July 2023

OLDER WORKERS

Retirement Account Disparities Have Increased by Income and Persisted by Race Over Time

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Why GAO Did This Study

In 2022, the tax incentives for workers to save in tax-preferred retirement accounts cost the federal government nearly $200 billion in forgone revenue, according to the Department of the Treasury. Members of Congress and others are concerned these incentives accrue primarily to high-income workers and not low-income workers. Knowing the distribution of retirement account balances can help illuminate the retirement security of households of different incomes.

GAO was asked to examine disparities in the distribution of retirement account balances. This report describes, among other issues, (1) how the distribution of retirement account balances among older households by income changed over time; (2) factors associated with the distribution of retirement account balances among older households by income; and (3) how selected strategies meant to increase retirement savings affect high-, middle-, and low-income workers.

GAO examined retirement account balances for older workers' households (age 51 to 64) over time using 2007-2019 SCF data. GAO analyzed 2018 HRS data to identify factors associated with the balance distribution. Both datasets were the most recent data available at the time of GAO's review. GAO crafted illustrative scenarios to show the effects of four strategies meant to increase retirement savings using SCF, HRS, and 2018 Internal Revenue Service Statistics of Income data. GAO selected these strategies with input from agency officials, federal reports, and experts. GAO also reviewed relevant literature and interviewed retirement security experts.

View GAO-23-105342. For more information, contact Tranchau (Kris) T. Nguyen at (202) 512-7215 or NguyenTT@gao.gov.

What GAO Found

Disparities between low-income and high-income older workers' retirement accounts were greater in 2019 than in 2007, according to GAO's analysis of Survey of Consumer Finances (SCF) data on households 51 to 64. For example, about one in 10 low-income households had a retirement account balance in 2019 compared to about one in five in 2007, while about nine in 10 high-income households had a balance through the period. For those with a balance, the median balance was higher for high-income households over the period, while any change for the other income groups was not statistically significant. Racial disparities also persisted over the period. A higher share of White households had a balance than those of all other races. Also, White households had about double the median balance as households of all other races.

Estimated Retirement Account Balances for Households Age 51-64 with a Balance, by Income
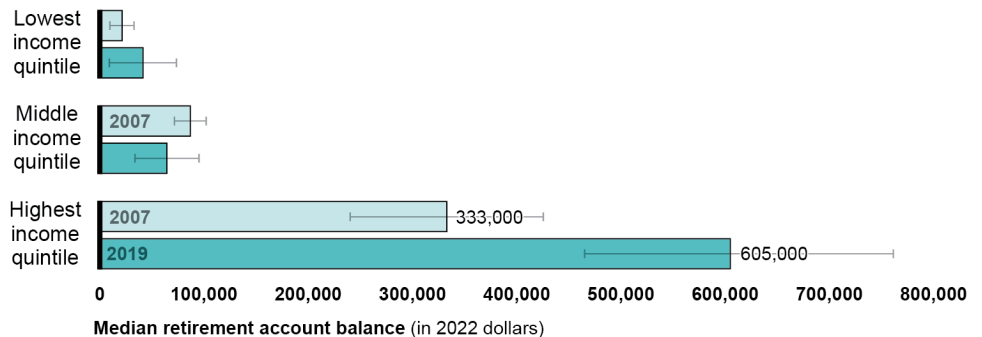
Source: GAO analysis of Survey of Consumer Finances data. | GAO-23-105342

Note: Brackets represent 95 percent confidence intervals. Overlapping brackets for the lowest and middle income quintiles indicate no statistically significant difference between 2007 and 2019.

Income, job-related factors, and race were strongly related to disparities in older worker households' retirement account balances, according to GAO's analysis of 2018 Health and Retirement Study (HRS) data. High-income households contributed a larger percentage of their pay than low-income households (about 8 and 5 percent) and received larger employer contributions. Households with higher income, longer job tenure, and a college education tended to have larger balances. Households of all other races than White and households with children had about 28 and 20 percent smaller balances, respectively.

The effects of selected strategies meant to increase workplace retirement savings vary across workers of different income groups, according to illustrative scenarios using GAO's analysis of SCF and HRS data. For example, automatic enrollment can increase participation of low-income older workers with access up to about one-third. However, only about 23 percent of low-income workers have access to a workplace retirement account. Further, they may choose not to participate, for example, if they have limited disposable income or expect Social Security to provide most of their retirement income. In contrast, increasing contribution limits for workplace retirement accounts almost entirely benefits high-income workers, as about 23 percent of high-income compared with about 3 percent of middle-income older workers contribute the individual limit.

—— **United States Government Accountability Office**

Contents

Figures

Abbreviations

AGI	Adjusted gross income
CBO	Congressional Budget Office
IRA	individual retirement account
IRS	Internal Revenue Service
HRS	Health and Retirement Study
NEST	National Employment Savings Trust
OECD	Organisation for Economic Co-operation and Development
RMD	Required minimum distribution
Saver's Credit	Retirement Savings Contributions Credit
SOI	Statistics of Income
SCF	Survey of Consumer Finances

U.S. GOVERNMENT ACCOUNTABILITY OFFICE

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July 27, 2023

The Honorable Sheldon Whitehouse
Chairman
Committee on the Budget
United States Senate

The Honorable Bernard Sanders
Chairman
Health, Education, Labor, and Pensions Committee
United States Senate

The estimated federal tax expenditure, or annual net revenue forgone, for tax-preferred retirement accounts was over $195 billion in 2022, according to the Department of the Treasury.[1] Members of Congress and others have raised concerns that the tax expenditure may primarily benefit high-income households and do relatively little to help low-income households save for retirement. In 2016, we reported that low-income households were less likely than high-income households to have access to a workplace retirement account or to have retirement savings.[2] Further, in 2019 we reported that disparities in income and overall wealth among older households became greater over the past 3 decades.[3] The rise of retirement accounts that place the primary responsibility on individuals to participate in, contribute to, and manage their balances may increase the challenges faced by various households to save for retirement. Knowing the distribution of retirement account balances is important for

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[1]Department of the Treasury, Office of Tax Analysis, "Tax Expenditures" (Washington, D.C.: Mar. 6, 2023), https://home.treasury.gov/policy-issues/tax-policy/tax-expenditures. The tax expenditure annual cost is the income tax revenue that the government will not collect because of activities undertaken in calendar year 2022, which cause payment deferrals or other long-term receipt effects. In this case, we report the present value calculation of tax expenditures that follow from 2022 tax deferred and after-tax contributions that workers and employers made to defined contribution accounts and individual retirement accounts. These contributions cause a deferral of income tax payments on wages in 2022 and on subsequent investment earnings in later years, though taxes in the future will be due on amounts distributed that are attributable to the pre-tax contributions (including earnings).

[2]GAO, *Retirement Security: Low Defined Contribution Savings May Pose Challenges*, GAO-16-408 (Washington, D.C.: May 5, 2016).

[3]GAO, *Retirement Security: Income and Wealth Disparities Continue through Old Age*, GAO-19-587 (Washington, D.C.: Aug. 9, 2019).

policymakers to gain a better understanding of the retirement security of households of different income levels.

You asked us to examine disparities in the distribution of retirement account balances for older Americans. In this report we describe (1) how the distribution of retirement account balances among older households by income groups has changed over time; (2) what factors are associated with the distribution of retirement account balances among older households by income groups; (3) how selected strategies meant to increase retirement savings affect high-, middle-, and low-income workers; and (4) how selected countries encourage retirement account savings by low- and middle-income workers.

To describe how the distribution of retirement account balances has changed over time, we analyzed the Survey of Consumer Finances (SCF), starting with 2007 data through 2019, the most current data at the time of our review. The SCF surveys a different representative sample of households every 3 years. It captures detailed information on the financial situation of these households and oversamples higher-income households, which allows deeper analysis of wealthier households' retirement account balances and other assets. To form income groups for this analysis, we estimated income quintiles for older households (ages 51 to 64).[4] We refer to the lowest fifth as "low-income" and the highest fifth as "high-income."

To describe factors associated with the distribution of retirement account balances, we analyzed 2018 RAND Health and Retirement Study (HRS) data, the most recent available. HRS surveys a representative sample of households aged 51 and older. HRS captures detailed information on households' demographics, health status, work histories, and other factors. To form income groups for this analysis of older households (ages 51 to 64), we estimated income terciles.[5] We refer to the lowest third as "low-income," the middle third as "middle-income," and the highest third as "high-income."

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[4]Here and elsewhere in the report, we refer to households aged 51 to 64 as "older households" or "older workers" for readability, though we recognize that all members of the household may not be working.

[5]As the HRS data has a limited sample size of older households with a retirement account balance, we used income terciles rather than quintiles.

To select strategies meant to increase retirement savings, we reviewed reports from the Congressional Budget Office and the Congressional Research Service. We also interviewed agency officials from the Department of Labor, Department of the Treasury and its Internal Revenue Service, and the Social Security Administration. The four strategies we selected are automatic enrollment, automatic escalation, increased contribution limits, and the Retirement Savings Contributions Credit (commonly referred to as the Saver's Credit).[6] We then illustrated the effects of these strategies on different income groups using data from the SCF, HRS, and the Internal Revenue Service's Statistics of Income (SOI). To illustrate automatic enrollment, we used 2019 SCF data to estimate workplace retirement account access and participation rates to calculate the maximum possible participation rate increase. To illustrate automatic escalation, we analyzed 2018 HRS data on contribution rates and income to estimate yearly contribution amounts. We then calculated the resulting cumulative savings increase over a 10-year time period assuming a 6 percent rate of return on investment.[7] To illustrate increased contribution limits, we analyzed 2018 HRS data to calculate the percentage of households with older workers contributing at least the limit.[8] For the Saver's Credit, we calculated the percentage of households claiming the credit using 2018 SOI data.

Throughout the report, we define retirement account balances as the sum of workplace retirement accounts (e.g., 401(k)-type plans) and individual retirement accounts (IRAs). All comparisons are statistically significant, unless noted otherwise. All dollar values are adjusted for inflation to 2022 dollars unless otherwise noted. For each of the datasets used in our study, we reviewed documentation and tested for outliers and missing

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[6]The strategies we selected are not a complete list of strategies meant to increase retirement savings, but six of seven experts we interviewed agreed they cover a variety of existing strategies meant to increase retirement savings that affect a variety of income levels. The other expert did not comment on the question. Automatic escalation is when a workers' contribution rate automatically increases over time. The Saver's Credit is a nonrefundable tax credit for certain taxpayers who contribute to retirement accounts.

[7]We chose a 6 percent rate of return based on a review of several professional economic forecasts.

[8]Specifically, we identified which households (the total of respondent and spouse) contributed at least the (1) limit on individual employee pre-tax and Roth contributions and, separately, (2) limit on catch-up contributions for workers aged 50 and older. Because of rounding and data limitations, we were unable to identify which individuals (respondent or spouse) contributed exactly at the limit.

data or variables. We determined that these data were sufficiently reliable for the purposes of this report.

