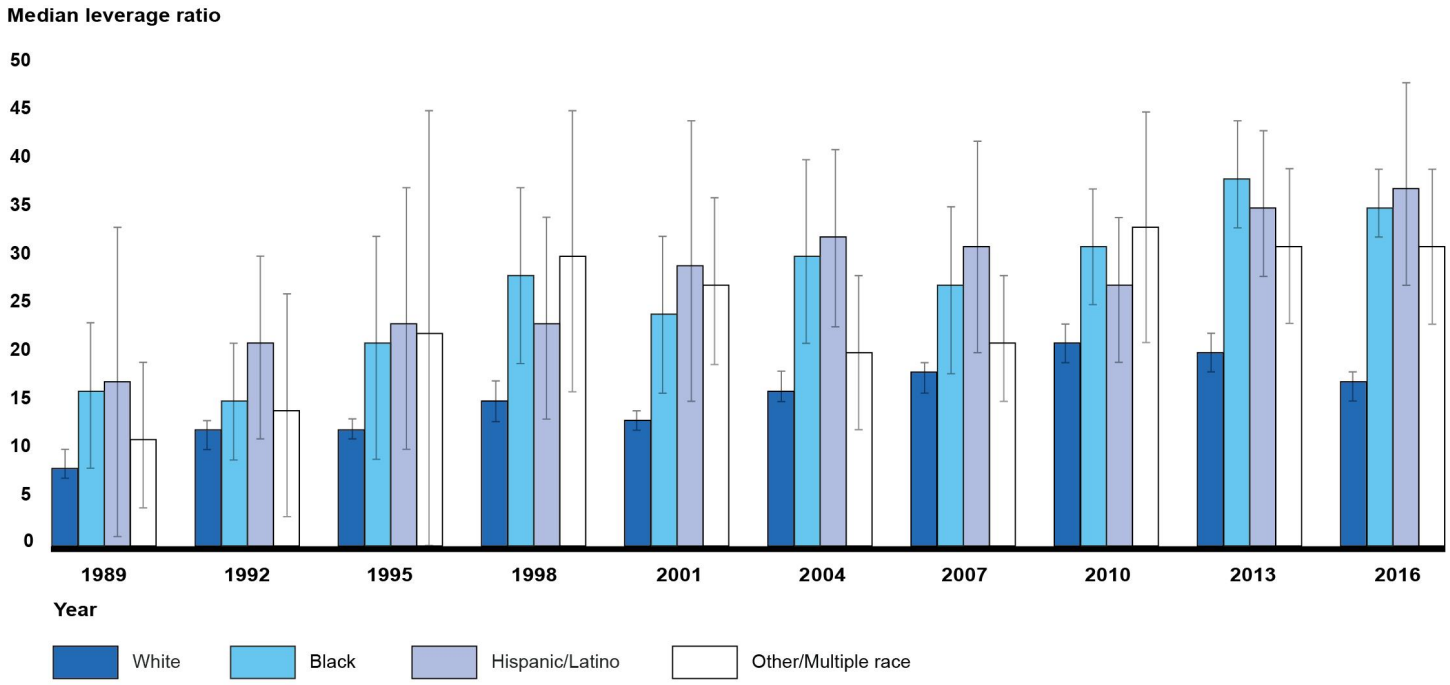
Some experts we interviewed said that many of the same debt stresses facing low-income households would be faced by non-White households as well. Our analysis of SCF data found disparities in overall debt stress and student loan debt emerging over time between White and non-White households.[61] For example, by 2016, non-White households had median leverage ratios that were about two times greater than for White households (see fig. 19). The disparity in 2016 remained despite the median leverage ratio for older households with debt being much higher in 2016 than in 1989.

[59] For each year of data for this analysis, we rank-ordered older households by household income and then broke them into five even groups, or quintiles. “High-income households” refers to the top 20 percent of households and “low-income households” refers to the bottom 20 percent. Academic researchers and the Federal Reserve commonly use a payment-to-income ratio threshold of 40 percent to study borrowers’ debt stress. In addition, one expert noted that certain banking institutions do not issue mortgages to borrowers whose payment–to-income ratios would be above 40 percent.

[60] In prior work using the SCF, we found that disparities in income and wealth among older households have become greater over the past 3 decades. See GAO-19-587.

[61] To analyze older households’ debt trends by race and ethnicity, we relied on the SCF variable that categorizes the head of household into four groups: (1) White non-Hispanic (which we refer to as White), (2) Black/African-American non-Hispanic (which we refer to as Black), (3) Hispanic or Latino (which we refer to as Hispanic/Latino), and (4) Other or multiple race (which includes Asian, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander).

Figure 19: Median Leverage Ratio for Older Households with Debt, by Race/Ethnicity Group, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Figure 19: Median Leverage Ratio for Older Households with Debt, by Race/Ethnicity Group, 1989 to 2016

Year	Median leverage ratio for White households	Confidence Interval-low	Confidence Interval-high
1989	8	7	10
1992	12	10	13
1995	12	11	13
1998	15	13	17
2001	13	12	14
2004	16	15	18
2007	18	16	19
2010	21	19	23
2013	20	18	22
2016	17	15	18

Year	Median leverage ratio for Black households	Confidence Interval	
1989	16	8	23
1992	15	9	21
1995	21	9	32
1998	28	19	37
2001	24	16	32
2004	30	21	40
2007	27	18	35
2010	31	25	37
2013	38	33	44
2016	35	32	39

Year	Median leverage ratio for Hispanic/Latino households	Confidence Interval-low	Confidence Interval-high
1989	17	1	33
1992	21	11	30
1995	23	10	37
1998	23	13	34
2001	29	15	44
2004	32	23	41
2007	31	20	42
2010	27	19	34
2013	35	28	43
2016	37	27	48

Year	Median leverage ratio for Other/Multiple race households	Confidence Interval-low	Confidence Interval-high
1989	11	4	19
1992	14	3	26
1995	22	0	45
1998	30	16	45
2001	27	19	36
2004	20	12	28
2007	21	15	28
2010	33	21	45

Year	Median leverage ratio for Other/Multiple race households	Confidence Interval-low	Confidence Interval-high
2013	31	23	39
2016	31	23	39

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: The lines overlapping the bars represent 95 percent confidence intervals. For this analysis we used the Survey of Consumer Finance's variable that categorizes the race and ethnicity of the household head as either White non-Hispanic (which we refer to as White), Black/African-American non-Hispanic (which we refer to as Black), Hispanic or Latino (which we refer to as Hispanic/Latino), or Other or multiple race (which includes Asian, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander).

In terms of home debt stress, median LTV ratios for older White, Black, and Other/multiple-race households were significantly higher in 2016 than in 1989 (see fig. 33, appendix II).

In addition, our analysis of SCF data found that older Black households were twice as likely to have student loan debt in 2016 than White households.[62] Specifically, in 1989, 3 percent of older White and Black households had student loan debt, but by 2016, 8 percent of White households and 16 percent of Black households had student loan debt (see fig. 34, appendix II).

Health Shocks and Impacts by Gender and Marital Status

Most of the experts we interviewed noted health shocks, or unpredictable illnesses that diminish health status, could leave those with debt particularly vulnerable. For example, some experts noted that older individuals may plan to work longer so they can pay-off their debt, especially mortgage debt, but as people age health generally deteriorates and major health events could derail debt repayment.[63] Poor health can

[62] Sample sizes were not large enough to produce reliable estimates for Hispanic/Latino and Other/multiple-race households.

[63] A major health shock could both derail repayment and cause an individual to incur new debt. For example, a study using the 1998-2008 HRS estimated that a new health event increases unsecured, consumer debt (e.g., credit card) by between 6 and 9 percent—with 20 percent deriving from out-of-pocket medical expenditures. The new severe health events increase debt for older Americans aged 50-64 but not those aged65 or older. This suggests that health insurance (such as Medicare) helps in minimizing depletion of wealth from medical expenses. Hyungsoo Kim, Wonah Yoon, and Karen A. Zurlo, "Health Shocks, Out-of-Pocket Medical Expenses and Consumer Debt among Middle-Aged and Older Americans." *The Journal of Consumer Affairs,* Vol. 46, No. 3 (Fall 2012): pp. 357-380.

make such older workers “financially fragile” since they cannot typically work longer or delay retirement to help service debts. An expert also noted there are different effects from taking on a planned debt, such as a new house, and incurring unanticipated debt because of a health shock.

Another expert noted that health shocks can be particularly damaging for coupled or partnered households. The death of a spouse can negatively affect the retirement security of a surviving spouse if the couple spent down their assets to cover care in the last few months of life. In addition, the negative impacts on retirement security can be compounding for the surviving spouse if they lose part or all of an income source (e.g., Social Security or a pension), have spent down their assets, and have more debt than before the health shock.

The negative consequences of a spouse’s death are more likely to fall on women.[64] Similarly, an expert we spoke to noted that death of a spouse or divorce could reduce retirement security and the impact of surviving a deceased spouse is more likely to fall on women, as women tend to live longer than men and are often younger than their spouse. In addition, we previously reported that spousal caregiving responsibilities are more likely to fall on women.[65] In terms of retirement security, we found that compared to non-caregivers, spousal caregivers age 59-66 had lower levels of retirement assets (IRAs and non-IRAs) and that women who were spousal caregivers had lower levels of Social Security income.

The detrimental effects on retirement security for women are not limited to those with spouses. We previously reported that unmarried retirees are at a higher risk of financial insecurity in retirement than married retirees.[66] Women approaching or in retirement who went through a divorce or became widowed after age 50 are especially at risk of financial insecurity. We also previously reported that women who participated in our focus

[64] We have previously noted that women 65 or older have less retirement income and higher rates of poverty than do men of the same age group. See GAO, *Retirement Security: Women Still Face Challenges*, GAO-12-699 (Washington, DC: July 19, 2012) and GAO-20-435.

[65] Women make up 52 percent of the general population but 63 percent of spousal caregivers. The average age of a spousal caregiver is 70 years old. Relatedly, parental caregiving responsibilities also fall on women as they make up 56 percent of parental caregivers. See GAO, *Retirement Security: Some Parental and Spousal Caregivers Face Financial Risks*, GAO-19-382 (Washington, DC: May 1, 2019).

[66] GAO-12-699.

groups said the loss of income as a result of divorce or widowhood could have significant negative effects on retirement security.[67] For example, after divorce, some women explained that they needed to rebuild credit and pay legal fees, and that they lost spousal health insurance coverage.[68]

Generational Differences

Most experts we interviewed noted possible generational differences in the perception and treatment of debt—including attitudinal shifts, educational costs, and declines in traditional pension plans.[69] Many experts explained that each successive generation appears to be more predisposed to taking on debt. For instance, some experts noted that each successive generation is carrying more debt than the one that preceded it. In particular, most experts described the trend of carrying mortgages at older ages. Some of these experts noted that earlier generations aspired to pay off their mortgages before retirement. Some experts said this increasing debt could make older Americans more financially fragile in general and more vulnerable to increases in interest rates, housing price fluctuations, or unemployment. For example, according to one study's analysis of the HRS, successive generations are showing increasing levels of debt stress and financial fragility.[70] Specifically, Early Baby Boomers on the verge of retirement hold less savings than the generations that preceded them.

While successive generations appear to be more debt burdened over their working careers, it is too early to confidently predict the impact on

[67] GAO-20-435.

[68] Divorce can also directly lead to loss of retirement security via loss of future pension income. Our July 2020 report on qualified domestic relations orders found, using the HRS data, that about one-third of those who experienced a divorce from 2008 through 2016 and reported their former spouse had a retirement plan also reported losing the claim to that spouse's benefit. See GAO, *Retirement Security: DOL Could Better Inform Divorcing Parties About Dividing Savings*, GAO-20-541 (Washington, D.C.: July 31, 2020).

[69] GAO previously noted generational differences in regard to household net worth (a calculation that includes debts as part of liabilities that offset assets held by the household). For example, Millennials aged 25-34 had significantly lower net worth than Gen X had at the same ages. GAO, *Millennial Generation: Information on the Economic Status of Millennial Households Compared to Previous Generations*, GAO-20-194 (Washington, DC: December 13, 2019).

[70] Lusardi, Mitchell and Oggero, "Debt and Financial Vulnerability on the Verge of Retirement."

retirement security for younger generations. For example, prior research indicates that the Millennial generation has lower net worth and higher student loan debt burdens than prior generations at the same age.[71] However, the ultimate effect of these burdens on their retirement security will not be known until the cohort approaches retirement. On one hand, prior research indicated that Millennials have several advantages for improving their retirement prospects; they have more education, likely longer working lives, and more flexible work arrangements than previous generations. On the other hand, this research also cited several disadvantages for improving retirement prospects, including having to take more responsibility for their own retirement plans and marrying and bearing children at later ages.

In addition, while debt generally appears to be increasing with each generation, it is difficult to attribute changes in attitudes toward debt that might otherwise be explained by secular trends. For instance, higher housing costs may necessitate the rise in mortgage debt, and costs of healthcare and housing are two essential expenses that have increased at a rate higher than most other goods and services. Further, the trend towards defined contribution plans, which requires added management in retirement compared to the guaranteed income of traditional pension plans (defined benefit), has been relatively longstanding and may not be specific to Millennials and other younger generations.

Coronavirus Pandemic and Related Recession

Experts we interviewed in spring 2020 said it was too early to understand the possible effects on consumer debt resulting from the national public health and economic threats caused by the Coronavirus Disease 2019 (COVID-19) pandemic.[72] In addition, due to the timing and policy interventions related to the COVID-19 pandemic, data incorporating the effects of the recession on older Americans debt will lag. Specifically, the CARES Act included provisions that forbear certain types of household debts. For example, mortgage and student loan payments were some of

[71] Millennials are also marrying, buying homes, and having children later. See, William Gale, Hillary Gelfond, and Jason Fichtner, *How Will Retirement Savings Change by 2050? Prospects for the Millennial Generation,* The Brookings Institution: Economic Studies at Brookings (Washington, D.C.: March 2019).

[72] Due to the timing of our interviews, we were able to ask four interviewees about the retirement implications for older Americans' debt and COVID-19.

the debt types for which the CARES Act created forbearances.[73] In addition, while older Americans will likely find relief from any forbearance, the ultimate effect on retirement security may be unclear because not all older consumers have debts that are impacted by the CARES Act and forbearing debt only provides a temporary suspension that defers payments to a later date.[74] Forbearance might improve a households' or individuals' short run credit or liquidity, but may still be debt-burdened in the long run.