Finally, to describe how selected countries encourage retirement account savings by low- and middle-income workers, we conducted case study reviews of Germany, New Zealand, and the United Kingdom. All of these countries have voluntary retirement account systems, though none of the retirement systems are directly comparable to the U.S. To select countries, we obtained recommendations from U.S. agency officials and Organisation for Economic Co-operation and Development (OECD) retirement account experts, and reviewed GAO and OECD reports. To conduct the case study reviews, we reviewed prior GAO and OECD reports, and interviewed international retirement representatives. See appendix I for additional information on our scope and methodology.

We conducted this performance audit from July 2021 to July 2023 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.

Background

Individuals are increasingly responsible for their retirement security, as the private sector has made a marked shift away from employers offering traditional defined benefit pension plans to retirement accounts over the last several decades.[9] This shift has increased the risks and responsibilities for individuals planning and managing their retirement. For example, defined benefit pension plans traditionally promise to provide a benefit for the life of the participant, based on a formula that typically takes into account factors such as a worker's salary, years of service, and

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[9]For more information, see GAO, *The Nation's Retirement System: A Comprehensive Re-Evaluation is Needed to Promote Future Retirement Security*, GAO-18-118SP (Washington, D.C.: Oct. 2017).

age at retirement.[10] With retirement accounts, participants must often decide whether to participate, how much to contribute, and how to invest their savings to balance risks and returns. While accumulating savings, individuals may face challenges keeping their savings in their retirement accounts (i.e., leakage) when other needs arise or their life circumstances change, such as when faced with a health emergency. Ultimately, they must decide how to draw down their retirement savings to last throughout their lifetime, the length of which is uncertain for most individuals.

As we reported in 2019, an estimated 29 percent of households aged 55 and over had neither retirement account balances nor defined benefit pension plans in 2016. An additional 20 percent of households aged 55 and over had only a defined benefit pension plan and 26 percent had only a retirement account balance.[11]

Workplace Retirement Accounts

One major avenue to accumulate retirement savings is through workplace retirement accounts, which include, for example, 401(k), 403(b) accounts, and the federal Thrift Savings Plan.[12] Participating workers can generally make tax-deferred contributions up to $22,500 per year as of 2023, with additional catch-up contributions up to $7,500 for workers aged 50 and

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[10]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). Households primarily rely on three main sources of retirement income: Social Security, defined benefit pensions and retirement savings accounts, and household savings. Social Security's Old-Age and Survivors Insurance program provides benefits to retired workers, their families, and survivors of deceased workers. Social Security retirement benefits replaces a higher percentage of a worker's monthly earnings for lower-earners than for higher-earners. Therefore, higher-earners must save more than lower-earners in order to replace a similar percentage of their income. (For additional information on defined benefit plans and Social Security retirement benefits, see appendix III). Household savings are any other non-retirement plan savings and investments (e.g., home equity).

[11]See GAO, *Retirement Security: Most Households Approaching Retirement Have Low Savings, an Update*, GAO-19-442R (Washington, D.C.: Mar. 26, 2019).

[12]401(k) plans were introduced in 1978 under section 401(k) of the Internal Revenue Code. 403(b) plans are often sponsored by public schools and certain tax-exempt organizations, such as public colleges and universities, and certain church-affiliated organizations. The Thrift Savings Plan is available to federal workers, including congressional employees and members of Congress, members of the judicial branch, members of the uniformed services, and postal employees.

over.[13] These amounts are adjusted annually for inflation. Recent legislation made changes to this and other aspects of workplace retirement accounts (see text box).

Forthcoming Automatic Enrollment, Automatic Escalation, and Contribution Limits Changes (SECURE 2.0 Act of 2022)

Automatic Enrollment and Automatic Escalation: Beginning in 2025 new 401(k) and 403(b) plans will be required to automatically enroll eligible workers in retirement accounts. There are exceptions for small businesses with 10 or fewer employees, businesses that are less than 3 years old, church plans, and governmental plans. Generally, the initial contribution rate for enrolled participants must be at least 3 percent and not more than ten percent unless the participant specifically elects to have contributions made at a different percentage. Plans will be required to increase the contribution rate of participants by 1 percentage point each year until the contribution rate reaches a minimum of 10 percent – with a maximum increase to 15 percent. Participants may opt out and employers will not be required to contribute to workplace retirement accounts.

Increased Catch-up Contribution Limits: Beginning in 2025 the catch-up contribution limit applicable to workplace retirement accounts for individuals ages 60, 61, 62, and 63 will be raised to the greater of $10,000 or 50 percent more than the regular catch-up limit (which is applicable to individuals age 50 and over). The increased amounts will be indexed for inflation starting in 2026.

Beginning in 2024 the catch-up limit for individual retirement accounts, which is currently $1,000, will be indexed for inflation.

Employers that choose to sponsor workplace retirement accounts may also provide employer contributions to those accounts. An employer may match the worker's contributions or may contribute without worker contributions. Depending on the program features that employers determine, workers who leave a job may automatically keep all employer contributions to their accounts (and the investment returns based on these contributions) or may do so only if they have remained with the employer for a period of time, referred to as "vesting."

Access to a workplace retirement account depends on the employer offering such a program and worker eligibility (see fig. 1). Depending on the program, certain workers may not be eligible, for example, if they are under 21 or have not been at their employer longer than a specified amount of time. Workers with access may opt to participate in the program. Some programs automatically enroll participants and set default contribution rates and investment portfolios (automatic enrollment), and some automatically escalate the contribution rate (automatic escalation).

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[13]A Roth account is a different type of retirement account in which contributions are made after-tax but investment earnings and distributions after age 59 ½ are generally tax-free. Employees may make non-Roth after-tax contributions in excess of this limit if the employer's plan allows it. While the contribution is included in the employee's income, they may still benefit from tax-deferred growth. This report focuses on non-Roth, or "traditional" retirement accounts, in part because traditional IRAs and traditional workplace retirement accounts are the most common types owned by U.S. households.

Workers may opt out, as set forth by each program's guidelines. When participating workers leave their employer prior to retirement, they may choose to leave their account balance in the plan, transfer the account balance to an IRA or another workplace retirement account ("roll over") or take the balance out of the account ("cash out") and pay taxes owed, among other options.

Figure 1: Access to and Participation in Workplace Retirement Accounts

Account offered	Eligibility
Employer makes a retirement account available to workers through the workplace	Individual worker able to participate based on the provisions of the program

Access
Employer offers a plan and worker is eligible

Participation
Workers with access may choose to participate either actively or passively (i.e., via automatic enrollment)
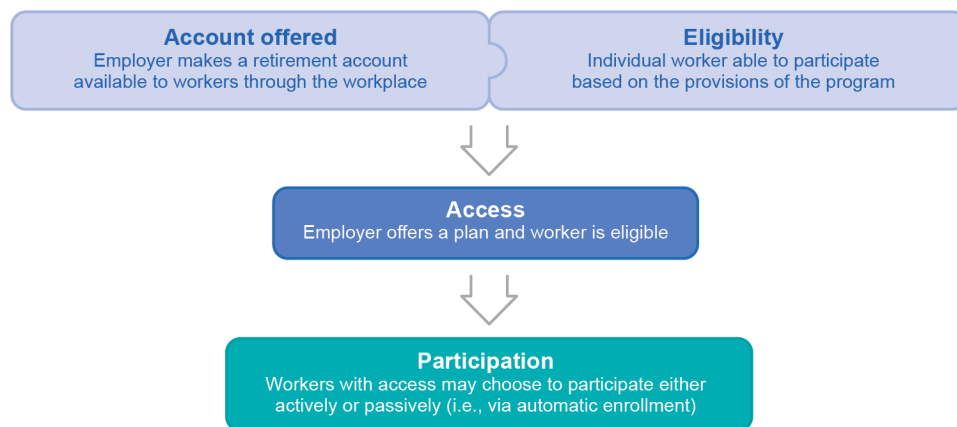
Source: GAO analysis of Department of Labor information. | GAO-23-105342

We reported in 2016 that about 61 percent of working households have access to workplace retirement savings accounts, according to our analysis of 2013 SCF data.[14] Using the same 2013 data, we found that lower-income workers are less likely to have access than higher-income workers. We also found that about 86 percent of those with access participated in their workplace retirement account. This indicates that limited access to workplace retirement accounts continues to be an impediment to expanding the percentage of households with retirement savings.

Individual Retirement Accounts

Another avenue to accumulate retirement savings is through an individual retirement account (IRA). In such accounts, individuals can generally contribute up to $6,500 per year in 2023, with additional catch-up contributions of up to $1,000 for individuals age 50 or older. The annual

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[14]GAO-16-408. We update this estimate using 2019 SCF data in this report.

contribution limit is adjusted annually for inflation while the catch-up limit will be adjusted annually for inflation starting in 2024.

Unlike workplace retirement accounts, individuals generally take independent action to open an IRA.[15] Accordingly, the IRA remains in the individual's control regardless of job change. While an estimated 15 percent of households contribute to IRAs, IRAs hold an increasingly large share of overall retirement savings nationwide, according to the Investment Company Institute.[16] This is in part because they are a key vehicle for "rollovers" from workplace retirement accounts, according to the Investment Company Institute. The Investment Company Institute estimated that IRA assets totaled $12.5 trillion, while workplace retirement account balances totaled $9.8 trillion at the end of March 2023.[17]

Tax Treatment and Credits for Retirement Savings

The federal government provides tax advantages to encourage retirement savings. For example, taxpayers are allowed to defer taxes on contributions to, and investment returns on contributions to, certain types of retirement accounts until the funds are withdrawn. Typically, withdrawals from retirement accounts are subject to an additional 10 percent tax if withdrawn before age 59 ½. There is no lifetime limit on the amount that workers can accumulate in their retirement accounts, but individuals must begin to withdraw assets from most workplace retirement accounts by age 73.[18]

While nearly anyone can open a traditional IRA, there may be income-based limits on the amount of tax deduction for contributions certain individuals can claim. For example, a married individual whose spouse is covered by a workplace retirement account and who files a joint tax return

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[15]While not as common, there are also state-run and employer-provided IRAs.

[16]The Investment Company Institute surveyed 3,232 IRA owners in June 2022 using a probability panel that was designed to be representative of the U.S. population. They reported that the estimates are within 1.7 percentage points at the 95 percent confidence level. Investment Company Institute, *The Role of IRAs in US Households' Saving for Retirement, 2022*; ICI Research Perspective: Vol. 29, No. 1 (Washington, D.C.: Feb. 2023).

[17]Investment Company Institute, *Release: Quarterly Retirement Market Data, First Quarter 2023* (Washington, D.C.: June 14, 2023).

[18]Prior to December 31, 2022, individuals must have begun to withdraw assets by age 72.

with a modified adjusted gross income at or above $228,000 per year in 2023 is not able to take a deduction for contributions to a traditional IRA.

Through the Saver's Credit, certain low- and middle-income tax filers may be eligible for a nonrefundable federal income tax credit up to $2,000 per year for qualified retirement savings.[19] The income limit is $73,000 for households with a filing status of married filing jointly in 2023, above which the household is not eligible for the credit (see fig. 2). The income thresholds are adjusted annually for inflation.

Figure 2: Saver's Credit Amount That Tax Filers Can Claim, 2023

Maximum credit amount (in dollars)
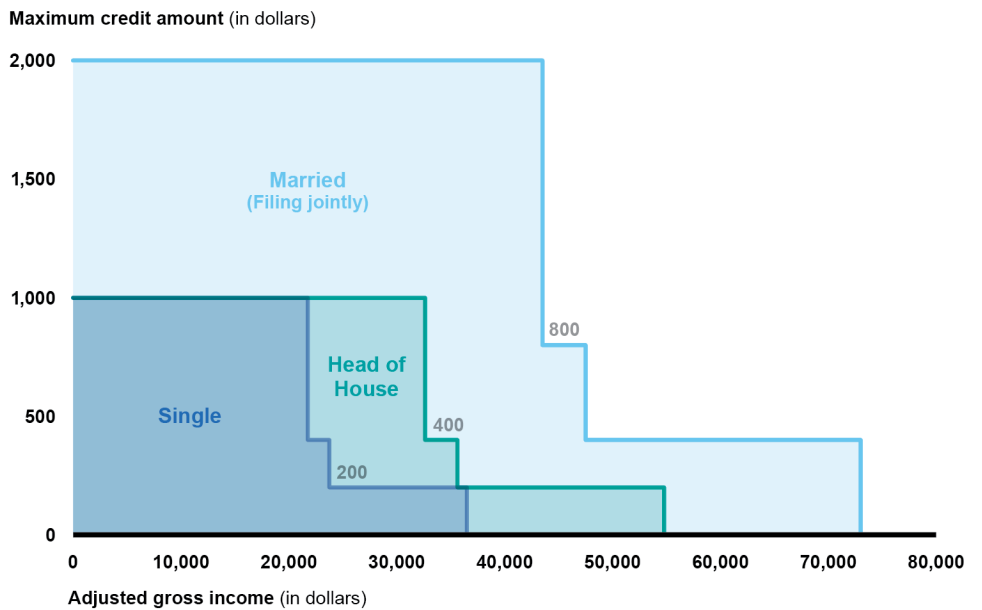
Source: Internal Revenue Service. | GAO-23-105342

Note: The Retirement Savings Contributions Credit ("Saver's Credit") is a nonrefundable federal income tax credit for qualified retirement savings. The same income thresholds and credit amounts apply for single individuals as for married individuals filing separately and qualifying widow(er). The income thresholds are adjusted annually for inflation.

[19]Beginning in 2027, the Saver's Credit will become the Saver's Match.

Retirement Account Disparities between High- and Low-Income Older Households Increased Over Time

Share of Low-Income Households with Retirement Account Balances Declined from 2007 to 2019

The percentage of low-income older households with a retirement account balance in 2019 was less than half of what it was in 2007 (about 10 percent in 2019 and 21 percent in 2007), according to our analysis of SCF data (see fig. 3).[20] Among higher income older households, there was no detectable difference in the percentage of households with a retirement account in 2019 compared to 2007, except for the second to highest income group. The percentage of households with a retirement account balance in that income group was lower in 2019 compared to 2007 (about 77 percent in 2019 and 89 percent in 2007).

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[20]For our analysis, we divided older households in the data into five groups, or quintiles, based on income. The low-income group is the first quintile of the income distribution (median income of about $19,100), and the high-income group is the fifth quintile of the income distribution (median income of about $282,000). Since the SCF is cross-sectional, and each year of data in our analysis used a different set of households, we created a new income distribution for each year of data. Therefore, each quintile includes different sets of households over time. We analyzed households in which the reference person is between 51 and 64 years old, who was generally the respondent to the survey. For simplicity, we call these households "older households." This definition allowed us to use the Summary Extract data, as opposed to the public use microdata.

Figure 3: Estimated Percentage of Older Households with a Retirement Account Balance by Income Quintile, 2007 to 2019
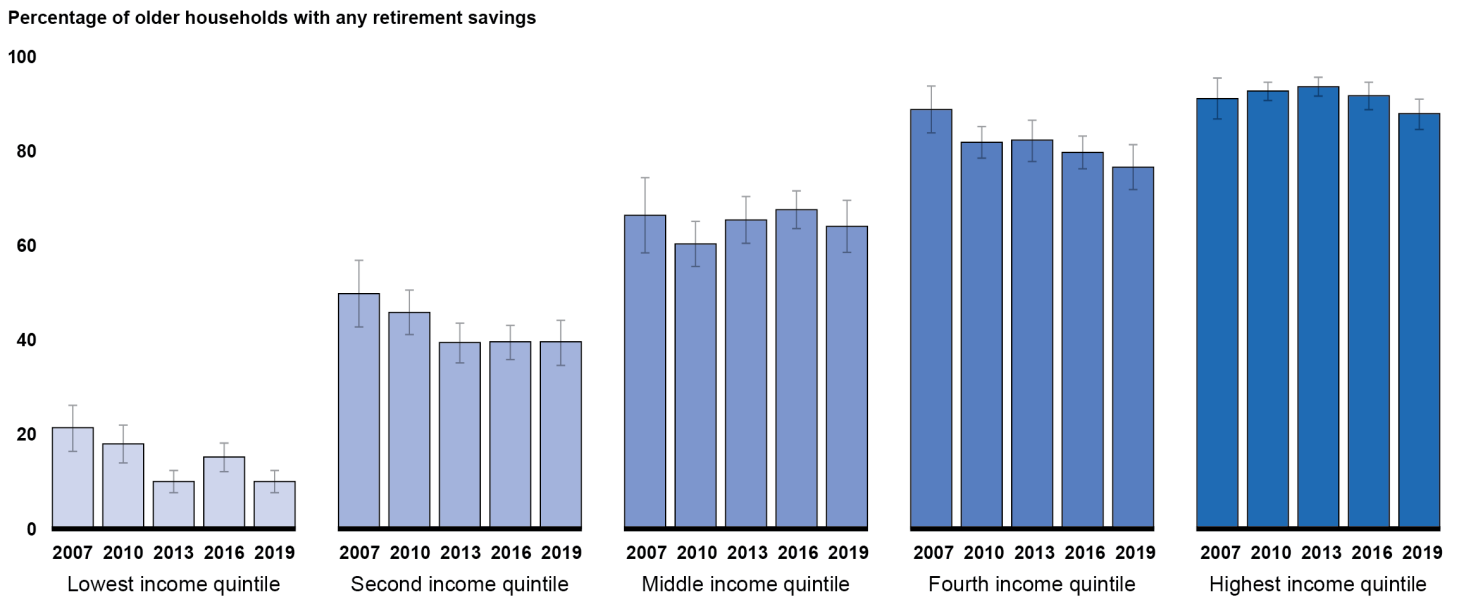
Percentage of older households with any retirement savings

Source: GAO analysis of Survey of Consumer Finances data. | GAO-23-105342

Notes: The bars reflect the estimated percentage of households aged 51 to 64 with a retirement account balance greater than zero. The lines overlapping the bars represent the 95 percent confidence intervals.

Other research analyzing SCF data similarly found that the percentage of households eligible for workplace retirement accounts who participated was persistently lower for those in the bottom fourth of the income distribution than the top fourth over this period.[21] This research also found participation of eligible households in the bottom fourth of income was substantially lower in 2010 than in 2007 (about 36 and 48 percent)–as 2010 is the survey year capturing the Great Recession. (See text box.)

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[21]C. Copeland, "The Status of American Families' Accumulations in Individual Account Retirement Plans and Differences by Race/Ethnicity," *Employee Benefit Research Institute Issue Brief*, No. 527 (Mar. 11, 2021): 8.

Recessions and the Retirement Security of Older Americans

Recessions can affect households' resources in various ways. While there was one recession during the period of our analysis (2007-2009), which the 2010 Survey of Consumer Finances captures, the data we analyzed did not allow us to disentangle the direct effects of the recession on individual households' income and, therefore, their retirement security. However, research on the 2007-2009 recession spotlights a few examples of how recessions could affect older Americans' retirement savings and suggests there could be varying effects across the income distribution.

For example, others' research shows the 2007-2009 recession affected high-income workers disproportionately because they were more likely to hold riskier assets, such as stocks, and the recession was rooted in a financial crisis. However, even though the effects on wealth may have been disproportionate, the effects may have been felt across the income distribution. For example, many families saw their wealth decline during this recession. The decline in housing values surrounding this recession affected many low- and moderate-wealth families, as home equity was a large share of their total assets. To the extent that home equity is an important source of wealth for older Americans, declines in housing values could create financial difficulties.

In addition, our prior work has demonstrated that when older workers lose their job, like in a recession, it takes them longer to find another job. This in turn could affect their retirement security. In 2012, we found long-term unemployment can put older workers at risk of deferring needed medical care, losing their homes, and accumulating debt. Also, long-term unemployment can substantially diminish an older worker's future retirement income in a couple of ways. First, it can force a worker to stop working and stop saving for retirement earlier than the worker had planned. Second, long-term unemployment can lead individuals to draw down their retirement accounts to cover living expenses while they are unemployed, which was a common life experience described by focus group participants with whom we spoke.

In addition to a decreased share of low-income households with a retirement account balance, the share of low-income households with a defined benefit pension or who owned a home was also lower in 2019 compared to 2007. Because retirement accounts, defined benefit pension, and home-ownership all represent potential retirement resources, their decreasing prevalence among low-income households has implications for the future retirement security of low-income households. About 10 percent of low-income households had a defined benefit pension in 2019, which was about half the percentage in 2007.[22] Likewise, a considerably smaller share of low-income households owned a home in 2019 than in 2007 (about 40 percent compared to 57 percent).[23] In contrast, the share of high-income households that owned a home or had a defined benefit pension remained relatively unchanged

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[22]Similarly, about 18 percent of low-income households had either a retirement account balance or a defined benefit pension in 2019, compared to 36 percent in 2007.

[23]This analysis did not include future income from Social Security. In 2017, Social Security benefits represented about 83 percent of total income for retirement age individuals in the lowest income quintile compared to about 11 percent of total income for retirement age individuals in the highest income quintile. See Congressional Research Service, Retirement Income Security: Issues and Policies (Washington, D.C.: Feb. 17, 2023).

over the period, similar to the unchanged share that had a retirement account balance.

Median Retirement Account Balances Increased Substantially for Highest-Income Households

Among those with a retirement account balance, the median balance was substantially larger in 2019 than in 2007 for high-income households. For all but the highest income group, there was no detectable difference between the median balances in 2019 and 2007 (see fig. 4).[24] The median balance for high-income households compared to middle-income households was significantly greater over this period.[25] Specifically, in 2019 the median for high-income households was about 9 times that of middle-income households (about $605,000 and $64,300, respectively). While in 2007, the median for high-income households was about 4 times that of middle-income households (about $333,000 and $86,800, respectively).

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[24]If a comparison is not statistically significant at the 95 percent level we say there was "no detectable difference" or "statistically unchanged".

[25]The ratio of the median balance for high-income households was about 15 times that of low-income households in 2019, which is relatively unchanged from about 16 times in 2007. The median balance for low-income households was about $41,400 in 2019 which was statistically unchanged from about $21,400 in 2007. However, the percentage of low-income households with any balance was significantly lower in 2019 than in 2007.