While experts we spoke to said the ultimate, specific effects of the current pandemic and recession remain to be seen, some impacts may be surmised from the unique nature of the current recession and more general implications that can be drawn from prior recessions. One expert said older Americans who are still working are especially likely to be vulnerable since many workers have been unemployed or furloughed due to COVID-19. In addition, certain older Americans might not want to go back to work given the associated health risks of COVID-19. A couple of

[73] See CARES Act, Pub. L. No. 116-136, §§ 3513 and 4022, 134 Stat. 281, 404-05, 490-92 (2020). For more information on the CARES Act and its early impact on debt in data in the CCP see Andrew Haughwout, Donghoon Lee, Joelle Scally, and Wilbert van der Klaauw, "U.S. Consumer Debt Payments and Credit Buffers on the Eve of COVID-19" Federal Reserve of New York Liberty Street Economics Blog, May 5, 2020, accessed July 29, 2020, https://libertystreeteconomics.newyorkfed.org/2020/05/us-debt-payments-and-credit-buffers-on-the-eve-of-covid-19.html.

[74] Other retirement-related provisions of the CARES Act could potentially affect retirement security in the form of reduced future balances in defined contribution plans. For example, the CARES Act temporarily allowed for certain coronavirus-related withdrawals from retirement accounts and waived the additional 10 percent tax early withdrawals from retirement accounts for certain coronavirus-related withdrawals by individuals affected by COVID-19. See Pub. L. No. 116-136, § 2202(a), 134 Stat. at 340-42. In addition, the Act modified loan rules for defined contribution plans by increasing the maximum loan balance allowed for new loans (taken between March 27 and 180 days thereafter) and extending the due date for new or existing plan loan payments until December 31, 2020, by one year. See Pub. L. No. 116-136, § 2202(b), 134 Stat. at 342. It is, however, optional for employers to choose to amend their plans to adopt the early withdrawal and modified loan rules of the CARES Act. According to publicly available research from Vanguard as of the end of September 2020, 17 percent of its Vanguard Retirement Plan Access (VRPA) plans had implemented the early COVID-19-related withdrawal provision and 15 percent allowed for the expanded loan limits under the CARES Act. For VRPA plans, the retirement security impacts of the CARES Act appear to be limited to a small group of participants—as few took advantage of early withdrawals or expanded loan limits. For example, 1.1 percent of participants initiated a COVID-19-related early withdrawal (in 17 percent of VRPA plans that offered them) and 0.1 percent of participants took a loan under the expanded limits (in 15 percent of VRPA plans that permitted them). See Vanguard, "How has the CARES Act affected small and midsize businesses?" (October 28, 2020 –an update to information published on July 1, 2020).

experts said prolonged unemployment could be particularly damaging for those older Americans who were planning to work to pay off debt. Job loss by individuals close to retirement age may lead to earlier retirement when it is difficult to find employment, which can lead to lower retirement income.[75] More generally, certain research finds that given any particular financial downturn, those with higher debt would have a higher probability of defaulting, so older Americans that had larger debts coming in to the recession may find it particularly challenging to recover.[76]

Overall, experts we talked to, as well as relevant studies, show that some factors influencing retirement security cut across specific categories of debt and may be driven more by demographic and economic circumstances. For example, those with low incomes and adverse health changes, and particularly women who may bear the burdens of such changes, are likely to experience debt stress that could affect their retirement security no matter what specific types of debt they may hold. Race, like income, may affect the retirement security of older households as well. We found most non-White households appear to have increasing home debt burden over time, which suggests that many older, non-White households may face challenges in dealing with debts relative to White households. More broadly, many experts noted that successive generations appear to be increasingly debt burdened, though the effects on retirement security remain to be seen. Finally, the recession and related challenges presented by the COVID-19 pandemic may be more

[75] Our prior work on unemployment during the Great Recession found that unemployed older workers had difficulty getting re-employed and faced a longer median duration of unemployment than they did before the recession began. Workers who experience unemployment are likely not able to contribute to their retirement accounts, and may need to draw on those accounts to cover expenses. In addition, a long period of unemployment could lead older workers to claim early Social Security retirement benefits, which would reduce their monthly benefits for the rest of their lives. See GAO, *Unemployed Older Workers: Many Experience Challenges Regaining Employment and Face Reduced Retirement Security*, GAO-12-445 (Washington, D.C.: Apr. 25, 2012).

[76] An essay from the Federal Reserve of Saint Louis examined the SCF and Center for Household Financial Stability calculations to see what types of household characteristics are most vulnerable to experiencing serious delinquency from income shocks like COVID-19. Being older (versus middle age) predicted the lowest likelihood of default relative to all the categories examined. In contrast, not having enough “safe” assets (i.e., 2 months of income in cash, savings, or checking accounts) or having too much debt relative to income were the two characteristics most likely to increase likelihood of default, more than doubling one’s probability overall. In addition, being in fair to poor health increased the likelihood of default by over 60 percent. Lowell Ricketts and Ray Boshara, “Which Families Are Most Vulnerable to an Income Shock such as COVID-19?” *In the Balance* (St. Louis, Mo: Federal Reserve Bank of St. Louis: May 1, 2020).

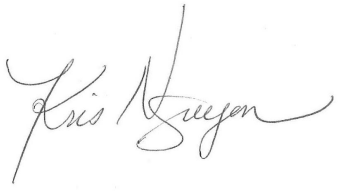
likely to affect older Americans who are or were planning to continue working. In addition, among other things, the CARES Act provides for suspension or forbearance of certain debt payments as well as early retirement withdrawals and loans, so the ultimate effect of the recession on older Americans' debt and retirement security will likely be unclear in the near term and may not be known for many years.[77]

Agency Comments

We provided a draft of this report to the Department of Labor, the Department of the Treasury, Social Security Administration (SSA), Consumer Financial Protection Bureau (CFPB), and the Board of Governors of the Federal Reserve System (Federal Reserve) for review and comment. Labor, SSA, CFPB, and the Federal Reserve provided technical comments, which we incorporated as appropriate. Treasury provided no comments.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to Labor, Treasury, SSA, CFPB, the Federal Reserve, the appropriate congressional committees and members, and other interested parties. In addition, the report will be available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-7215 or nguyentt@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.



[77] In addition, subsequent legislation may help reduce or alleviate certain debts. For example, The American Rescue Plan Act of 2021 extended funding for rental assistance and utility costs (including arrears) and established a Homeowner Assistance Fund to assist certain homeowners experiencing financial hardship by providing assistance with mortgage payments and other expenses. See Pub. L. No. 117-2, §§ 3201 and 3206, 135 Stat. 4, 54-58, 63-67.

Kris Nguyen
Director
Education, Workforce, and Income Security

Appendix I: Objectives, Scope and Methodology

The objectives of this study were to examine: (1) how have the types, levels, and outcomes of debt held by older Americans changed over time, including for different demographic and economic groups, (2) how the types and levels of debt held by the same older American households changed as they aged, including for those in different demographic groups; and, (3) what are the implications of debt trends for the general retirement security of older Americans and their families.

Survey of Consumer Finances

Data Source

To examine the types and levels of debt held by older Americans over time, we analyzed 1989 through 2016 data from the Survey of Consumer Finances (SCF). The SCF is a survey of U.S. households produced by the Board of Governors of the Federal Reserve System (Federal Reserve) every 3 years.[1] The SCF asks households detailed questions about their debt—including the type and amount—and assets—including the type and value. The survey also asks households about their income and demographic information, among other topics. The SCF is a cross-sectional survey, meaning it presents a nationally representative "snapshot" for each survey wave rather than following the same households over time. Therefore, a different sample of households was used for each year in our analysis. These data allow for comparison of the experiences of same-age households at different points in time.

The SCF is conducted using a dual-frame sample design. One part of the design is a standard, multistage area-probability design, while the second part is a special over-sample of relatively wealthy households. This is done in order to accurately capture financial information about the population at large, as well as characteristics specific to the relatively wealthy. The two parts of the sample are adjusted for sample nonresponse and combined using weights to make estimates from the survey data nationally representative of households overall. In addition,

[1] Data from the 2016 survey were the most recent available at the time of our analysis.

the SCF excludes people included in the Forbes magazine list of the 400 wealthiest people in the United States. Furthermore, the SCF omits households that have net worth at least equal to the minimum level needed to qualify for the Forbes list. For example, the 2016 SCF surveyed 6,254 U.S. households and removed six households that had net worth equal to at least the minimum level needed to qualify for the 2016 Forbes list. Over time, the number of households interviewed has expanded.

We found the SCF to be reliable for the purposes of our report. While the SCF is a widely used federal data source, we conducted an assessment to ensure its reliability. Specifically, we reviewed related documentation, including our recent use of the data, and conducted electronic testing. Nonetheless, the SCF and other surveys that are based on self-reported data are subject to nonsampling error, including the ability to get information about all sample cases; difficulties of definition; differences in the interpretation of questions; and errors made in collecting, recording, coding, and processing data. These nonsampling errors can influence the accuracy of information presented in the report, although the magnitude of their effect is not known.

Estimates from the SCF are also subject to some sampling error since, for any given year, the sample is one of a large number of random samples that might have been drawn. Since each possible sample could have provided different estimates, we express our confidence in the precision of the sample results as 95 percent confidence intervals. These intervals would contain the actual population values for 95 percent of the samples that could have been drawn. In this report, we present 95 percent confidence intervals alongside the numerical estimates that were produced using SCF data. We adjusted all financial figures to real 2016 dollars using the Consumer Price Index for All Urban Consumers Research Series.

Key Definitions and Assumptions

We chose to look at household-level resources because couples may pool their economic resources and the SCF asks some of its questions about resources for households. The Federal Reserve provides the underlying programming code for creating the variables presented in its publications. Where possible, we relied on variable definitions used for Federal Reserve publications using the SCF. For example, we relied on the Federal Reserve's variable that categorizes the race and ethnicity of the household head into four groups: (1) White non-Hispanic (which we

refer to as White), (2) Black/African-American non-Hispanic (which we refer to as Black), (3) Hispanic or Latino (which we refer to as Hispanic/Latino), and (4) Other or multiple race (which includes Asian, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander). We also relied on the Federal Reserve's definitions for

- total debt,
- primary home debt,
- credit card debt,
- student loan debt, and
- total assets.

In other cases, we developed our own variables based on the raw variables described in the SCF codebooks.

- Older households: Those in which the survey respondent or any spouse or partner were aged 50 or older.[2]
- Household income: The estimated total income by adding all of the individual income components created by the Federal Reserve.

Analysis

To understand the prevalence of debt among older households, we estimated the percentage of households in each survey year that had (1) any type of debt, (2) primary home debt, (3) credit card debt, and (4) student loan debt.[3] To understand how the level of older households' debt changed over time, we estimated the median amount of debt among households with each type of debt. To understand how older households' debt stress changed over time, we calculated ratios of their debt to their assets and income for each survey year. Specifically, we estimated the median leverage ratio—total debt divided by total assets—for households that had any type of debt. For these households, we also estimated the median payment-to-income ratio—total monthly debt payments divided by total monthly income—and the percentage of households with payment-

[2] While there is no agreed upon age for the term older American, we chose 50 since it provides insight into debt holdings prior to common retirement ages. For example, 62 is the early retirement age for Social Security, and defined benefit pensions often calculate annuities that begin at age 65.

[3] The SCF also includes data on the prevalence and median amount on households' vehicle debt, secondary home debt, and other debt.

to-income ratios above 40 percent. In addition, among households with primary home debt, we estimated the median loan-to-value (LTV) ratio—total home debt divided by the value of the home.

To understand how these trends in debt and debt stress varied for households with different demographic and economic characteristics, we disaggregated the prevalence of debt, median debt amounts, and leverage and LTV ratios for households of different ages. Specifically, we divided the population of households aged 50 or older into the following age categories: 50-54, 55-59, 60-64, 65-69, 70-74, and 75 or older. In 2016, the SCF included a new question about whose education a household's student loan was for—the household head or spouse/partner, a child, or both. To analyze the results of this new question for older households, we disaggregated the prevalence of student loan debt for different members of the household using the age categories of 50-64 and 65 or older because we found few households 65 or older had student loans. We also disaggregated the trend in older households' leverage ratio by the race/ethnicity of the household head, and the trend in the percentage of households with payment-to-income ratios above 40 percent across the income distribution. To create an income distribution, we rank ordered older households by household income and then broke them into five even groups, or quintiles. The "high-income households" refers to the top 20 percent of households in this ranking while the "low-income households" refers to the bottom 20 percent of households. We repeated this exercise for each year of the data.

Analyses Using Consumer Credit Panel Data

To examine debt levels and adverse debt outcomes for older Americans over time, we analyzed Consumer Credit Panel (CCP) data from the Federal Reserve Bank of New York (FRBNY) from the fourth quarter of 2003 through the fourth quarter of 2019. The CCP is a nationally representative 5 percent simple random sample of all individuals with an Equifax credit report that includes their Social Security number. Equifax provides the sampled credit report data to FRBNY each quarter, which FRBNY then uses to create the CCP. The CCP is a longitudinal panel, meaning it generally follows the same individuals over time. Because the CCP sample is selected each quarter using the last two digits of individuals' Social Security numbers, the sample remains representative of all individuals with an Equifax credit report that includes their Social

Security number over time, automatically capturing entrants to the target population (those with new credit reports) and out of it (those who die).

For this report, FRBNY provided aggregate CCP data specifically for individuals aged 50-79 and for the fourth quarter of each year from 2003 to 2019.[4] We used this CCP data on older individuals to look at trends in median debt amounts (including mortgage, credit card, and student loan debt), the share of these types of debt that was late (delinquent) by 90 days or more, and the number of bankruptcies and foreclosures that first appeared on their credit reports during the prior 3 months.[5] We disaggregated these trends by individuals' demographic and economic characteristics, such as age, credit score, and state of residence.[6] For age groups, at our request, FRBNY provided estimates for the following age categories: 50-54, 55-59, 60-64, 65-69, 70-74, and 75-79.[7] For credit scores, in consultation with FRBNY officials, we requested and received estimates for the following groups: less than 620, 620-659, 660-719, 720-759, and 760 or higher.[8] We adjusted all financial figures to real December 2019 dollars using the Consumer Price Index for All Urban Consumers Research Series.