GAO-23-105342 Retirement Account Disparities

Figure 4: Estimated Median Retirement Account Balances for Older Households with a Balance, by Income Quintile in 2022 dollars, 2007 to 2019
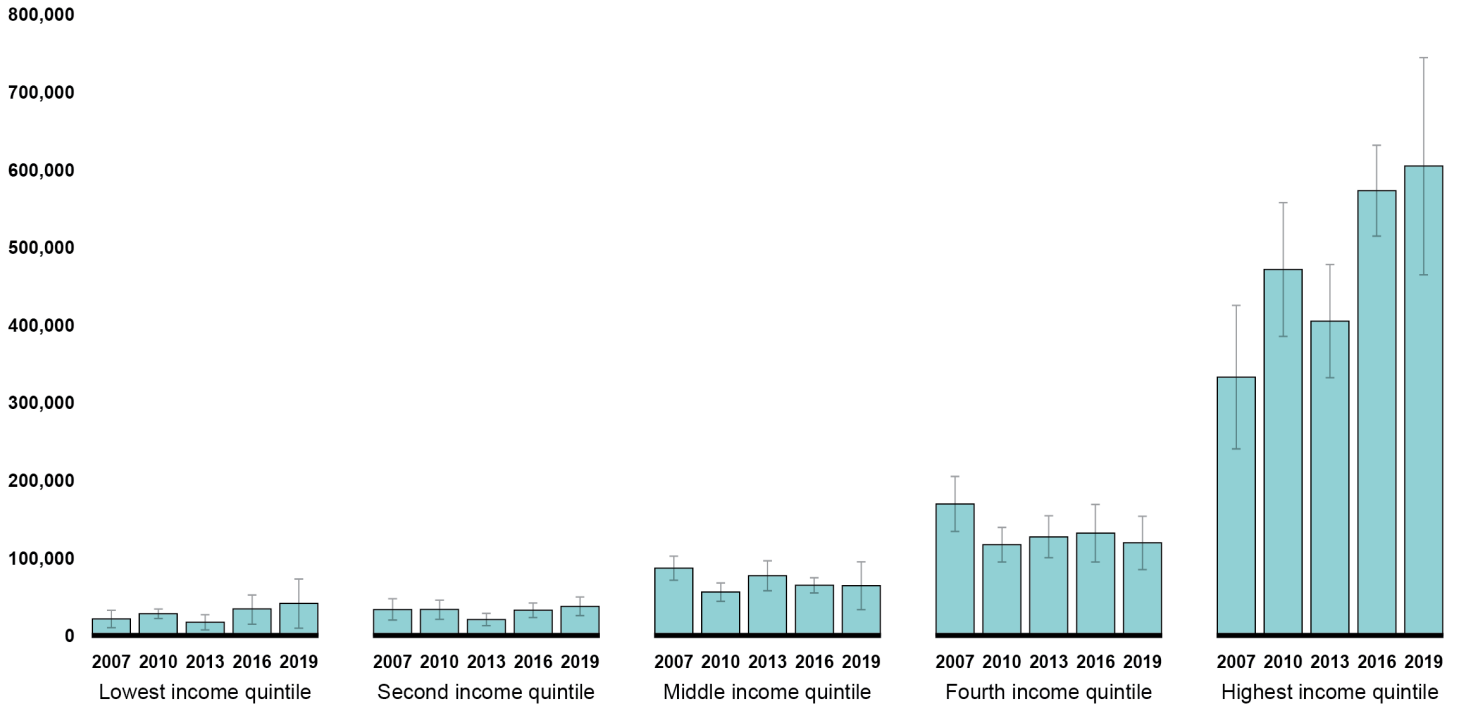
Median retirement account balance (in 2022 dollars)

Source: GAO analysis of Survey of Consumer Finances data. | GAO-23-105342

Notes: The bars reflect the median retirement account balance, conditional on having a balance. The lines overlapping the bars represent the 95 percent confidence intervals. We divided older households aged 51 to 64 into five groups, or quintiles, based on income. Income is aggregated across all sources, such as wages, Social Security benefits, or withdrawals from retirement accounts.

A 2021 Congressional Budget Office report found high-income workers receive a disproportionate share of the tax expenditure for defined benefit pensions and retirement accounts (see text box).

High-Income Households Predominately Benefit from Tax Expenditures for Retirement Plans

A Congressional Budget Office (CBO) study estimated the distribution of tax expenditures for pensions and retirement savings accounts by income in 2019 and found the benefits largely accrue to high-income households.[a] For example:

- Households in the top fifth income group received over 60 percent of the benefits of the income tax expenditure. In contrast, the bottom two income groups combined received under 5 percent of the benefits.
- Highest income households' benefits from the income tax expenditure were about 1.5 percent of their income, while middle-income and lowest income households' benefits were about 0.8 percent and 0.2 percent of their income, respectively.
- More highest-income households (about 77 percent) than middle-income or lowest-income households received any benefit from the tax expenditure (about 46 percent and 19 percent, respectively).

According to CBO, higher-income taxpayers tend to benefit more from the exclusion for pensions and retirement savings accounts for three main reasons:

1. High-income taxpayers are more likely to be employed by organizations that offer pensions plans and contribute to retirement savings accounts.
2. The generosity of retirement plans often increases with income, up to a certain income threshold.
3. High-income taxpayers are subject to higher marginal tax rates. For instance, for each dollar contributed to a retirement account, a taxpayer subject to the highest marginal tax rate deducts 37 cents compared to 10 cents for a taxpayer subject to the lowest tax rate.

Source: GAO summary of Congressional Budget Office. The Distribution of Major Tax Expenditures in 2019. Oct. 2021. | GAO-23-105342

[a]CBO estimated this tax expenditure using a present-value method, which shows the value of forgone taxes over time that would result from current-year contributions.

Racial Disparities in the Percentage of Households with Retirement Account Balances and Median Balances Persisted from 2007 through 2019

The share of older White households with a retirement account balance was significantly greater than the share of households of all other races from 2007 through 2019.[26] For example, about 63 percent of White households had a retirement account balance in 2019 compared to about 41 percent of households of all other races than White. For Black or African American households in particular, there was a significant decline from 50 percent with a retirement account balance in 2007 to 35 percent in 2016 (see fig. 5).[27]

[26]All Other Race households include Black or African American, Hispanic or Latino, and Other households. The SCF combines multiple groups to create the Other category, which include Asian, American Indian, Alaska Native, Native Hawaiian, Pacific Islander, Other race, and all respondents reporting more than one racial identification. The SCF does not allow estimates for particular groups within the Other category.

[27]About 39 percent of Black or African American households had a retirement account balance in 2019, which was not detectably different from 2007.

Figure 5: Estimated Percentage of Older Households with a Retirement Account Balance by Race and Ethnicity, 2007 to 2019
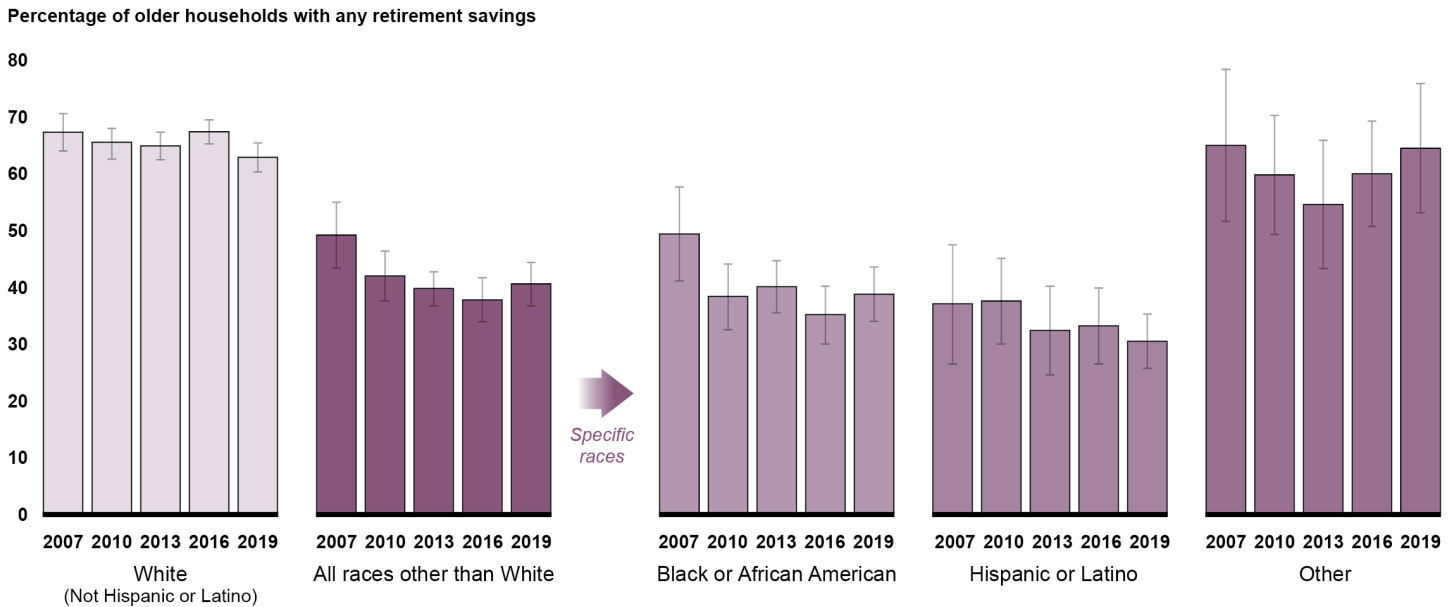
Percentage of older households with any retirement savings

Source: GAO analysis of Survey of Consumer Finances data. | GAO-23-105342

Notes: The bars reflect the estimated percentage of households aged 51 to 64 with a retirement account balance greater than zero. The lines overlapping the bars represent the 95 percent confidence intervals. All Other Race households include Black or African American, Hispanic or Latino, and Other households. Other Race households include Asian, American Indian, Alaska Native, Native Hawaiian, Pacific Islander, Other race, and all respondents reporting more than one racial identification.

Of those with a retirement account balance, White households had significantly greater median balances than households of all other races each year from 2007 to 2019. For example, in 2019 those White households had median balances of about $164,000, which were about twice that as households of all other races (about $80,300) (see fig. 6). One potential reason for this is that White households had significantly higher median income than households of all other races each year over this period. For instance, in 2019 the median income of White households was about $90,700, which was about 1.7 times that of households of all other races (about $53,400), including about twice that of Black or African American households (about $46,100).

GAO-23-105342 Retirement Account Disparities

Figure 6: Estimated Median Retirement Account Balances by Race and Ethnicity for Older Households with a Balance, in 2022 dollars, 2007 to 2019
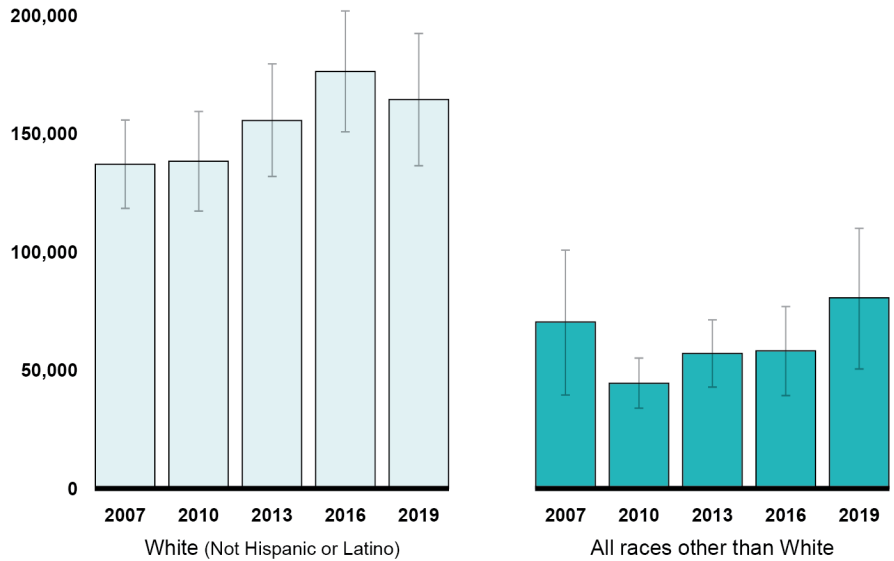
Median retirement account balance (in 2022 dollars)

White (Not Hispanic or Latino) — 2007, 2010, 2013, 2016, 2019

All races other than White — 2007, 2010, 2013, 2016, 2019

Source: GAO analysis of Survey of Consumer Finances data. | GAO-23-105342

Notes: The bars reflect the median retirement account balance, conditional on having a balance. The lines overlapping the bars represent the 95 percent confidence intervals. We divided older households aged 51 to 64 into five groups, or quintiles, based on income. Income is aggregated across all sources, such as wages, Social Security benefits, or withdrawals from retirement accounts. We present estimates for White and All Other Race households, where All Other Race households include Black or African American, Hispanic or Latino, and Other Race households. Other Race households include Asians, American Indians, Alaska Natives, Native Hawaiians, Pacific Islanders, other races, and all respondents reporting more than one racial identification. We did not present estimates for each All Other Race group individually because some estimates of the conditional median retirement account balance were imprecise, particularly for the Other Race group.

GAO-23-105342 Retirement Account Disparities

Income Disparities and Job-Related Factors Are Strongly Associated with Disparities in Retirement Account Balances by Income for Older Households

Across Race and Other Demographics, High-Income Households Had a Substantially Higher Share with Retirement Account Balances and Larger Balances than Low-Income Households
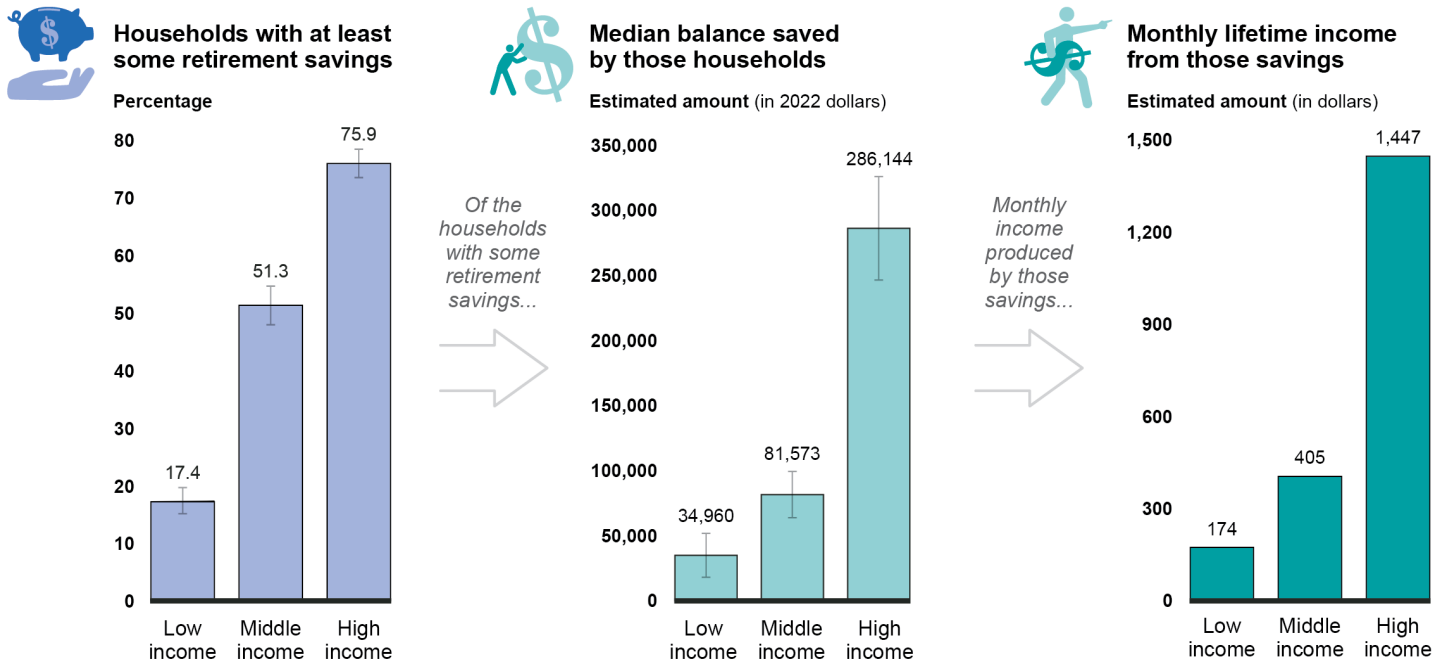
We found additional evidence of a disparity in retirement account balances across income groups and that the disparities exist across race and other demographics by analyzing 2018 HRS data. A substantially greater share of high-income older households had any retirement account balance and considerably larger median balances than low-income older households.[28] Among households with a balance, high-income households' median balance was about 8 times larger than low-income households' balances.[29] This disparity existed throughout the distribution of balances.[30] The median balances would generate a substantially smaller estimated lifetime income of $174 per month for low-income households compared to about $1,447 per month for high-income households at retirement age (see fig. 7).

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[28]These results are consistent with our analysis of the SCF data. For our HRS data analysis, we sought to describe factors associated with the distribution of balances and divided older households into three equal groups based on income. High-income households (those in the top third income group) had a median income of about $205,000 and low-Income households (those in the bottom third income group) had a median income of about $18,700. See appendix I for details.

[29]If these balances are entirely tax deferred, this suggests that an after-tax median balance for high-income households (about $229,000 or 20 percent less) was still over 7 times larger than low-income households' after-tax balance (about $31,500 or 10 percent less). This illustration assumes the retirement account balance is reduced by the tax rate applicable to the income group's estimated median income and does not account for the tax treatment of Social Security retirement benefits. This illustration uses the temporary individual tax rates from the December 2017 tax revision that are set to expire after December 31, 2025.

[30]For instance, the 25th percentile of high-income households' balances was about 19 times greater than low-income households' balances. Likewise, the 75th percentile of high-income households' balances was still about 5 times greater than low-income households' balances.

Figure 7: Estimated Percentage of Older Households with a Retirement Account Balance in 2018 (Left), Estimated Median Balance for Those Households in 2018 (Center), and Estimated Lifetime Income from that Balance in 2022, by Income (Right)

Households with at least some retirement savings

Percentage

- Low income: 17.4
- Middle income: 51.3
- High income: 75.9

Of the households with some retirement savings...

Median balance saved by those households

Estimated amount (in 2022 dollars)

- Low income: 34,960
- Middle income: 81,573
- High income: 286,144

Monthly income produced by those savings...

Monthly lifetime income from those savings

Estimated amount (in dollars)

- Low income: 174
- Middle income: 405
- High income: 1,447

Source: GAO analysis of 2018 Health and Retirement Study data; GAO (icons). | GAO 23-105342

Note: Estimated monthly lifetime income values for the 2018 median balance of each income group assumed conversion at age 65 in 2022 after projecting balances 4 years forward using a 4 percent annual rate of return. This assumed purchasing an annuity that pays the same nominal dollar amount through the life of the last survivor of a couple. The lines overlapping the bars represent 95 percent confidence intervals. Older households are those where the respondent or spouse was age 51-64. We ranked households by their income and broke them into three equally sized groups.

One reason for the disparity in retirement account balances by income is that the median contribution to a workplace retirement account is disproportionately greater for high-income households than for low-income households. Specifically, for older households contributing, high-income households contributed about $10,000—or 8 percent of pay— while low-income households contributed about $1,500—or 5 percent of pay. Likewise, the median employer contribution is greater for high-income than for low-income households (about $5,000 and $1,300, respectively).

Research and our prior reports found employer matches and account fees affect workplace retirement account balances (see text box).

GAO-23-105342 Retirement Account Disparities

Employer Matches Especially Increased Low-Income Workers' Workplace Retirement Account Participation; Fees Disproportionately Reduce Their Balances

A Congressional Budget Office study on the effect of an employer match for federal employees' workplace retirement accounts found the match led to an estimated 22 percentage point increase in participation and about 3.5 percentage point increase in average worker contributions. There were larger increases in participation and contribution rates for low-income workers than high-income workers.

Retirement account fees slow the growth of balances over time and especially affect low-income workers. In July 2021, we found 41 percent of 401(k) plan participants we surveyed incorrectly believe that they do not pay any 401(k) plan fees. Similarly, 41 percent of participants do not understand they can pay additional fees on smaller account balances, which may affect low-income workers more than high-income workers. Low-income workers had lower median balances than high-income workers, according to our analysis of 2018 Health and Retirement Study data, and would be more likely to pay higher fees on savings in IRAs, for example.

Disparities in retirement account balances by income also reflect racial disparities that exist within each income group (see fig. 8). A greater share of older White households had a retirement account balance than older Black or African American households within each income group. For those with a balance, White households' median balance was more than double Black or African American households' median balance within each income group.