We found the CCP data we received to be reliable for the purposes of our report. We conducted an assessment to ensure its reliability. Specifically, we reviewed related documentation, interviewed FRBNY officials, and conducted electronic testing. FRBNY provided selected 95 percent confidence intervals to demonstrate the amount of sampling error for CCP

[4] Because the CCP follows sampled individuals over time, individuals may age into and out of our study's age range (50-79) from 2003 to 2019. Data from the fourth quarter of 2019 were the most recent available at the time of our analysis. We chose 2003 as our starting point because, while the CCP's mortgage and credit card data goes back to 1999, 2003 was the first year it included student loan data.

[5] The CCP data also include median debt amounts and share of debt delinquent for auto debt, home equity lines of credit, and other debt.

[6] We requested CCP data by age because it is key to our study's focus on older Americans; on credit score because it is available in the CCP data; and on state of residence because CCP's large sample size allows us to present precise state-level estimates.

[7] Because FRBNY officials raised data reliability concerns about data on debt for individuals 80 or older, we limited our request to individuals age 50-79.

[8] Credit score refers to the Equifax Risk Score 3.0, which Equifax uses to predict the likelihood of an individual becoming seriously delinquent (90 days or more late on payments) on their debt over the following 24 months. Equifax's credit scores range from 280 to 850—a borrower with a higher score represents a better lending risk than a borrower with a lower score. According to FRBNY officials, Equifax credit scores below 620 are considered subprime.

estimates from varying sample sizes (see table 2). While we do not have 95 percent confidence intervals for all CCP estimates, we use these example confidence intervals to determine whether our comparisons are statistically significant at the 95 percent confidence level.

Table 2: Selected Consumer Credit Panel Data with 95 Percent Confidence Intervals, December 2011

		Sample size	Estimate	95 percent confidence interval
Percent of credit card balance delinquent by 90 days or more	Age 50-79	2,946,902	10.16%	10.14% - 10.18%
	Age 70-74	313,275	9.81%	9.76% - 9.87%
	North Dakota	7,102	5.34%	5.05% - 5.62%
Median outstanding credit card debt	Age 50-79	2,946,902	$2,086	$2,081 - $2,092
	Age 70-74	313,275	$1,359	$1,349 - $1,369
	North Dakota	7,102	$1,437	$1,364 - $1,518

Source: GAO presentation of Federal Reserve Bank of New York Consumer Credit Panel / Equifax data. | GAO-21-170.

Note: Dollar figures have not been adjusted for inflation.

Analyses Using Health and Retirement Study Longitudinal Data

To understand how the types and levels of debt held by older Americans changed as they aged, we created estimates from the Health and Retirement Study (HRS), a biennial, nationally representative survey of older Americans. The HRS is a longitudinal survey, meaning that it follows the same individuals and households over the course of the study, allowing us to determine how households' debt changed over time. The HRS is a project of the University of Michigan's Institute for Social Research funded by the National Institute on Aging and the Social Security Administration. The survey collects information on individuals over age 50 and, among other things, contains detailed data on their debt, assets, and income. When the HRS began in 1992, it consisted of a representative sample of Americans then aged 51-61, called the original HRS cohort. As of the dates of our analyses, the RAND HRS Longitudinal data files are available from 1992 through 2016. We used the 2016 file, which was an early release, published in May 2019.

RAND, a research organization, cleans and processes the HRS data to create a user-friendly longitudinal dataset that has consistent and intuitive naming conventions and model-based imputations for missing debt, income, and wealth data. We used the RAND version of the HRS variables due to the greater ease of use and the additional data cleaning already performed. RAND gives debt, income, and wealth variables in nominal dollars. We adjusted these variables to real 2016 dollars using the Consumer Price Index for All Urban Consumers Research Series. For all debt estimates, we used the household survey weights provided with HRS data to account for the complexity of the survey design,

nonresponse, and post-stratification adjustments for demographic distributions.

We focused this analysis on the original HRS cohort (born 1931-1941). This cohort entered the study in 1992 at ages 51-61 and reached their mid-70s or mid-80s by 2016. We conducted our analysis at the household level because households may pool financial resources and RAND HRS variables on debt, income, and wealth are at the household level. We included households in our analyses if the age of the respondent was within the appropriate range for their cohort.

Our housing debt variable is the sum of the three housing debt variables in the RAND HRS Data: (1) primary residence mortgages, (2) other primary residence home loans – including the balance on an equity line of credit, and (3) all secondary residence mortgages.[9] Our leverage ratio is total debt divided by total assets – which is the sum of the RAND HRS data's 11 asset variables.[10]

We found the HRS variables presented in this report to be sufficiently reliable. We conducted a data reliability assessment of selected variables by conducting electronic data tests, reviewing documentation on the dataset, and reviewing related internal controls. We used 95 percent confidence intervals to test the statistical significance of our estimates. We also performed sensitivity analyses for sample attrition and imputations by redoing selected debt estimates without imputed debt values, as well as for only those respondents who survive the whole period. We found the debt estimates of those who survive the whole period were statistically similar to the full sample and the debt estimates without imputations were statistically similar to the estimates with imputations. As a result, we report debt estimates with imputations for the full sample.

[9] However, for wave 3 (1996), the value of all secondary residence mortgages is not available so housing debt and total debt do not include this debt type for wave 3. Also, for wave 3 the value of secondary residence is not available, so total assets for this wave is the sum of the other 10 asset variables.

[10] These 11 asset variables were: Value of primary residence; Value of secondary residence: Net value of real estate (not primary residence); Net value of vehicles; Net value of businesses; Net value of IRA, Keogh accounts; Net value of stocks, mutual funds, and investment trusts; Value of checking, savings, or money market accounts; Value of CD, government savings bonds, and T-bills; Net value of bonds and bond funds; Net value of all other savings.

Analysis of Debt Expert Interviews and Literature

To help identify major debt trends and their impact on retirement security we interviewed experts on debt using a semi-structured interview protocol. These 10 experts included academics; representatives of advocacy groups, trade associations, and research institutions; and agency officials. These individuals (or institutions or organizations) represented a range of expertise across a range of affiliations. We interviewed four academics, representatives of two advocacy groups and two consulting or professional associations, as well as two government officials.

We used a semi-structured set of questions to interview each of these experts to ensure we consistently captured their views on various aspects of the impact of debt on retirement security. We then summarized the results of these interviews by themes and compiled statements related to the objective. One analyst summarized the interview statements and another analyst reviewed whether the interview statements were consistent with the topic or theme. The analysts discussed and reconciled any disagreements. The analysts then tallied the number of responses within a given thematic category or sub-category. To characterize interviewees' views throughout this report, we defined modifiers to quantify experts' views as follows:

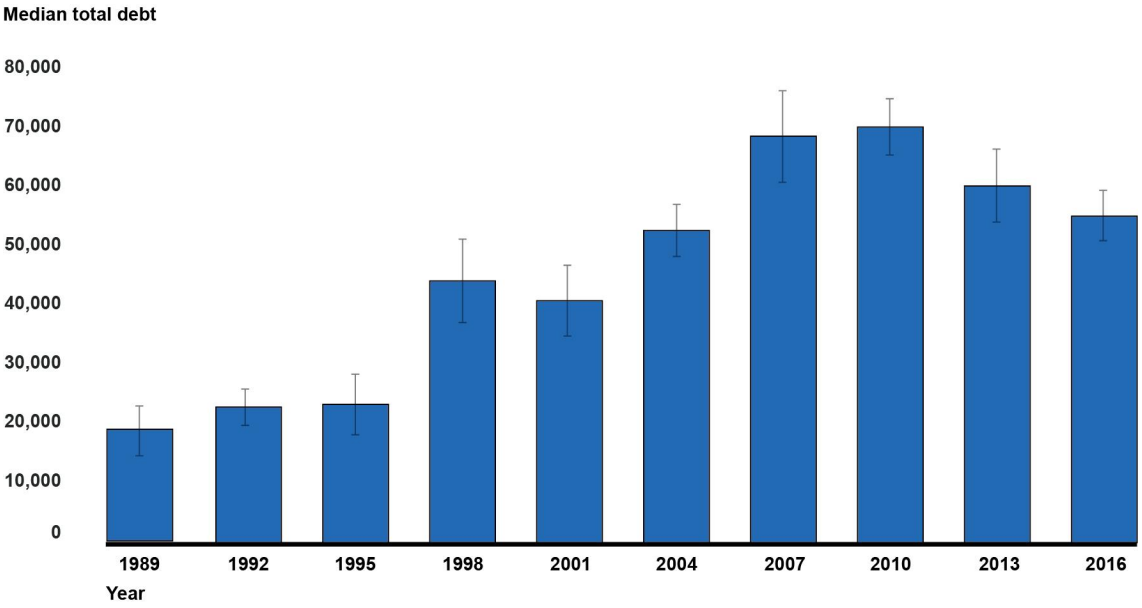
- "most" represents 6 or more interviewees,
- "many" represents 5 interviewees,
- "some" represents 3 or 4 interviewees, and
- "a few" or "a couple" represents 2 interviewees.

We also identified and reviewed relevant literature from which we identified debt experts to interview. To identify literature with original analyses of debt held by older Americans, we searched various databases, such as EBSCO, EconLit, and ProQuest. We also asked all of the experts on debt that we interviewed to recommend additional studies. From these sources, we identified 19 studies with original analyses of debt held by older Americans for possible inclusion in the report. We also identified 10 additional studies for inclusion in the report that we identified through our interviews. To assess the methodological quality of the included studies, we obtained information about each study's methodology. For studies directly cited in the report, a GAO economist reviewed and confirmed our reported analysis of the studies.

We conducted this performance audit from June 2019 to April 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Additional Figures and Table

Figure 20: Median Amount of Debt for Older Households with Debt, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Figure 20: Median Amount of Debt for Older Households with Debt, 1989 to 2016

Year	Median total debt	Confidence Interval-low	Confidence Interval-high
1989	18,901	14,714	23,089
1992	22,942	19,892	25,993
1995	23,390	18,287	28,493
1998	44,293	37,222	51,365
2001	40,930	34,970	46,890
2004	52,827	48,383	57,271
2007	68,795	60,994	76,597
2010	70,343	65,570	75,116
2013	60,371	54,295	66,447
2016	55,272	50,945	59,599

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. |

GAO-21-170

Note: All dollar figures are in 2016 dollars. The lines overlapping the bars represent 95 percent confidence intervals.

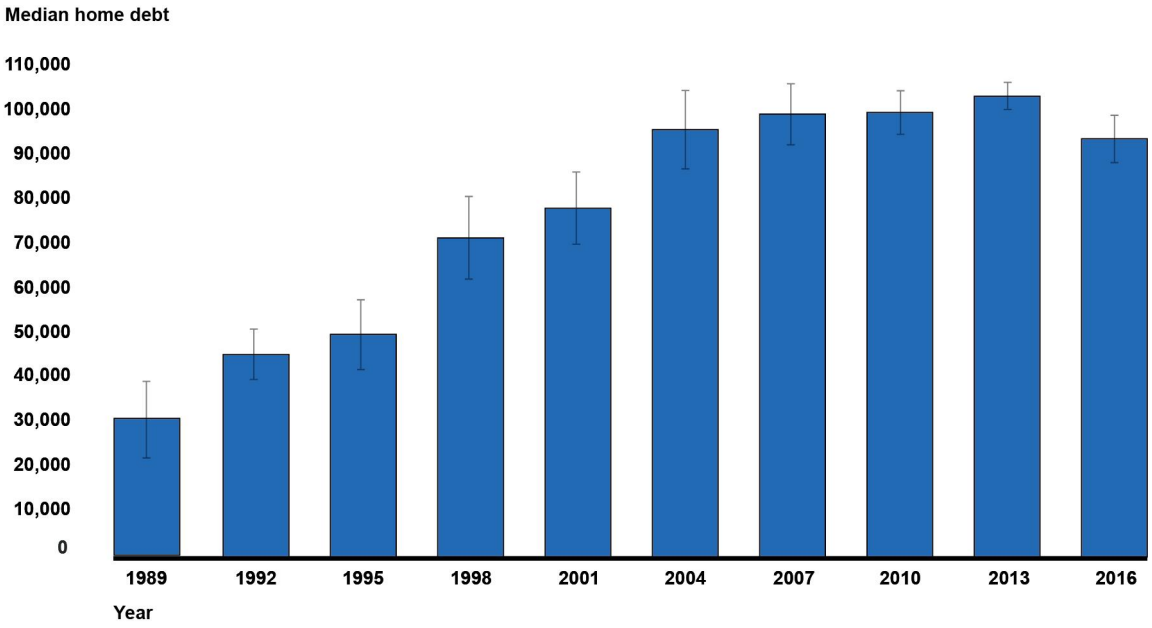
Table 3: Percent of Older Households with Selected Types of Debt and Median Debt Amounts for Those with Each Type, 1989 to 2016

Year	Percent with vehicle debt	Median vehicle debt	Percent with secondary home debt	Median secondary home debt	Percent with other debt	Median other debt
1989	23	$9,300	6	$45,500	18	$3,700
1992	19	$8,200	6	$51,000	18	$4,400
1995	19	$10,200	5	$47,000	14	$3,600
1998	23	$12,700	6	$63,400	14	$4,900
2001	23	$12,000	5	$48,200	12	$5,300
2004	27	$14,000	5	$117,300	12	$5,300
2007	27	$12,700	5	$131,500	14	$5,800
2010	24	$10,800	6	$126,600	16	$6,200
2013	26	$12,400	6	$87,400	15	$4,800
2016	28	$12,000	7	$100,000	14	$5,900

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: All dollar figures are in 2016 dollars. The Other Debt category includes all debt that is not primary or secondary home debt, credit card debt, student loan debt, or vehicle debt.