Figure 8: Estimated Percentage of Older Households with a Retirement Account Balance (Top) and Median Balance for Those Households, by Race and Income in 2018 (Bottom)

Percentage of households with any retirement savings
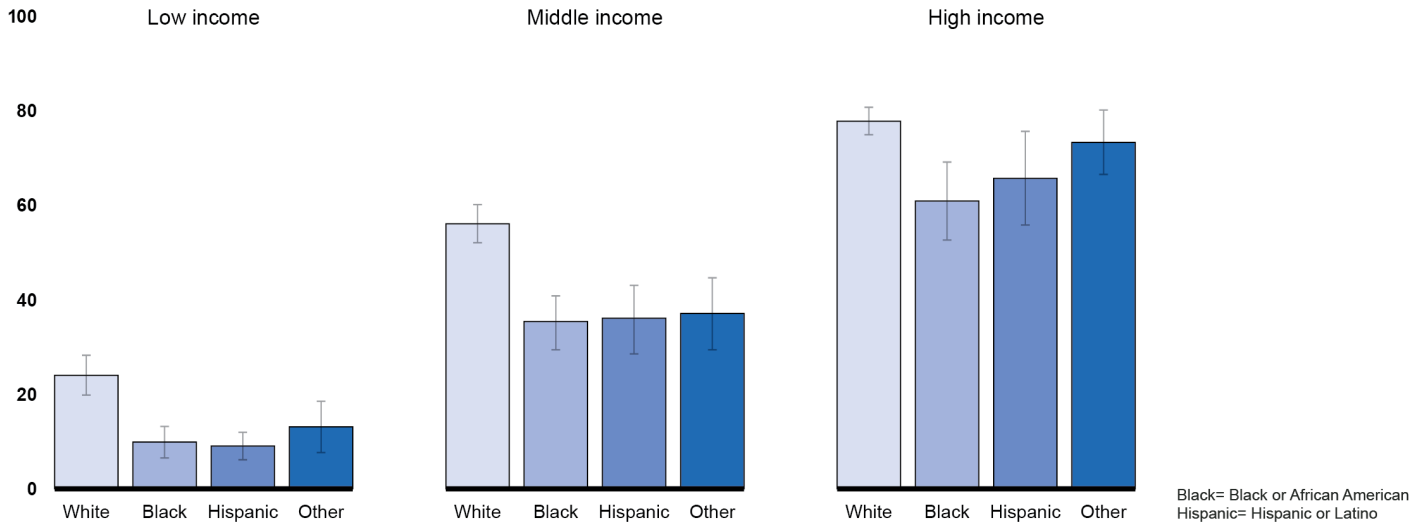
Median value of those retirement accounts (in 2022 dollars)
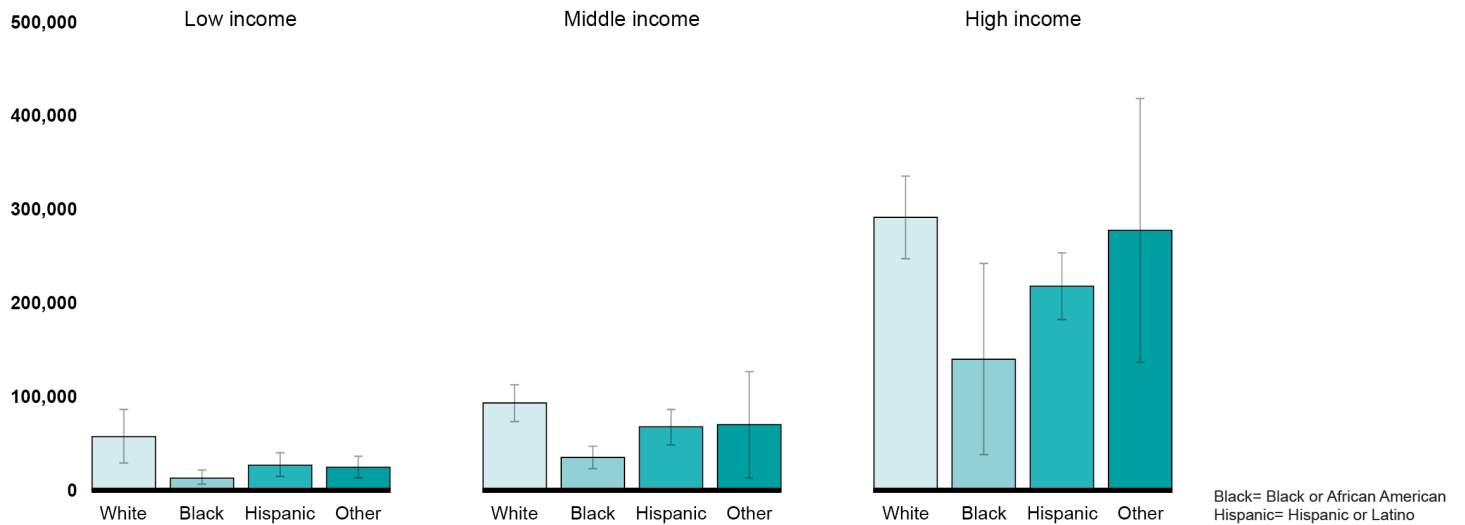
Source: GAO analysis of 2018 Health and Retirement Study data. | GAO 23-105342

Note: The lines overlapping the bars represent 95 percent confidence intervals. "Other Race" includes: Asian, American Indian, Alaska Native, Native Hawaiian, Pacific Islander, and Other Race. Older households are those where the respondent or spouse was age 51 to 64. We ranked households by their income and broke them into three equally sized groups.

GAO-23-105342 Retirement Account Disparities

Disparities in balances between older White households and older households of all other races with a balance also existed in multivariate analyses, which controlled for certain factors that could influence balances.[31] Specifically, older households of all other races had about 28 percent smaller balances than similar older White households; this disparity is equivalent to the effect associated with about 40 percent lower income.[32] One factor that may help explain this disparity is that the unemployment rate for Black or African American workers has generally been about twice the unemployment rate for White workers for decades.[33] Tax expenditures for retirement accounts likely affect White households more than Black or African American households. This is due to racial disparities in retirement accounts and that White households generally have a higher marginal income tax rate.

Income, Job Tenure, and Household Factors That Are Associated with Overall Retirement Account Balances across Income Groups

Higher income, longer job tenure, and a college education are each associated with substantially larger retirement account balances while households with children are associated with considerably smaller balances, according to our analyses that controlled for certain factors influencing balances (see table 1).[34]

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[31]Some of these factors controlled for included: household income and number of children as well as the respondent's age, job tenure, and employer size. All Other Race households include Black or African American, Hispanic or Latino, Asian, American Indian, Alaska Native, Native Hawaiian, Pacific Islander, or Other Race households.

[32]Prior research on racial disparities in retirement savings also found Black and Hispanic workers had lower participation and contribution rates as well as a smaller share of their accounts invested in stock. Yoong, Joanne K., Angela A. Hung, Silvia Helena Barcellos, Leandro Carvalho, and Jack Clift, *Disparities in Minority Retirement Savings Behavior: Survey and Experimental Evidence from A Nationally-Representative Sample of US Households*. (Santa Monica, Calif.: RAND Corporation, 2019), https://www.rand.org/pubs/working_papers/WR1331.html.

[33]U.S. Bureau of Labor Statistics, Unemployment Rate - White, Black or African American, retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/LNS14000003.

[34]These analyses use 2018 HRS data of older households across and within income groups.

Table 1: Estimated Relationship of Certain Factors with Retirement Account Balances of Older Households, 2018

Factor	Estimated Relationship with Retirement Account Balances
Income	10 percent higher household income is associated with almost a 7 percent larger retirement account balance.
Job tenure	10 years additional tenure at the longest job held by the household head is associated with about 37 percent larger retirement account balance, which is equivalent to the effect associated with over 50 percent higher income. This relationship between job tenure and larger balances is over twice as strong for middle-income households as for high-income households (about 53 percent and 23 percent larger balances, respectively).
College education	A household head with at least some college education is associated with an about 63 percent larger balance than a household with a head who did not attend college. This effect is equivalent to the effect associated with nearly doubling income.
Children	A household that has two children living anywhere is associated with about a 40 percent lower balance than a similar childless household, which is equivalent to the effect associated with about 58 percent less income.

Source: GAO analysis of 2018 Health and Retirement Study data. | GAO-23-105342

Notes: By using multivariate regressions that control for certain factors influencing balances, we identified factors independently correlated with balances for households with any balance. See appendix II for more information about our analysis and the results. Older households are those where the respondent or spouse was age 51 to 64.

Various reasons may explain these factors' relationship with retirement account balances. As households' income increases, they typically have more disposable income and are more able to afford to save for retirement. Longer job tenure suggests fewer employer changes when workers may cash out a workplace retirement account, or forfeit unvested employer contributions, both of which may occur more often for low-income than for high-income households. Attending college may reflect (1) an increased awareness about the need to save, (2) more financial education and achieving higher rates of return on savings, (3) willingness to work longer, and (4) receiving larger bequests from wealthier parents, according to our 2019 review of the literature.[35] Children's association with smaller balances may be due to the expenses of raising a child, and some families may have to choose between these expenses and saving for retirement.[36]

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[35]GAO-19-587.

[36]A Brookings study estimated the cost of raising a child through age 17 to be over $300,000. Welch, Morgan and Isabel Sawhill. "Future estimated annual expenditures of raising a child, assuming a higher inflation rate of 4 percent after 2020." (August 2022). Brookings.

GAO-23-105342 Retirement Account Disparities

Differences in Workplace Retirement Account Access, Asset Allocation, and Withdrawals Further Disparities in Balances by Income

High-income older households have greater workplace retirement account access, more investment in stocks, and fewer cash outs of retirement accounts when leaving an employer. These factors help explain high-income households' greater share with a retirement account balance and larger balances than low-income households.

Workplace retirement account access. The percentage of high-income older households with access to workplace retirement accounts was over three times greater than low-income older households' access (about 75 percent and 23 percent with access, respectively), according to our analysis of the 2019 SCF. Households that do not have access may face the greatest challenges saving for retirement, as we found in our 2017 report.[37] For instance, such households generally are required to take more action on their own to contribute to IRAs, are generally not provided any employer contributions to augment their savings, and generally pay higher fees to maintain IRAs.

Asset allocation. High-income households' greater investment in stocks than low-income households' investment allows for greater long-term growth of balances and may reflect greater tolerance for risk. The median percentage of a workplace retirement account invested in stocks was over 2.5 times greater for high-income than low-income households (about 80 percent and 30 percent invested in stocks, respectively), according to our analysis of the 2018 HRS. Further, a significantly greater share of low-income households than high-income households had no stock investments in a workplace retirement account (about 37 percent and 23 percent had no stock investments, respectively).[38] A 2018 Social Security Bulletin study noted high-income households may benefit from better financial advice and a greater ability to take risk investing in stocks than low-income households, holding other variables constant. This gives high-income households an advantage toward earning a higher rate of return over time than low-income households.[39]

Cashing out workplace retirement account. Over twice the share of low-income households than high-income households withdrew all the money from their workplace retirement account when they left an

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[37]GAO-18-111SP.

[38]The HRS does not specify but these households may have invested entirely in bonds.

[39]Saad-Lessler, Joelle, Teresa Ghilarducci, and Gayle L. Reznik, "Retirement Savings Inequality: Different Effects of Earnings Shocks, Portfolio Selections, and Employer Contributions by Worker Earnings Level." *Social Security Bulletin* 78 (3) (2018): 1–17.

employer between 2016 and 2018 (about 7 percent and 3 percent withdrew all their money, respectively). Further, low-income households also changed employers more than high-income households over this period (about 36 percent and 21 percent changed employers, respectively). Prior research analyzing the HRS also found that workers who cashed out a workplace retirement account tended to be low-income and that cashing out was more common for those who were late on mortgage payments, lost health insurance, and fell into poor health.[40] While such withdrawals can help workers facing financial difficulties, they can also affect a worker's long-term retirement security by reducing account assets, forgoing long-term investment growth, and subjecting early withdrawals to additional taxation.

Low-Income Households Experiencing Divorce and Unemployment Face More Frequent Declines in Retirement Account Balances

Older households with a retirement account balance in 2016 who newly reported divorce when surveyed again in 2018 more often had their balance decline over the period, according to our analysis of 2016 and 2018 HRS data. We also examined unemployment and for high-income older households it was frequently accompanied by a decline in retirement account balances. Low-income households suffered these shocks more often and their balances declined more frequently over the period (see fig. 9).

Figure 9: Estimated Percentage of Older Households who Experienced Marital or Employment Shocks, by Income, 2016 to 2018
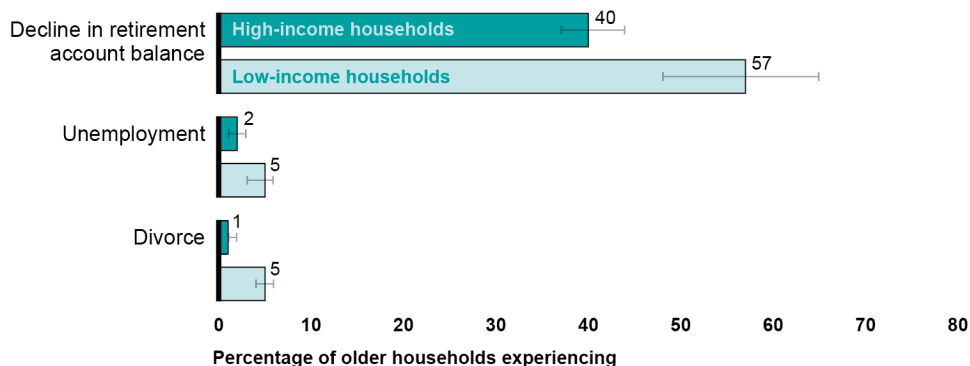
Source: GAO analysis of Health and Retirement Study data. | GAO-23-105342

Notes: Divorce category also includes widows and separations. The lines on the bars are 95 percent confidence intervals. Older households are those where the respondent or spouse was age 51-64.

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[40]Philip Armour, Michael D. Hurd, and Susann Rohwedder, "Trends in Pension Cash-Out at Job Change and the Effects on Long-Term Outcomes" in *Insights in the Economics of Aging*, ed. David A. Wise (Chicago: University of Chicago Press, 2017): 15-39.

We ranked households by their income. High-income households were in the top third and low-Income households were in the bottom third.

Divorce. We found low-income households more often divorced, widowed, or separated than high-income households, and these marital status changes were frequently accompanied by a decline in retirement account balances. A greater share of households who divorced, widowed, or separated from 2016 to 2018 had their balance decline over the period compared to those who did not experience these marital status changes (about 76 percent and 43 percent had a balance decline, respectively). We previously estimated that 31 percent of persons who divorced from 2008 to 2016 reported losing a claim to a former spouse's retirement benefits and divorce may disproportionately affect women's retirement security.[41]

Unemployment. We found low-income older households more often experienced unemployment than high-income older households. Even for high-income households, unemployment was associated with retirement account balances declining about twice as often. For example, a substantially greater share of high-income households who became unemployed from 2016 to 2018 had their balance decline over the period than those who did not become unemployed (about 75 percent and 38 percent had a balance decline, respectively).[42]

Other research and our prior work also identified factors that may explain the finding that low-income households are more likely to make early withdrawals—and pay additional taxes—than are high-income households. A 2013 study by the Board of Governors of the Federal Reserve System suggests early withdrawals from retirement accounts are strongly correlated with declines in income and changes in marital status, which lower-income workers are both more likely to experience and to withdraw from their accounts when they do.[43] Similarly, we found in 2019 that low-income individuals' rates of hardship withdrawals were higher

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[41]Estimates of HRS data are conditional on their former spouse having a retirement plan. GAO, *Retirement Security: DOL Could Better Inform Divorcing Parties About Dividing Savings*, GAO-20-541 (Washington, D.C.: July 31, 2020).

[42]There was no statistically significant difference in the estimated percent of low-income households with a balance that declined if they became unemployed.

[43]Argento, Bryant, and Sabelhaus, *Federal Reserve Board: Early Withdrawals from Retirement Accounts During the Great Recession* (Washington, D.C.: Mar. 2013).

GAO-23-105342 Retirement Account Disparities

than those with higher income, based on our analysis of 2014 data.[44] Stakeholders identified individuals' pressing financial needs, such as out-of-pocket medical costs, as affecting early withdrawals.

Spousal caregiving is associated with unemployment as well as lower income and less retirement savings. We reported in 2019 that daily parental or spousal caregiving was more prevalent among unemployed individuals than those working full-time (33 percent and 18 percent, respectively).[45] Additionally, spousal caregivers ages 59 to 66 had lower levels of retirement assets and less income than married non-caregivers of the same ages, according to our analysis of 2002 to 2014 HRS data. Specifically, spousal caregivers had an estimated 50 percent less in IRA assets and 39 percent less in non-IRA assets, after controlling for demographic and other characteristics. Further, women caregivers had 15 percent less in Social Security income than married women who did not provide spousal care. Lower Social Security retirement benefits is particularly harmful to lower-income groups because Social Security is typically their primary source of retirement income.

Estimated Benefits of Selected Strategies Meant to Increase Retirement Account Savings Are Distributed Unevenly Across Income Groups

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[44]Our analysis was of 2014 Survey of Income and Program Participation data. GAO, *Retirement Savings: Additional Data and Analysis Could Provide Insight into Early Withdrawals*, GAO-19-179 (Washington, D.C.: Mar. 28, 2019).

[45]Our analysis was of 2011 to 2017 American Time Use Survey data. GAO*, Retirement Security: Some Parental and Spousal Caregivers Face Financial Risks*, GAO-19-382 (Washington, D.C.: May 1, 2019)*.

GAO-23-105342 Retirement Account Disparities

Automatic Enrollment Can Help Increase Workplace Retirement Account Participation for All Workers with Access, Especially for the Small Share of Low-Income Workers Who Have Access

In an illustrative scenario using estimates from our analysis of 2019 SCF data, we found that automatic enrollment can potentially increase workplace retirement account participation for older workers with access regardless of income level.[46] Among older workers with access to a workplace retirement account, low-income workers have the greatest potential participation rate increase while high-income workers have the least (see fig. 10).

Scenario: Automatic Enrollment

We analyzed 2019 Survey of Consumer Finances data to estimate the share of older workers with access to (and eligibility for) a workplace retirement account as well as the share who are not participating in a workplace retirement account. We assume workers are automatically enrolled and none opt out as a part of this illustrative scenario.

Source: GAO. | GAO 23-105342

Figure 10: Potential Workplace Retirement Account Participation Rate Increase in Automatic Enrollment Scenario for Older Workers with Access by Income Tercile, 2019
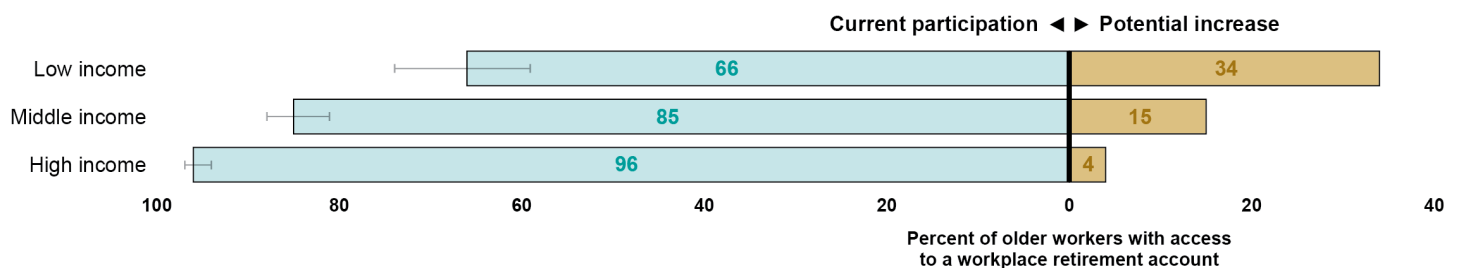
Source: GAO analysis of 2019 Survey of Consumer Finances data. | GAO-23-105342
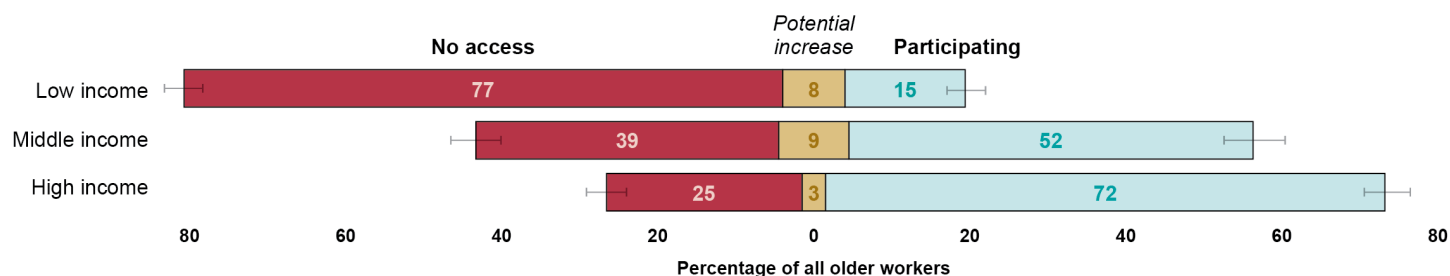
Note: This graphic illustrates a scenario of the potential impact of an automatic enrollment strategy where workers with access to (and eligibility for) a workplace retirement account who were not participating are automatically enrolled to participate in the workplace retirement account and none opt out. Older workers are those survey respondents or any spouses or partners aged 51 to 64. The lines overlapping the bars represent 95 percent confidence intervals.

Automatic enrollment only benefits those with access to a workplace retirement account, and a substantially smaller share of low-income than

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[46]Our analysis of 2019 SCF data and 2018 HRS data defined older workers as survey respondents, or any spouses or partners, aged 51 to 64. For more details on scenario methodology, see appendix 1.

GAO-23-105342 Retirement Account Disparities

high-income older workers have access to a workplace retirement account, according to our analysis of 2019 SCF data. While about 23 percent of low-income workers have access to a workplace retirement account, about 75 percent of high-income workers have access. Despite the difference in access, the potential increase in participation is 8 percent of all low-income workers and 3 percent of all high-income workers, because far fewer low-income workers participate when they have access (see fig. 11).

Figure 11: Potential Workplace Retirement Account Participation Rate Increase under Automatic Enrollment Scenario for Older Workers with and without Access by Income Tercile, 2019

Source: GAO analysis of 2019 Survey of Consumer Finances data. | GAO-23-105342

Note: The graphic above illustrates a scenario of the potential impact of an automatic enrollment strategy where workers with access to (and eligibility for) a workplace retirement account who were not participating are automatically enrolled and none opt out and workers without access cannot participate. Older workers are those survey respondents or any spouses or partners aged 51 to 64. The lines overlapping the bars represent 95 percent confidence intervals.