Figure 21: Median Amount of Home Debt for Older Households with Home Debt, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

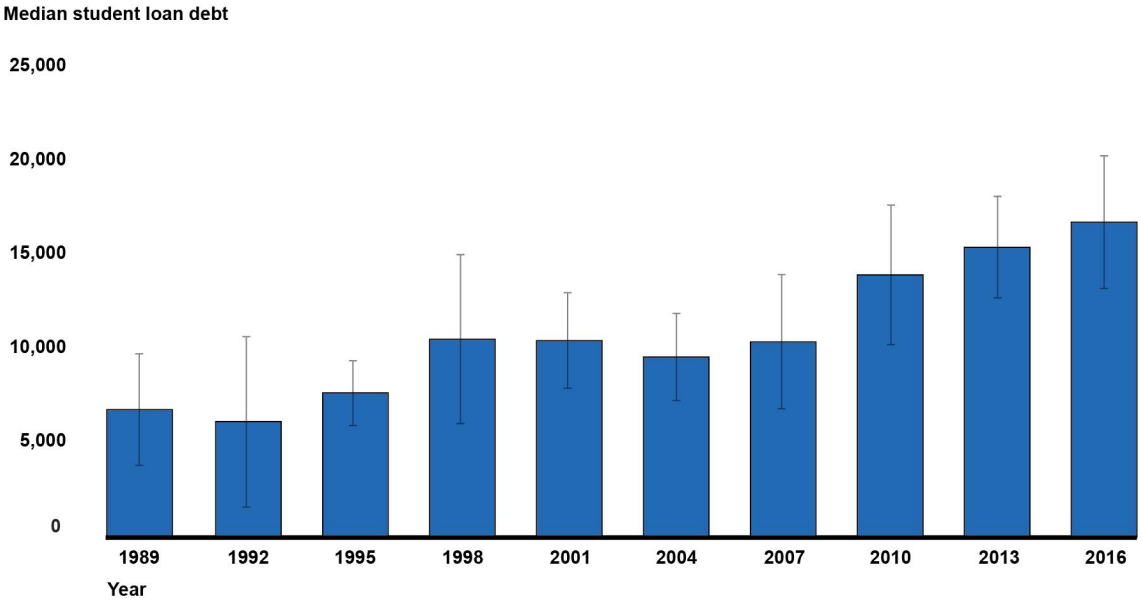
Data table for Figure 21: Median Amount of Home Debt for Older Households with Home Debt, 1989 to 2016

Year	Median home debt	Confidence Interval-low	Confidence Interval-high
1989	30,600	22,082	39,118
1992	45,281	39,627	50,934
1995	49,799	41,962	57,636
1998	71,412	62,119	80,706
2001	78,039	69,886	86,193
2004	95,638	86,833	104,443
2007	99,126	92,313	105,939
2010	99,480	94,598	104,361
2013	103,110	100,146	106,075
2016	93,600	88,322	98,878

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: All dollar figures are in 2016 dollars. The lines overlapping the bars represent 95 percent confidence intervals.

Figure 22: Median Amount of Student Loan Debt for Older Households with Student Loan Debt, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

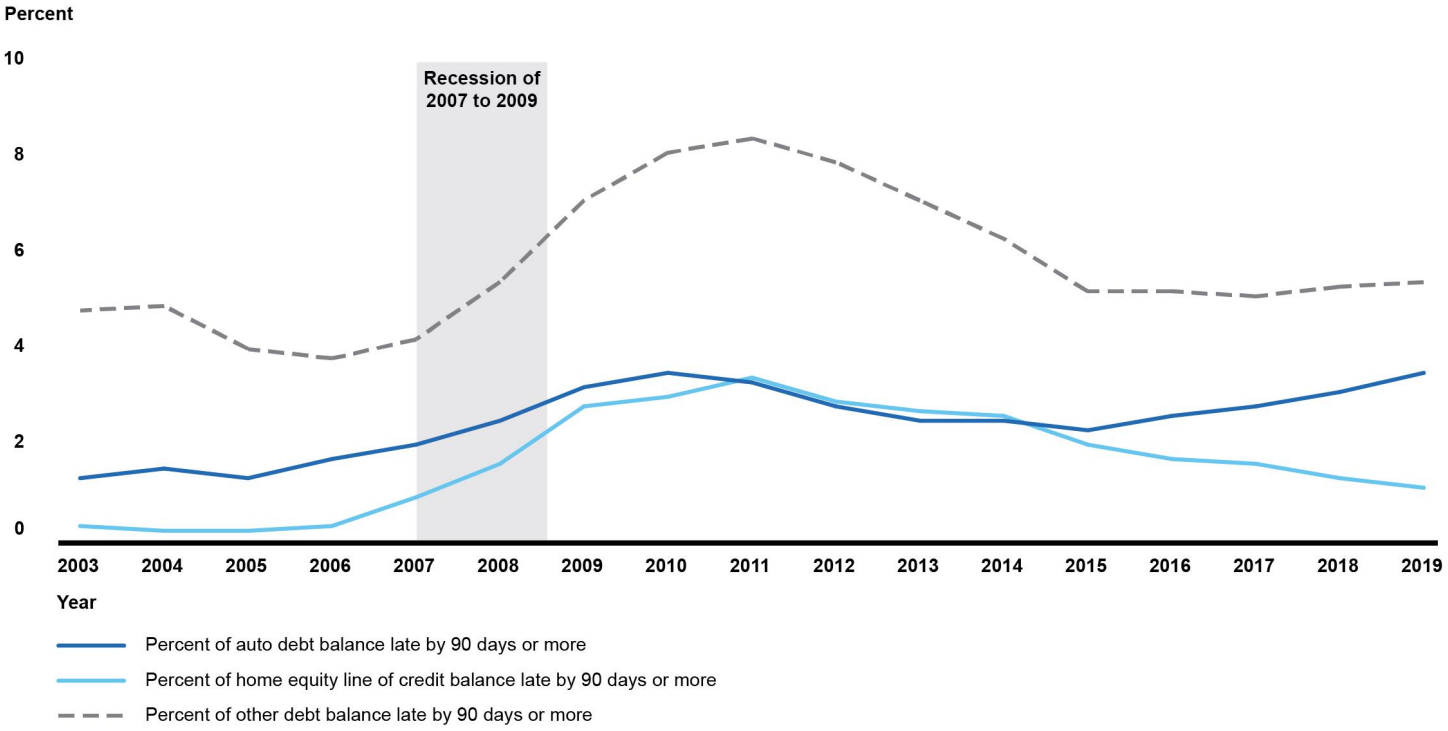
Data table for Figure 22: Median Amount of Student Loan Debt for Older Households with Student Loan Debt, 1989 to 2016

Year	Median home debt	Confidence Interval - low	Confidence Interval - high
1989	30,600	22,082	39,118
1992	45,281	39,627	50,934
1995	49,799	41,962	57,636
1998	71,412	62,119	80,706
2001	78,039	69,886	86,193
2004	95,638	86,833	104,443
2007	99,126	92,313	105,939
2010	99,480	94,598	104,361
2013	103,110	100,146	106,075
2016	93,600	88,322	98,878

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: All dollar figures are in 2016 dollars. The lines overlapping the bars represent 95 percent confidence intervals.

Figure 23: Percent of Outstanding Loan Balance Delinquent by 90 Days or More for Individuals Age 50-79, by Selected Debt Types, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Data table for Figure 23: Percent of Outstanding Loan Balance Delinquent by 90 Days or More for Individuals Age 50-79, by Selected Debt Types, December 2003 to December 2019

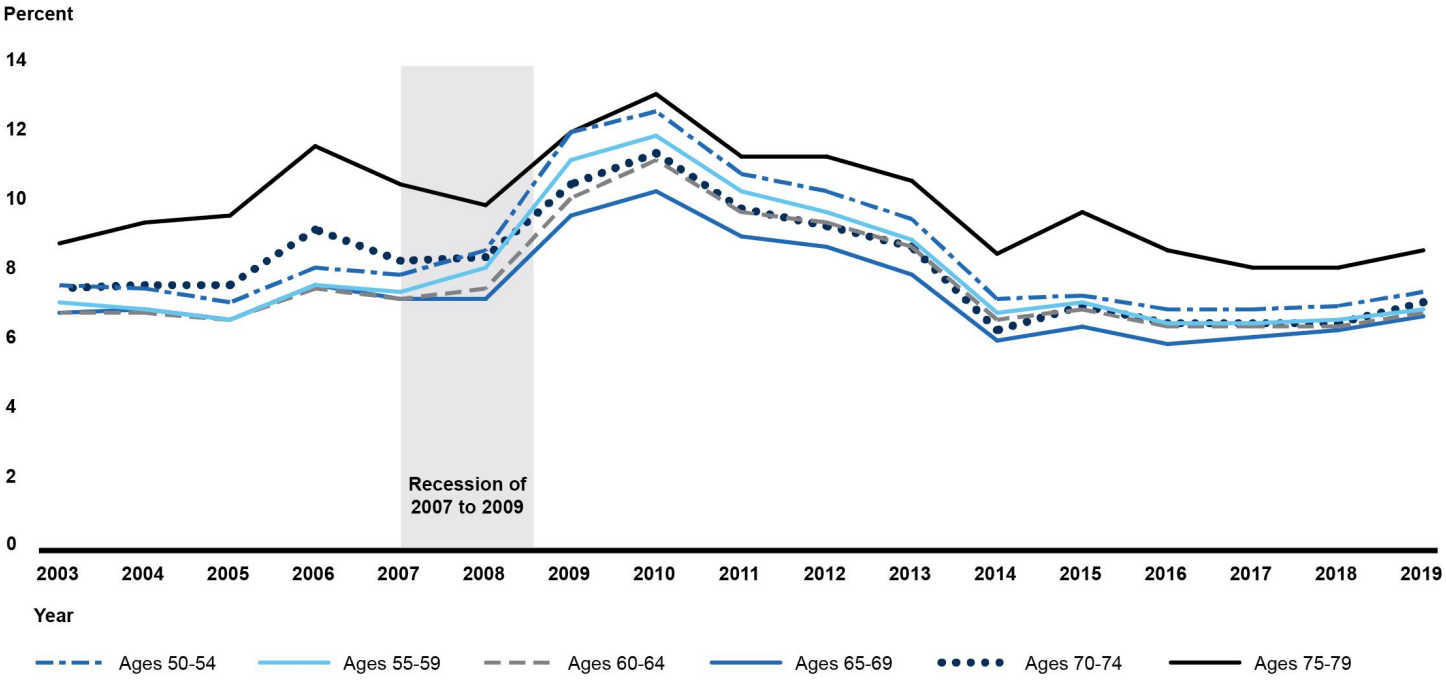
Year	Percent of auto debt balance late by 90 days or more	Percent of home equity line of credit balance late by 90 days or more	Percent of other debt balance late by 90 days or more
2003	1.3	0.3	4.8
2004	1.5	0.2	4.9
2005	1.3	0.2	4.0
2006	1.7	0.3	3.8
2007 (recession year)	2.0	0.9	4.2
2008 (recession year)	2.5	1.6	5.4
2009 (recession year)	3.2	2.8	7.1
2010	3.5	3.0	8.1
2011	3.3	3.4	8.4
2012	2.8	2.9	7.9
2013	2.5	2.7	7.1

Year	Percent of auto debt balance late by 90 days or more	Percent of home equity line of credit balance late by 90 days or more	Percent of other debt balance late by 90 days or more
2014	2.5	2.6	6.3
2015	2.3	2.0	5.2
2016	2.6	1.7	5.2
2017	2.8	1.6	5.1
2018	3.1	1.3	5.3
2019	3.5	1.1	5.4

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Note: The shaded area represents the period of the Great Recession, December 2007-June 2009. Because the Consumer Credit Panel data the Federal Reserve Bank of New York provided are as of December of each year, the shaded area ranges from 2007 to halfway between 2008 and 2009.The other debt category includes consumer finance (sales financing, personal loans) and retail (clothing, grocery, department stores, home furnishings, gas etc.) loans.

Figure 24: Percent of Outstanding Credit Card Balance Delinquent by 90 Days or More for Individuals Age 50-79, by Age Group, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

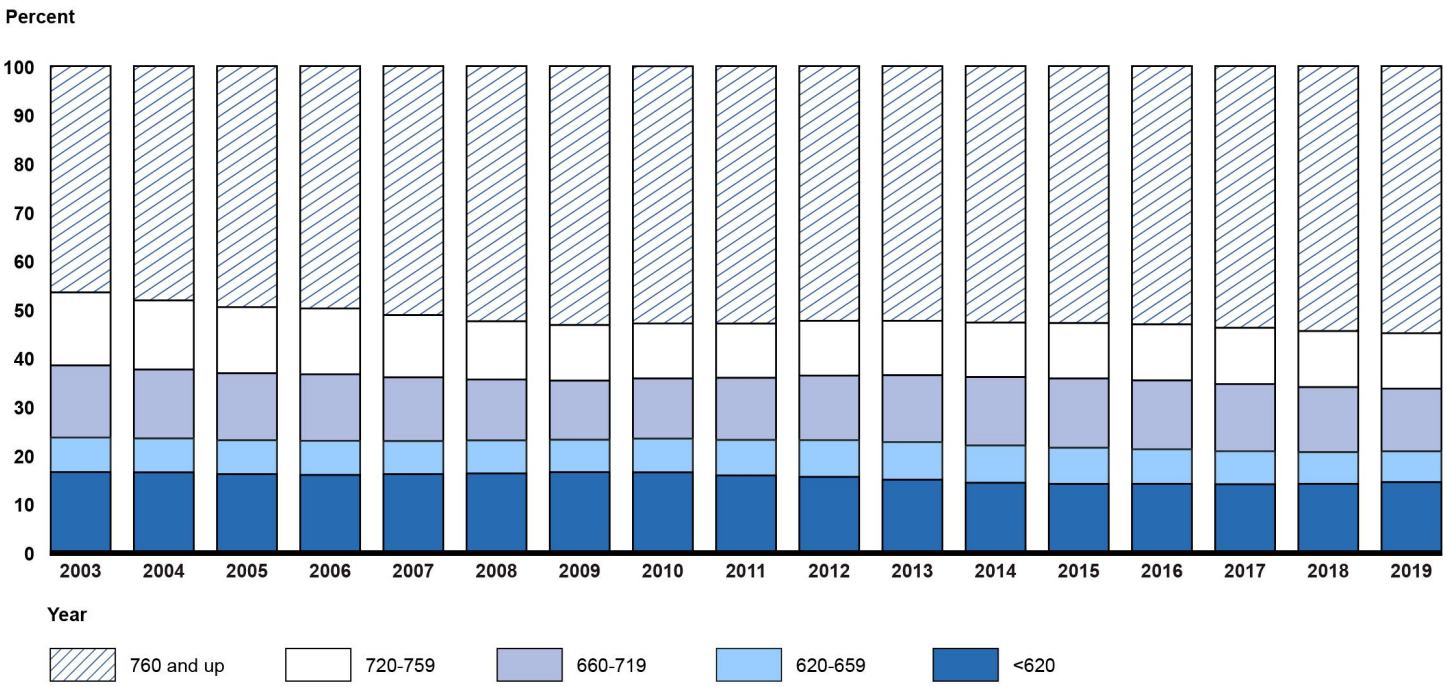
Data table for Figure 24: Percent of Outstanding Credit Card Balance Delinquent by 90 Days or More for Individuals Age 50-79, by Age Group, December 2003 to December 2019

Year	Ages 50-54	Ages 55-59	Ages 60-64	Ages 65-69	Ages 70-74	Ages 75-79
2003	7.6	7.1	6.8	6.8	7.5	8.8
2004	7.5	6.9	6.8	6.9	7.6	9.4
2005	7.1	6.6	6.6	6.6	7.6	9.6
2006	8.1	7.6	7.5	7.6	9.2	11.6
2007 (recession year)	7.9	7.4	7.2	7.2	8.3	10.5
2008 (recession year)	8.6	8.1	7.5	7.2	8.4	9.9
2009 (recession year)	12	11.2	10.1	9.6	10.5	12
2010	12.6	11.9	11.2	10.3	11.4	13.1
2011	10.8	10.3	9.7	9	9.8	11.3
2012	10.3	9.7	9.4	8.7	9.3	11.3
2013	9.5	8.9	8.7	7.9	8.7	10.6
2014	7.2	6.8	6.6	6	6.3	8.5
2015	7.3	7.1	6.9	6.4	7	9.7
2016	6.9	6.5	6.4	5.9	6.5	8.6
2017	6.9	6.5	6.4	6.1	6.5	8.1
2018	7	6.6	6.4	6.3	6.5	8.1
2019	7.4	6.9	6.8	6.7	7.1	8.6

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Note: The shaded area represents the period of the Great Recession, December 2007-June 2009. Because the Consumer Credit Panel data the Federal Reserve Bank of New York provided are as of December of each year, the shaded area ranges from 2007 to halfway between 2008 and 2009.

Figure 25: Distribution of Equifax Credit Scores for Individuals Age 50-79, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Data table for Figure 25: Distribution of Equifax Credit Scores for Individuals Age 50-79, December 2003 to December 2019

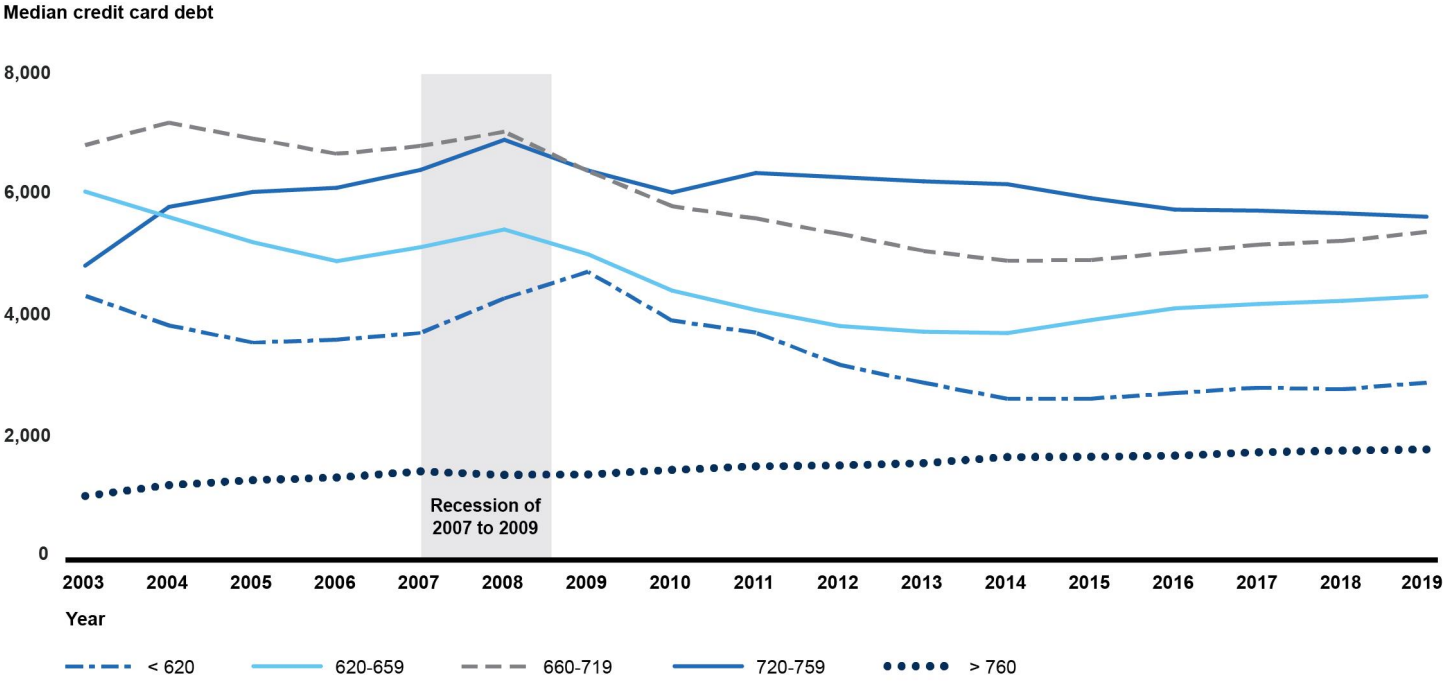
Year	Percent <620	Percent 620-659	Percent 660-719	Percent 720-759	Percent 760 and up
2003	16.55	7.12	14.78	15.01	46.55
2004	16.5	6.96	14.18	14.18	48.18
2005	16.1	6.99	13.76	13.59	49.57
2006	15.94	7.06	13.64	13.54	49.83
2007	16.1	6.81	13.09	12.83	51.17
2008	16.28	6.76	12.53	11.97	52.47
2009	16.53	6.64	12.19	11.41	53.23
2010	16.47	6.95	12.37	11.33	52.86
2011	15.84	7.3	12.77	11.17	52.93
2012	15.55	7.56	13.26	11.27	52.35

Year	Percent <620	Percent 620-659	Percent 660-719	Percent 720-759	Percent 760 and up
2013	14.98	7.73	13.75	11.19	52.35
2014	14.35	7.65	14.07	11.21	52.72
2015	14.12	7.43	14.22	11.39	52.84
2016	14.13	7.1	14.14	11.52	53.11
2017	14.03	6.8	13.8	11.57	53.81
2018	14.13	6.5	13.38	11.52	54.48
2019	14.47	6.34	12.88	11.4	54.91

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Note: According to officials at the Federal Reserve Bank of New York, Equifax credit scores below 620 are considered subprime.

Figure 26: Median Credit Card Debt for Individuals Age 50-79 with Credit Card Debt, by Equifax Credit Score, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

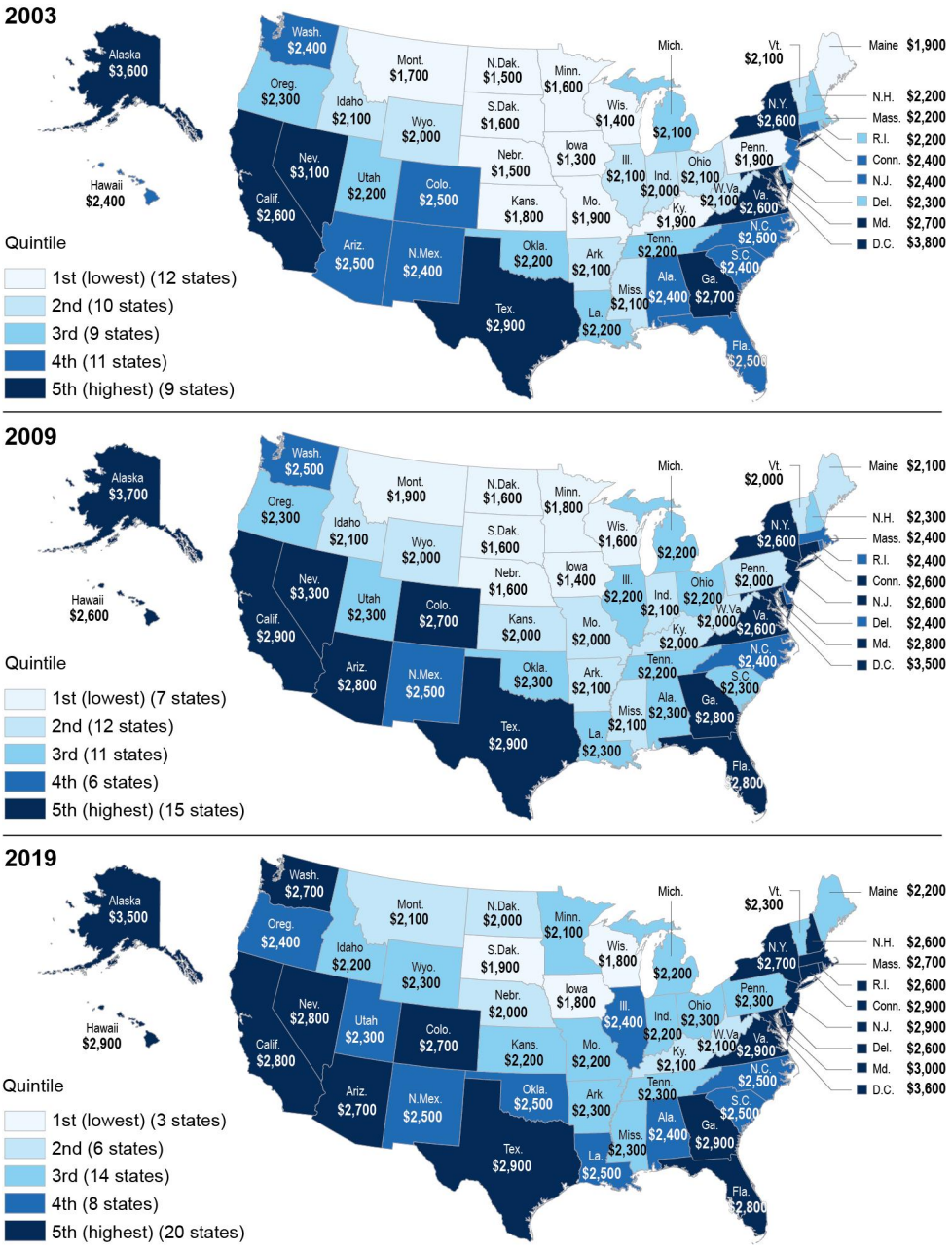
Data table for Figure 26: Median Credit Card Debt for Individuals Age 50-79 with Credit Card Debt, by Equifax Credit Score, December 2003 to December 2019

Year	<620	620-659	660-719	720-759	760 and up
2003	4,353	6,062	6,821	4,846	1,064
2004	3,864	5,643	7,195	5,811	1,243
2005	3,583	5,231	6,933	6,056	1,324
2006	3,631	4,920	6,682	6,124	1,368
2007 (recession year)	3,741	5,149	6,811	6,418	1,469
2008 (recession year)	4,310	5,440	7,042	6,912	1,411
2009 (recession year)	4,745	5,032	6,397	6,408	1,418
2010	3,943	4,437	5,822	6,047	1,493
2011	3,746	4,117	5,619	6,367	1,552
2012	3,218	3,855	5,367	6,299	1,566
2013	2,922	3,761	5,090	6,230	1,604
2014	2,661	3,739	4,924	6,183	1,704
2015	2,664	3,953	4,941	5,954	1,709
2016	2,754	4,146	5,062	5,766	1,727
2017	2,843	4,217	5,189	5,749	1,783
2018	2,817	4,268	5,251	5,706	1,810
2019	2,927	4,344	5,397	5,649	1,829

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Note: All dollar figures are in December 2019 dollars. The shaded area represents the period of the Great Recession, December 2007-June 2009. Because the Consumer Credit Panel data the Federal Reserve Bank of New York provided are as of December of each year, the shaded area ranges from 2007 to halfway between 2008 and 2009. According to officials at the Federal Reserve Bank of New York, Equifax credit scores below 620 are considered subprime.

Figure 27: Median Credit Card Debt for Individuals Age 50-79 with Credit Card Debt, By U.S. State, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Data table for Figure 27: Median Credit Card Debt for Individuals Age 50-79 with Credit Card Debt, By U.S. State, December 2003 to December 2019

Year	State	Median credit card debt	Quintile
2003	IA	$1,300	1st quintile (lowest) (12 states)
	WI	$1,400	
	ND	$1,500	
	NE	$1,500	
	MN	$1,600	
	SD	$1,600	
	MT	$1,700	
	KS	$1,800	
	KY	$1,900	
	ME	$1,900	
	MO	$1,900	
	PA	$1,900	
	IN	$2,000	2nd quintile (10 states)
	WY	$2,000	
	AR	$2,100	
	ID	$2,100	
	IL	$2,100	
	MI	$2,100	
	MS	$2,100	
	OH	$2,100	
	VT	$2,100	
	WV	$2,100	
	LA	$2,200	3rd quintile (9 states)
	MA	$2,200	
	NH	$2,200	
	OK	$2,200	
	RI	$2,200	
	TN	$2,200	
	UT	$2,200	
	DE	$2,300	
	OR	$2,300	
	AL	$2,400	4th quintile (11 states)
	CT	$2,400	
	HI	$2,400	

Year	State	Median credit card debt	Quintile
	NJ	$2,400	
	NM	$2,400	
	SC	$2,400	
	WA	$2,400	
	AZ	$2,500	
	CO	$2,500	
	FL	$2,500	
	NC	$2,500	
	CA	$2,600	5th quintile 2003 (highest) (9 states)
	NY	$2,600	
	VA	$2,600	
	GA	$2,700	
	MD	$2,700	
	TX	$2,900	
	NV	$3,100	
	AK	$3,600	
	DC	$3,800	
2009	IA	$1,400	1st quintile (lowest) (7 states)
	ND	$1,600	
	NE	$1,600	
	SD	$1,600	
	WI	$1,600	
	MN	$1,800	
	MT	$1,900	
	KS	$2,000	2nd quintile (12 states)
	KY	$2,000	
	MO	$2,000	
	PA	$2,000	
	VT	$2,000	
	WV	$2,000	
	WY	$2,000	
	AR	$2,100	
	ID	$2,100	
	IN	$2,100	
	ME	$2,100	
	MS	$2,100	

Year	State	Median credit card debt	Quintile
	IL	$2,200	3rd quintile (11 states)
	MI	$2,200	
	OH	$2,200	
	TN	$2,200	
	AL	$2,300	
	LA	$2,300	
	NH	$2,300	
	OK	$2,300	
	OR	$2,300	
	SC	$2,300	
	UT	$2,300	
	DE	$2,400	4th quintile (6 states)
	MA	$2,400	
	NC	$2,400	
	RI	$2,400	
	NM	$2,500	
	WA	$2,500	
	CT	$2,600	5th quintile (highest) (15 states)
	HI	$2,600	
	NJ	$2,600	
	NY	$2,600	
	VA	$2,600	
	CO	$2,700	
	AZ	$2,800	
	FL	$2,800	
	GA	$2,800	
	MD	$2,800	
	CA	$2,900	
	TX	$2,900	
	NV	$3,300	
	DC	$3,500	
	AK	$3,700	
2019	IA	$1,800	1st quintile (lowest) (3 states)
	WI	$1,800	
	SD	$1,900	
	ND	$2,000	2nd quintile (6 states)

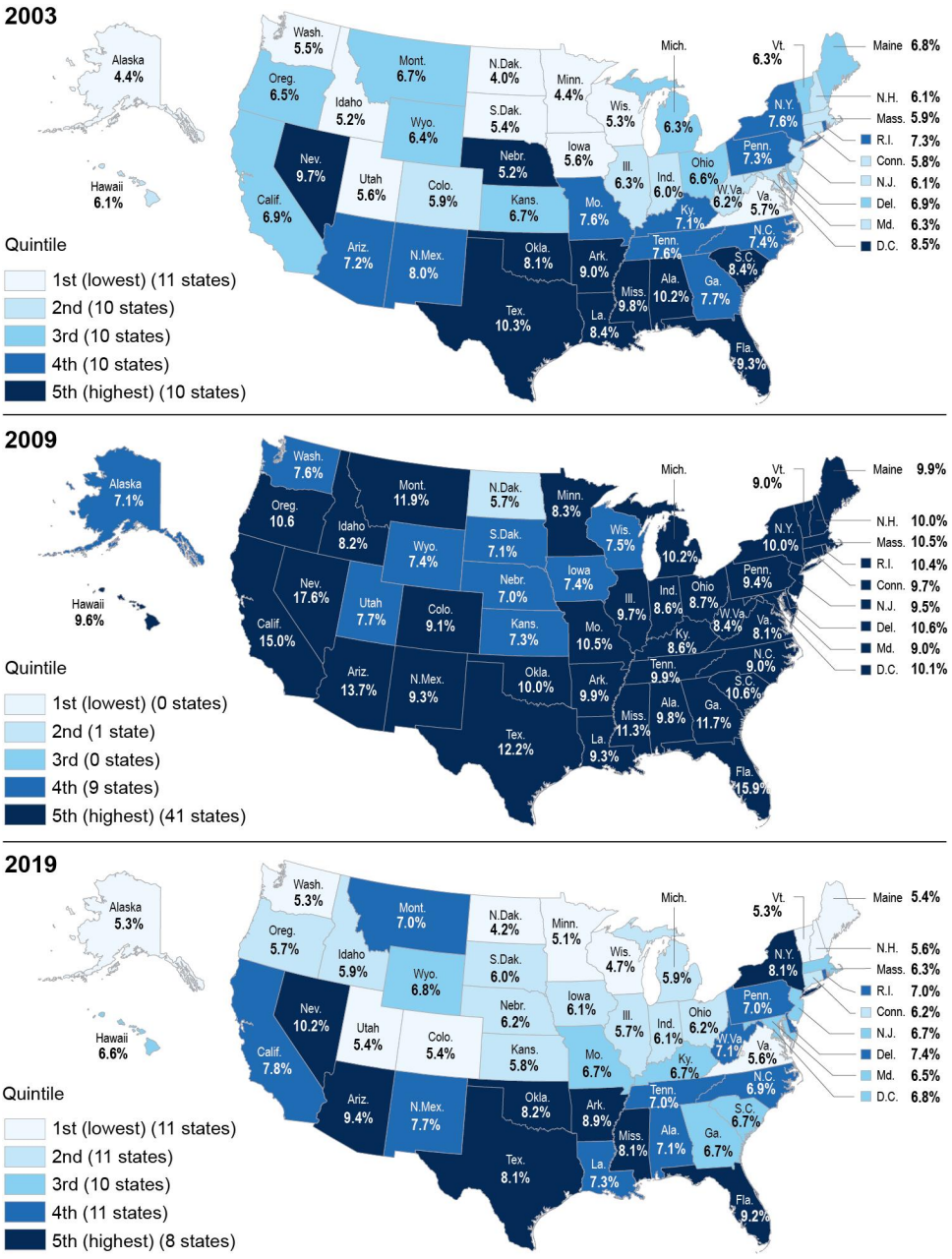
Year	State	Median credit card debt	Quintile
	NE	$2,000	
	KY	$2,100	
	MN	$2,100	
	MT	$2,100	
	WV	$2,100	
	ID	$2,200	
	IN	$2,200	
	KS	$2,200	
	ME	$2,200	
	MI	$2,200	
	MO	$2,200	
	AR	$2,300	3rd quintile (14 states)
	MS	$2,300	
	OH	$2,300	
	PA	$2,300	
	TN	$2,300	
	UT	$2,300	
	VT	$2,300	
	WY	$2,300	
	AL	$2,400	
	IL	$2,400	
	OR	$2,400	
	LA	$2,500	4th quintile (8 states)
	NC	$2,500	
	NM	$2,500	
	OK	$2,500	
	SC	$2,500	
	DE	$2,600	
	NH	$2,600	
	RI	$2,600	
	AZ	$2,700	
	CO	$2,700	5th quintile (highest) (20 states)
	MA	$2,700	
	NY	$2,700	
	WA	$2,700	
	CA	$2,800	

Year	State	Median credit card debt	Quintile
	FL	$2,800	
	NV	$2,800	
	CT	$2,900	
	GA	$2,900	
	HI	$2,900	
	NJ	$2,900	
	TX	$2,900	
	VA	$2,900	
	MD	$3,000	
	AK	$3,500	
	DC	$3,600	

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Note: All dollar figures are in December 2019 dollars. For 2003, we broke the 50 states and the District of Columbia into five even groups—quintiles—based on the median credit card debt of older individuals living there. Then for 2009 and 2019, we compared states' median credit card debt amounts to those quintile cutpoints for 2003.

Figure 28: Percent of Outstanding Credit Card Debt Delinquent by 90 Days or More, for Individuals Age 50-79, by U.S. State, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Data table for Figure 28: Percent of Outstanding Credit Card Debt Delinquent by 90 Days or More, for Individuals Age 50-79, by U.S. State, December 2003 to December 2019

Year	State	Share of credit card debt delinquent	Quintile
2003	ND	4.0%	1st quintile (lowest) (11 states)
	AK	4.4%	
	MN	4.4%	
	ID	5.2%	
	NE	5.2%	
	WI	5.3%	
	SD	5.4%	
	WA	5.5%	
	UT	5.6%	
	IA	5.6%	
	VA	5.7%	
	CT	5.8%	2nd quintile (10 states)
	MA	5.9%	
	CO	5.9%	
	IN	6.0%	
	NJ	6.1%	
	NH	6.1%	
	HI	6.1%	
	WV	6.2%	
	IL	6.3%	
	MD	6.3%	
	MI	6.3%	3rd quintile (10 states)
	VT	6.3%	
	WY	6.4%	
	OR	6.5%	
	OH	6.6%	
	MT	6.7%	
	KS	6.7%	
	ME	6.8%	
	DE	6.9%	
	CA	6.9%	
	KY	7.1%	4th quintile (10 states)

Year	State	Share of credit card debt delinquent	Quintile
2009	AZ	7.2%	
	RI	7.3%	
	PA	7.3%	
	NC	7.4%	
	NY	7.6%	
	TN	7.6%	
	MO	7.6%	
	GA	7.7%	
	NM	8.0%	
	OK	8.1%	5th quintile (highest) (10 states)
	LA	8.4%	
	SC	8.4%	
	DC	8.5%	
	AR	9.0%	
	FL	9.3%	
	NV	9.7%	
	MS	9.8%	
	AL	10.2%	
	TX	10.3%	
	ND	5.7%	2nd quintile (1 state)
	NE	7.0%	4th quintile (9 states)
	AK	7.1%	
	SD	7.1%	
	KS	7.3%	
	IA	7.4%	
	WY	7.4%	
	WI	7.5%	
	WA	7.6%	
	UT	7.7%	
	VA	8.1%	5th quintile (highest) (41 states)
	ID	8.2%	
	MN	8.3%	
	WV	8.4%	
	IN	8.6%	
	KY	8.6%	

Year	State	Share of credit card debt delinquent	Quintile
	OH	8.7%	
	MD	9.0%	
	NC	9.0%	
	VT	9.0%	
	CO	9.1%	
	NM	9.3%	
	LA	9.3%	
	PA	9.4%	
	NJ	9.5%	
	HI	9.6%	
	IL	9.7%	
	CT	9.7%	
	AL	9.8%	
	ME	9.9%	
	TN	9.9%	
	AR	9.9%	
	NH	10.0%	
	NY	10.0%	
	OK	10.0%	
	DC	10.1%	
	MI	10.2%	
	RI	10.4%	
	MO	10.5%	
	MA	10.5%	
	OR	10.6%	
	DE	10.6%	
	SC	10.6%	
	MS	11.3%	
	GA	11.7%	
	MT	11.9%	
	TX	12.2%	
	AZ	13.7%	
	CA	15.0%	
	FL	15.9%	
	NV	17.6%	

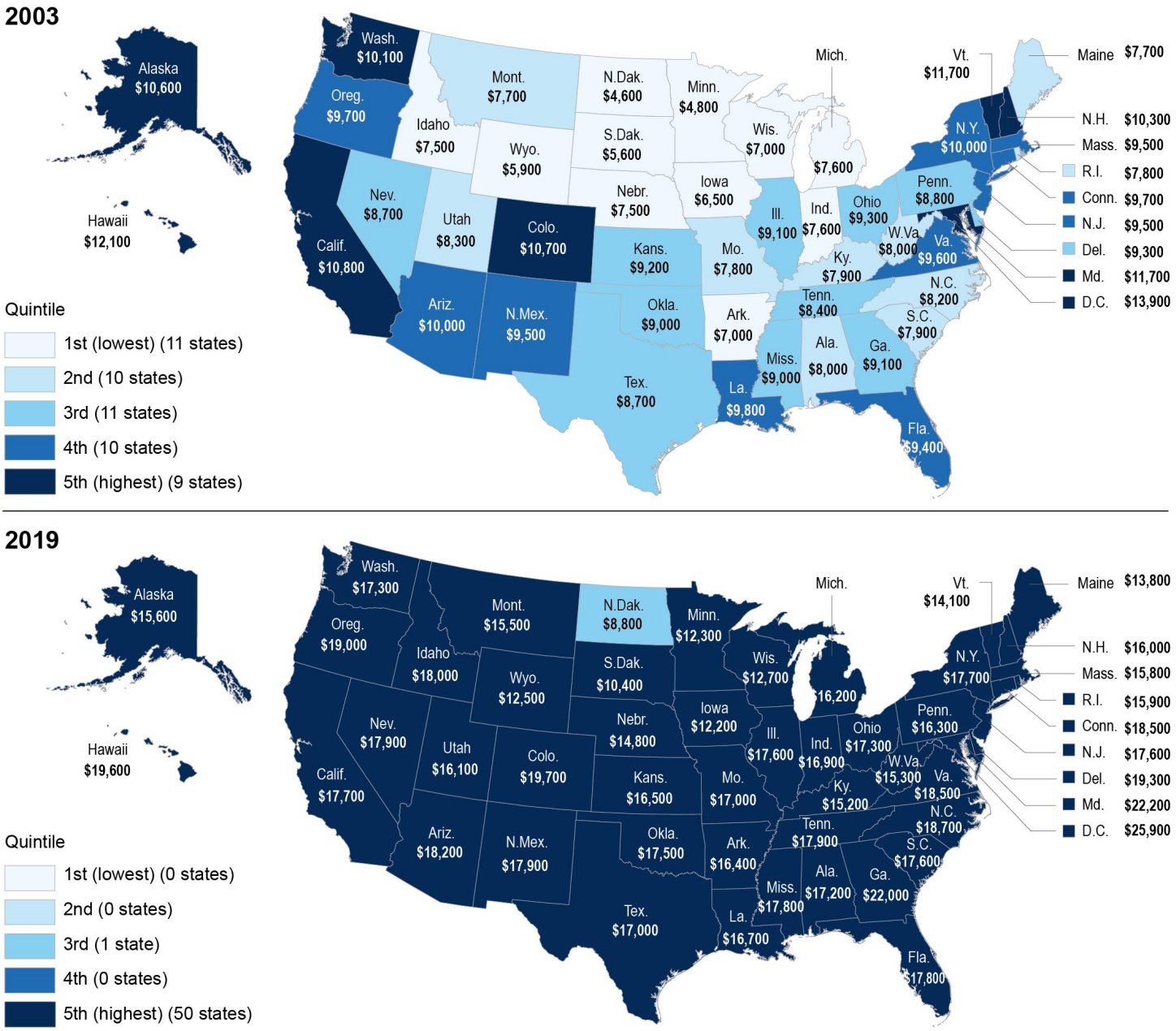
Year	State	Share of credit card debt delinquent	Quintile
2019	ND	4.2%	1st quintile (lowest) (11 states)
	WI	4.7%	
	MN	5.1%	
	VT	5.3%	
	AK	5.3%	
	WA	5.3%	
	ME	5.4%	
	UT	5.4%	
	CO	5.4%	
	NH	5.6%	
	VA	5.6%	
	OR	5.7%	2nd quintile (11 states)
	IL	5.7%	
	KS	5.8%	
	MI	5.9%	
	ID	5.9%	
	SD	6.0%	
	IA	6.1%	
	IN	6.1%	
	OH	6.2%	
	NE	6.2%	
	CT	6.2%	
	MA	6.3%	3rd quintile (10 states)
	MD	6.5%	
	HI	6.6%	
	KY	6.7%	
	GA	6.7%	
	SC	6.7%	
	MO	6.7%	
	NJ	6.7%	
	DC	6.8%	
	WY	6.8%	
	NC	6.9%	4th quintile (11 states)
	PA	7.0%	
	TN	7.0%	

Year	State	Share of credit card debt delinquent	Quintile
	RI	7.0%	
	MT	7.0%	
	AL	7.1%	
	WV	7.1%	
	LA	7.3%	
	DE	7.4%	
	NM	7.7%	
	CA	7.8%	
	TX	8.1%	5th quintile (highest) (8 states)
	NY	8.1%	
	MS	8.1%	
	OK	8.2%	
	AR	8.9%	
	FL	9.2%	
	AZ	9.4%	
	NV	10.2%	

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Note: For 2003, we broke the 50 states and the District of Columbia into five even groups—quintiles—based on the percent of outstanding credit card debt delinquent by 90 days or more for older individuals living there. Then for 2009 and 2019, we compared states' percent of outstanding credit card debt delinquent to those quintile cutpoints for 2003.

Figure 29: Median Student Loan Debt for Individuals Age 50-79 with Student Loan Debt, By U.S. State, December 2003 to December 2019



Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Data table for Figure 29: Median Student Loan Debt for Individuals Age 50-79 with Student Loan Debt, By U.S. State, December 2003 to December 2019

Year	State	Median student loan debt	Quintile
2003	ND	$4,600	1st quintile (lowest) (11 states)
	MN	$4,800	
	SD	$5,600	
	WY	$5,900	
	IA	$6,500	
	AR	$7,000	
	WI	$7,000	
	ID	$7,500	
	NE	$7,500	
	IN	$7,600	
	MI	$7,600	
	ME	$7,700	2nd quintile (10 states)
	MT	$7,700	
	MO	$7,800	
	RI	$7,800	
	KY	$7,900	
	SC	$7,900	
	AL	$8,000	
	WV	$8,000	
	NC	$8,200	
	UT	$8,300	3rd quintile (11 states)
	TN	$8,400	
	NV	$8,700	
	TX	$8,700	
	PA	$8,800	
	MS	$9,000	
	OK	$9,000	

Year	State	Median student loan debt	Quintile
	GA	$9,100	
	IL	$9,100	
	KS	$9,200	
	DE	$9,300	4th quintile (10 states)
	OH	$9,300	
	FL	$9,400	
	MA	$9,500	
	NJ	$9,500	
	NM	$9,500	
	VA	$9,600	
	CT	$9,700	
	OR	$9,700	
	LA	$9,800	
	AZ	$10,000	
	NY	$10,000	
	WA	$10,100	5th quintile 2003 (highest) (9 states)
	NH	$10,300	
	AK	$10,600	
	CO	$10,700	
	CA	$10,800	
	MD	$11,700	
	VT	$11,700	
	HI	$12,100	
	DC	$13,900	
2019	ND	$8,800	3rd quintile (1 state)
	SD	$10,400	5th quintile (highest) (50 states)
	IA	$12,200	
	MN	$12,300	
	WY	$12,500	

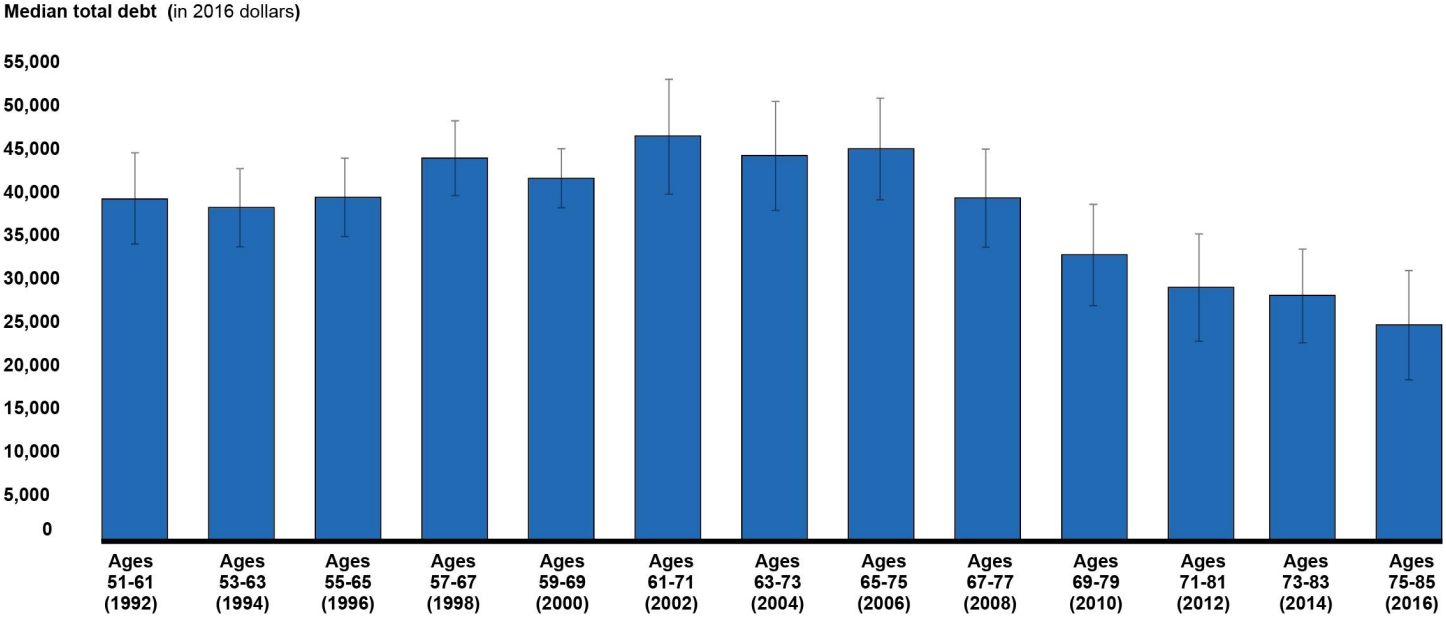
Year	State	Median student loan debt	Quintile
	WI	$12,700	
	ME	$13,800	
	VT	$14,100	
	NE	$14,800	
	KY	$15,200	
	WV	$15,300	
	MT	$15,500	
	AK	$15,600	
	MA	$15,800	
	RI	$15,900	
	NH	$16,000	
	UT	$16,100	
	MI	$16,200	
	PA	$16,300	
	AR	$16,400	
	KS	$16,500	
	LA	$16,700	
	IN	$16,900	
	MO	$17,000	
	TX	$17,000	
	AL	$17,200	
	OH	$17,300	
	WA	$17,300	
	OK	$17,500	
	IL	$17,600	
	NJ	$17,600	
	SC	$17,600	
	CA	$17,700	
	NY	$17,700	

Year	State	Median student loan debt	Quintile
	FL	$17,800	
	MS	$17,800	
	NM	$17,900	
	NV	$17,900	
	TN	$17,900	
	ID	$18,000	
	AZ	$18,200	
	CT	$18,500	
	VA	$18,500	
	NC	$18,700	
	OR	$19,000	
	DE	$19,300	
	HI	$19,600	
	CO	$19,700	
	GA	$22,000	
	MD	$22,200	
	DC	$25,900	

Source: GAO analysis of Federal Reserve Bank of New York Consumer Credit Panel / Equifax Data. | GAO-21-170

Note: All dollar figures are in December 2019 dollars. For 2003, we broke the 50 states and the District of Columbia into five even groups—quintiles—based on the median student loan debt of older individuals living there. Then for 2019, we compared states' median student loan debt amounts to those quintile cutpoints for 2003.

Figure 30: Estimated Median Total Debt among Households with Any Debt as those Born in 1931-1941 Aged from 1992-2016



Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

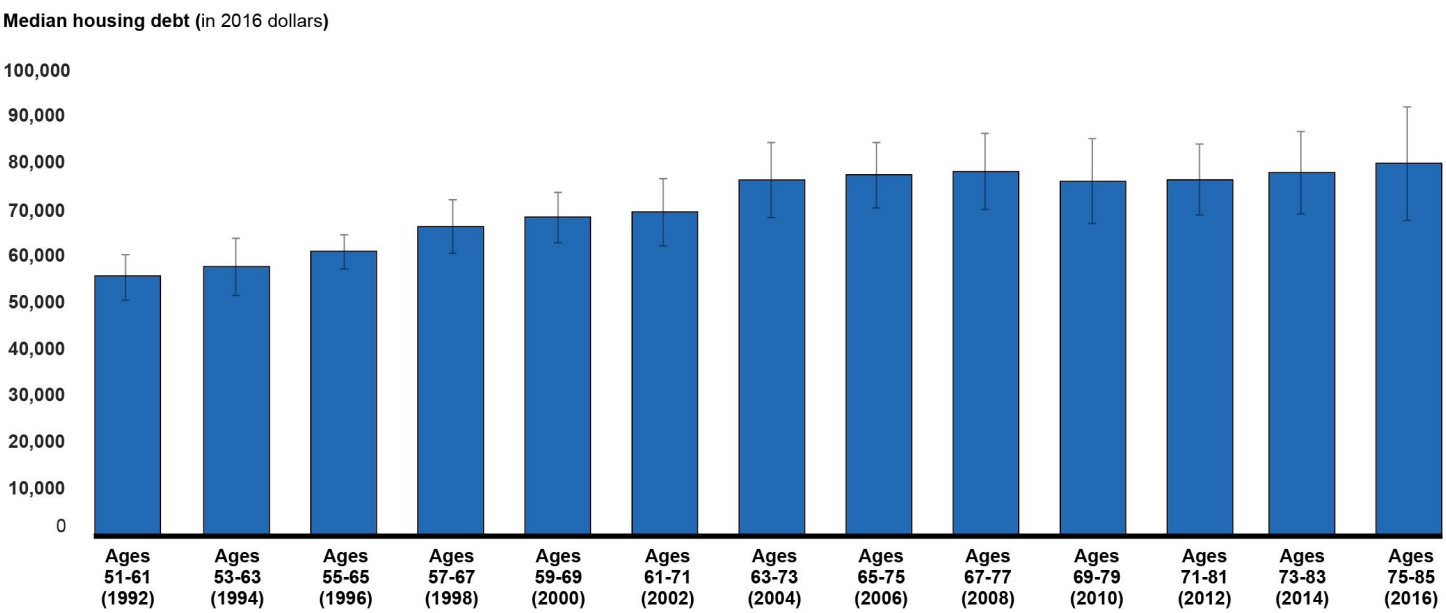
Data table for Figure 30: Estimated Median Total Debt among Households with Any Debt as those Born in 1931-1941 Aged from 1992-2016

	Median total debt (in 2016 dollars)	Confidence intervals-low	Confidence intervals-high
Ages 51-61 (1992)	39,543	34,271	44,816
Ages 53-63 (1994)	38,553	33,988	43,118
Ages 55-65 (1996)	39,725	35,233	44,218
Ages 57-67 (1998)	44,267	39,929	48,605
Ages 59-69 (2000)	41,922	38,498	45,345
Ages 61-71 (2002)	46,817	40,263	53,371
Ages 63-73 (2004)	44,573	38,333	50,813
Ages 65-75 (2006)	45,338	39,492	51,184
Ages 67-77 (2008)	39,664	34,025	45,303
Ages 69-79 (2010)	33,090	27,272	38,907
Ages 71-81 (2012)	29,319	23,162	35,476
Ages 73-83 (2014)	28,410	22,991	33,830
Ages 75-85 (2016)	25,000	18,728	31,272

Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Note: The lines overlapping the bars represent 95 percent confidence intervals.

Figure 31: Estimated Median Housing Debt among Households with Any Housing Debt as those Born in 1931-1941 Aged from 1992-2016



Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

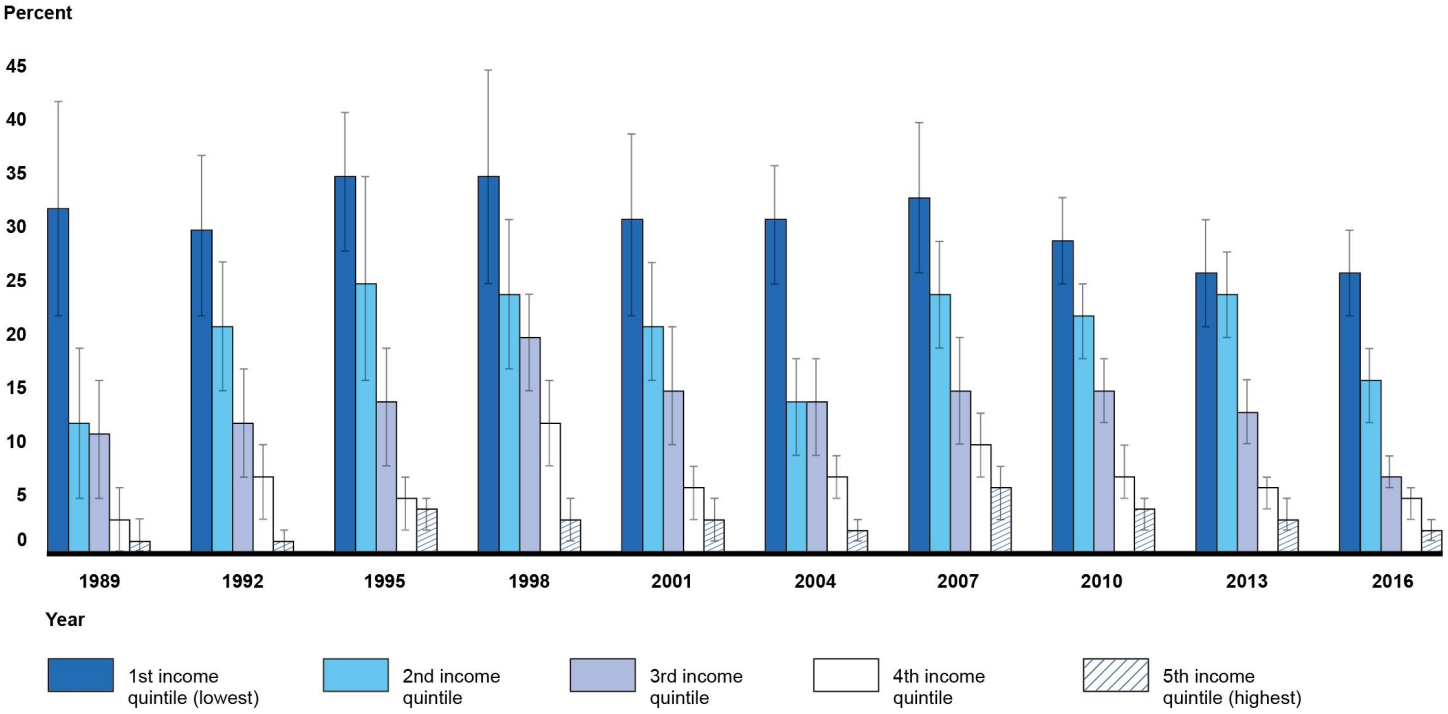
Data table for Figure 31: Estimated Median Housing Debt among Households with Any Housing Debt as those Born in 1931-1941 Aged from 1992-2016

	Median housing debt (in 2016 dollars)	Confidence intervals-low	Confidence intervals-high
Ages 51-61 (1992)	55,481	50,464	$60,498
Ages 53-63 (1994)	57,829	51,532	$64,127
Ages 55-65 (1996)	61,115	57,372	$64,859
Ages 57-67 (1998)	66,401	60,617	$72,185
Ages 59-69 (2000)	68,472	62,994	$73,950
Ages 61-71 (2002)	69,556	62,347	$76,766
Ages 63-73 (2004)	76,411	68,299	$84,524
Ages 65-75 (2006)	77,552	70,537	$84,568
Ages 67-77 (2008)	78,211	69,999	$86,424
Ages 69-79 (2010)	76,107	66,919	$85,296
Ages 71-81 (2012)	76,439	68,743	$84,135
Ages 73-83 (2014)	77,993	68,973	$87,013
Ages 75-85 (2016)	80,000	67,750	$92,250

Source: GAO analysis of 1992 through 2016 Health and Retirement Study data. | GAO-21-170

Note: The lines overlapping the bars represent 95 percent confidence intervals.

Figure 32: Percent of Older Households with Payment-to-Income Ratios above 40 Percent, by Income Quintile, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Figure 32: Percent of Older Households with Payment-to-Income Ratios above 40 Percent, by Income Quintile, 1989 to 2016

Year	1st income quintile (lowest) (percent)	Confidence Interval-low	Confidence Interval-high
1989	32	22	42
1992	30	22	37
1995	35	28	41
1998	35	25	45
2001	31	22	39
2004	31	25	36
2007	33	26	40
2010	29	25	33
2013	26	21	31
2016	26	22	30

Year	2nd income quintile (percent)	Confidence Interval - low	Confidence Interval - high
1989	12	5	19
1992	21	15	27
1995	25	16	35
1998	24	17	31
2001	21	16	27
2004	14	9	18
2007	24	19	29
2010	22	18	25
2013	24	20	28
2016	16	12	19

Year	3rd income quintile (percent)	Confidence Interval-low	Confidence Interval-high
1989	11	5	16
1992	12	7	17
1995	14	8	19
1998	20	15	24
2001	15	10	21
2004	14	9	18
2007	15	10	20
2010	15	12	18
2013	13	10	16
2016	7	6	9

Year	4th income quintile (percent)	Confidence Interval-low	Confidence Interval-high
1989	3	0	6
1992	7	3	10
1995	5	2	7
1998	12	8	16
2001	6	3	8
2004	7	5	9
2007	10	7	13
2010	7	5	10

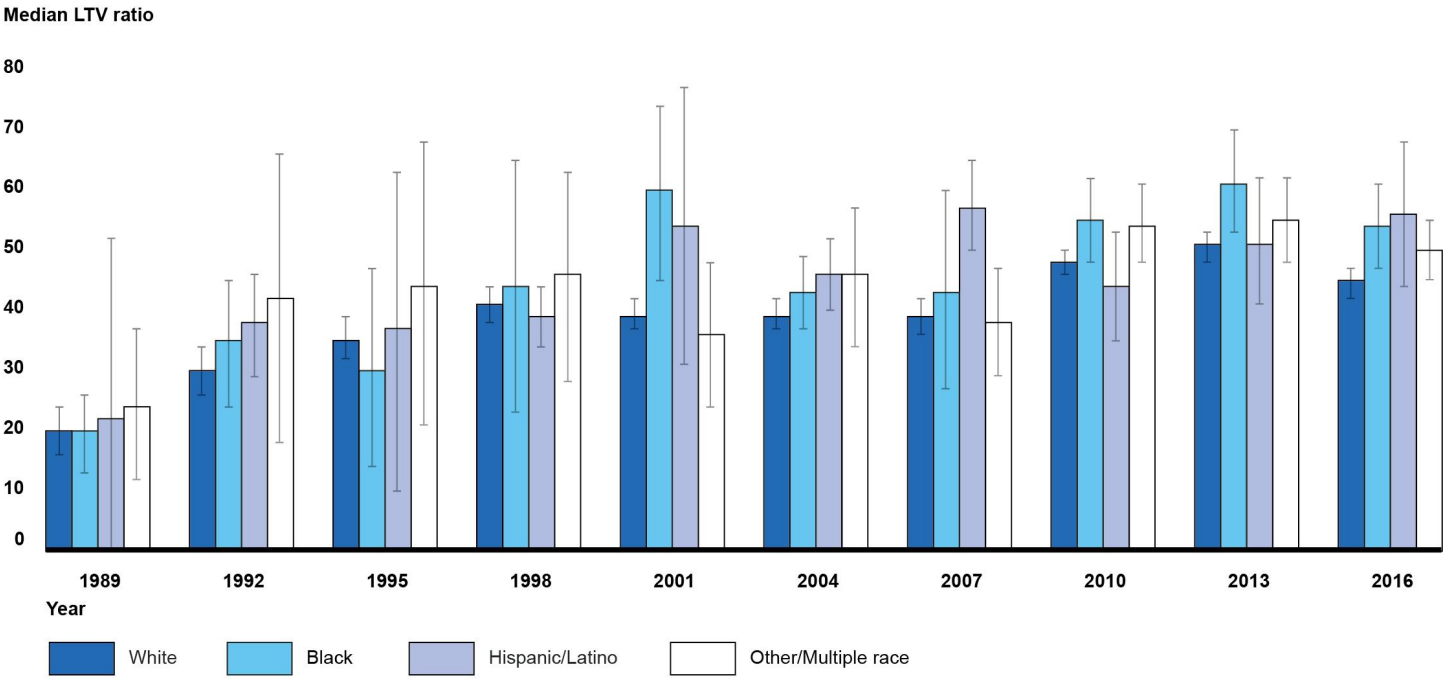
Year	4th income quintile (percent)	Confidence Interval-low	Confidence Interval-high
2013	6	4	7
2016	5	3	6

Year	5th income quintile (highest) (percent)	Confidence Interval - low	Confidence Interval - high
1989	1	0	3
1992	1	0	2
1995	4	2	5
1998	3	1	5
2001	3	1	5
2004	2	1	3
2007	6	3	8
2010	4	2	5
2013	3	2	5
2016	2	1	3

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: The lines overlapping the bars represent 95 percent confidence intervals. For each year, we rank-ordered older households by household income and then broke them into five even groups, or quintiles.

Figure 33: Median Loan-to-Value (LTV) Ratio for Older Households with Home Debt, by Race/Ethnicity Group, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Figure 33: Median Loan-to-Value (LTV) Ratio for Older Households with Home Debt, by Race/Ethnicity Group, 1989 to 2016

Year	Median LTV ratio for White households	Confidence Interval-low	Confidence Interval-high
1989	20	16	24
1992	30	26	34
1995	35	32	39
1998	41	38	44
2001	39	37	42
2004	39	37	42
2007	39	36	42
2010	48	46	50
2013	51	48	53
2016	45	42	47

Year	Median LTV ratio for Black households	Confidence Interval-low	Confidence Interval-high
1989	20	13	26
1992	35	24	45
1995	30	14	47
1998	44	23	65
2001	60	45	74
2004	43	37	49
2007	43	27	60
2010	55	48	62
2013	61	53	70
2016	54	47	61

Year	Median LTV ratio for Hispanic/Latino households	Confidence Interval-low	Confidence Interval-high
1989	22	0	52
1992	38	29	46
1995	37	10	63
1998	39	34	44
2001	54	31	77
2004	46	40	52
2007	57	50	65
2010	44	35	53
2013	51	41	62
2016	56	44	68

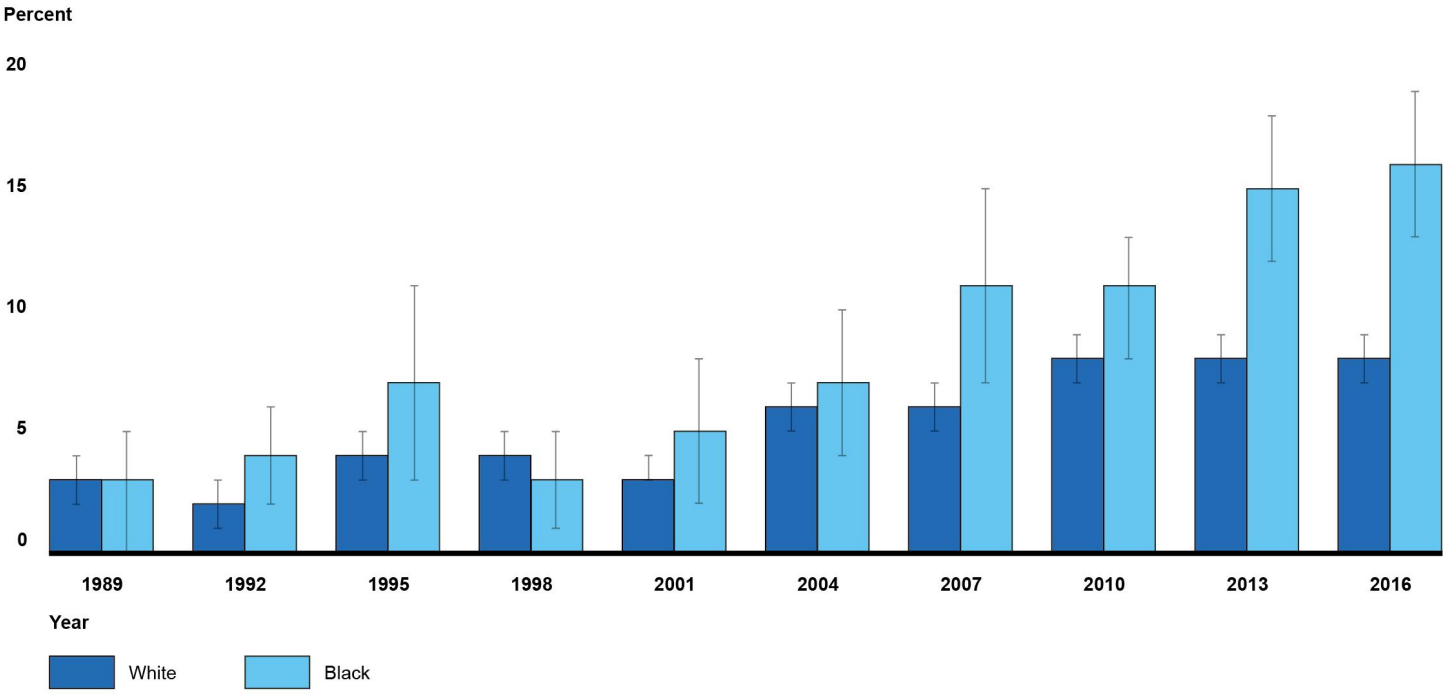
Year	Median LTV ratio for Other/Multiple race households	Confidence Interval-low	Confidence Interval-high
1989	24	12	37
1992	42	18	66
1995	44	21	68
1998	46	28	63
2001	36	24	48
2004	46	34	57
2007	38	29	47

Year	Median LTV ratio for Other/Multiple race households	Confidence Interval-low	Confidence Interval-high
2010	54	48	61
2013	55	48	62
2016	50	45	55

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: The lines overlapping the bars represent 95 percent confidence intervals. For this analysis, we used the Survey of Consumer Finances variable that categorizes the race and ethnicity of the household head as either White non-Hispanic (which we refer to as White), Black/African-American non-Hispanic (which we refer to as Black), Hispanic or Latino (which we refer to as Hispanic/Latino), or Other or multiple race (which includes Asian, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander).

Figure 34: Percent of Older Households with Student Loan Debt, by Race/Ethnicity Group, 1989 to 2016



Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Data table for Figure 34: Percent of Older Households with Student Loan Debt, by Race/Ethnicity Group, 1989 to 2016

Year	Percent of White households with student loan debt	Confidence Interval-low	Confidence Interval-high
1989	3	2	4
1992	2	1	3
1995	4	3	5
1998	4	3	5
2001	3	3	4
2004	6	5	7
2007	6	5	7
2010	8	7	9
2013	8	7	9
2016	8	7	9

Year	Percent of Black households with student loan debt	Confidence Interval-low	Confidence Interval-high
1989	3	0	5
1992	4	2	6
1995	7	3	11
1998	3	1	5
2001	5	2	8
2004	7	4	10
2007	11	7	15
2010	11	8	13
2013	15	12	18
2016	16	13	19

Source: GAO analysis of the Federal Reserve's Survey of Consumer Finances data. | GAO-21-170

Note: The lines overlapping the bars represent 95 percent confidence intervals. For this analysis, we used the Survey of Consumer Finances variable that categorizes the race and ethnicity of the

household head. We refer to White non-Hispanic households as White and Black/African-American non-Hispanic households as Black.

Appendix III: GAO Contact and Staff Acknowledgments

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Staff Acknowledgments

In addition to the contact named above, Michael Collins (Assistant Director), Charles Ford (Analyst in Charge), Andrew Emmons, Kirsten Lauber, Kathleen McQueeney, Jeffrey G. Miller, Joseph Silvestri, Jeff Tessin, and Adam Wendel made key contributions to this report. Also contributing to this report were Lucas Alvarez, Christina Bixby, Jason Bromberg, Alicia Cackley, Susan Irving, Courtney LaFountain, Ted Leslie, Kathryn Long, Rhiannon Patterson, Oliver Richard, Kelly Snow, Joy Solmonson, Curtia Taylor, Frank Todisco, and Emily Weisenberger.

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