Our scenario likely overstates automatic enrollment's potential to increase participation for all workers and particularly for low-income workers. In practice, some automatically enrolled workers would choose to opt out of participating in a workplace retirement account. Research on automatic enrollment found that low-income workers are more likely to opt out of participating than high-income workers (see text box).[47]

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[47]Jeffrey W. Clark and Jean A. Young, "Automatic enrollment; The power of the default," *Vanguard Research,* (February 2021). Barbara A. Butrica and Nadia S. Karamcheva, "Automatic Enrollment and Its Relation to the Incidence and Distribution of DC Plan Contributions: Evidence from a National Survey of Older Workers," *Journal of Consumer Affairs*, (Fall 2019): 1192-1219.

Automatic Escalation Can Help Increase Balances for All Workers, with Larger Proportional Increases for Low-Income Workers and Larger Balances for High-Income Workers

Scenario: Automatic Escalation

We analyzed 2018 Health and Retirement Study data to estimate the income and initial workplace retirement account contribution rate for older workers in each income tercile. We calculated the difference in account balances over 10 years for hypothetical workers in each income tercile with constant income under two scenarios: in one, the workers' contribution rate remained constant, and in the other, the workers' contribution rate increased 1 percentage point each year–up to 10 percent. Each year, we increased the workers' cumulative account balances by a constant rate of return and no workers opt out.

Source: GAO. | GAO-23-105342

Automatic escalation can increase the workplace retirement account balances of all older workers with access, according to a 10 year illustrative scenario based on our analysis of 2018 HRS data. The retirement account balances of low-income older workers with access increased by the largest proportion (64 percent increase) in an automatic escalation scenario, as their initial contribution rate is the lowest. Projected balances increased 46 percent and 20 percent for middle-income and high-income workers, respectively.

Four of seven experts on retirement security we interviewed generally agreed that automatic escalation will proportionally increase low-income workers' retirement account balances the most. However, two other experts warned that a study of Oregon's state-sponsored retirement savings account showed automatic escalation may lead low-income workers to opt out of saving as their pay does not increase proportional to their contribution rate increase.[48] For this reason, our scenario may overstate automatic escalation's impact, particularly among low-income workers who may opt out if their take home pay decreases.

In our automatic escalation scenario, total workplace retirement account balances per worker increased the most for high-income older workers, as these workers contribute an increased percentage of a substantially larger income than do middle- and low-income workers. High-income older workers' total balances increased about $26,840 at the end of 10 years relative to what the projected account balance would have been without automatic escalation (see fig. 12). At the end of the same period,

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[48]J. Chalmers, O. Mitchell, J. Reuter, M. Zhong, "Do State-Sponsored Retirement Plans Boost Retirement Saving?," *AEA Papers and Proceedings 2022,* vol. 112 (2022): 142-146. The one other expert noted low-income workers more often change jobs before automatic escalation increases their contribution rate.

middle-income and low-income older workers' total account balances increased about $23,415 and $12,549, respectively.[49]

Figure 12: Potential Increase in Total Workplace Retirement Account Balances for Hypothetical Workers Due to Automatic Escalation, by Year and Income

Increase in workplace retirement account balance (2022 dollars)
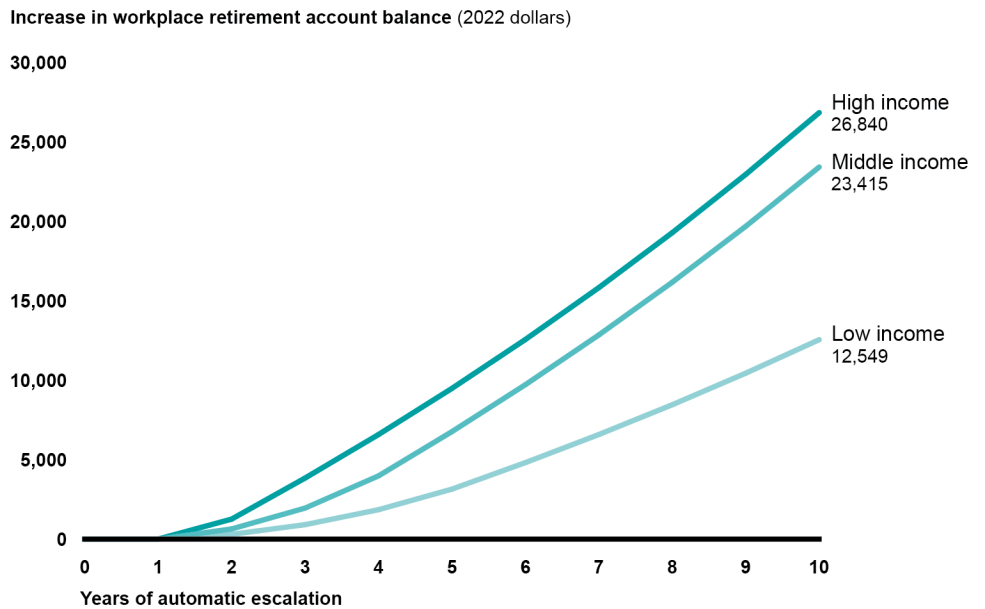
Source: GAO Analysis of 2018 Health and Retirement Study data. | GAO-23-105342

Note: The lines represent the estimated account balance increase for hypothetical workers in each income tercile with automatic escalation relative to what their estimated account balances would be with a constant contribution rate over a 10-year period. For our automatic escalation scenario, we assume the workers' contribution rates increased 1 percentage point each year–up to 10 percent. Estimates are based on the median contribution rates for workers aged 51 to 64 by income tercile. We assume the hypothetical workers' income remains constant and no workers opt out. Each year we increased the workers' cumulative account balances by a constant rate of return, which we assume to be 6 percent. We acknowledge that our scenario may not reflect reality, in part because account balances can also depend on additional factors not present our scenario, such as job tenure and level of employer match.

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[49]After the hypothetical 10-year period, the retirement account balance without automatic escalation was about $132,300 for high-income older workers, about $50,400 for middle income older workers, and about $19,500 for low-income older workers.

## Increased Contribution Limits Almost Entirely Benefit High-Income Older Workers

Our analysis of 2018 HRS data shows that increased contribution limits almost entirely benefit high-income older workers. Nearly one in four high-income workers contributed the individual contribution limit and nearly one in eight contributed the additional catch-up contribution limit for workplace retirement accounts among those contributing (see fig. 13). In contrast, the share of low-income older workers who contributed these limits was not detectibly different from zero. Our 2011 report found that primarily high-income workers contributed at the new limit following past contribution limit increases.[50] In our scenario we assume workers who currently contribute the limit may benefit from increased contribution limits.

Figure 13: Estimated Percentage of Older Households Contributing the Individual and Catch-Up Limits to a Workplace Retirement Account, by Income Tercile, 2018
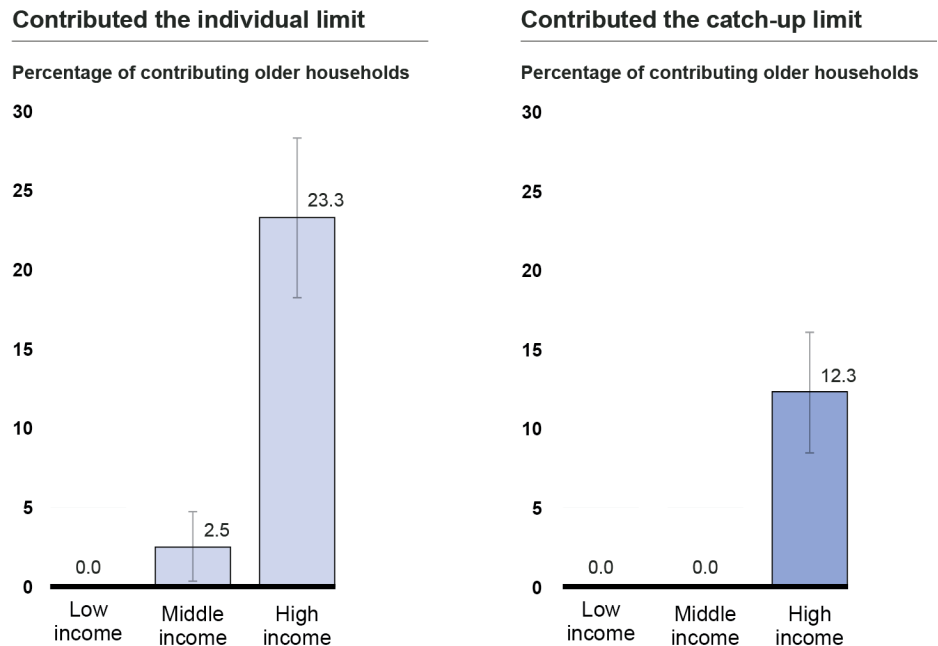
Source: GAO analysis of 2018 Health and Retirement Study data. | GAO 23-105342

Note: Bars reflect the estimated percentage of older households (the total of respondent and spouse) who contributed at least the individual contribution and the additional catch-up contribution limits among those contributing. These percentages for low-income households were not detectably different from zero. In 2018 the limit on individual employee pre-tax and Roth contributions was $18,500 and the limit on catch-up contributions was an additional $6,000 for workplace retirement accounts. Older households are those survey respondents or any spouses or partners who were age 51 to 64. The lines overlapping the bars represent 95 percent confidence intervals.

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[50]GAO, *Private Pensions: Some Key Features Lead to an Uneven Distribution of Benefits,* GAO-11-333 (Washington, D.C.: Mar. 30, 2011).

Five of seven experts we interviewed shared that low- and middle-income workers generally do not have enough income to contribute at the workplace retirement account limit. A different four of the seven experts also noted that high-income workers might be more likely to contribute at the individual limit because they have greater access to workplace retirement accounts–a requirement for contributing.

According to experts, increased IRA contribution limits would mostly benefit high-income workers, but might benefit middle- and low-income workers more than increased individual workplace retirement account limits. Workers and their spouses are able to contribute to an IRA; however the contribution limits for IRAs are significantly lower than those for workplace retirement accounts. Two experts noted that high-income workers would benefit the most from increased IRA contribution limits as they are more likely to have IRAs than low- and middle-income workers. However, three experts emphasized that IRA contribution limits are lower than workplace retirement account limits, so a greater proportion of middle- and low-income workers contribute at the IRA limit. Two of these three experts added that IRAs benefit workers without access to a workplace retirement account, who are more likely to be middle- and low-income.

Currently there is no limit on total balances in tax-preferred retirement accounts, including IRAs. In an October 2014 report, we found that few taxpayers had IRA balances over $5 million in 2011, and those taxpayers had an adjusted gross income of more than $200,000.[51] In 2021, the Joint Committee on Taxation estimated that over 28,000 taxpayers had IRA balances over $5 million in 2019.[52] We also found that with no total limit on large retirement account balances, the federal government forgoes millions of dollars in tax revenue. As noted in our 2014 report, this stands in contrast to Congress's aim to prevent individuals from accumulating tax-favored balances exceeding what is needed for retirement. Without legislation, the intended broad-based tax benefits of IRAs are likely to continue to be skewed toward a select group of high-income individuals. In 2014, we recommended that Congress consider revisiting the use of

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[51]GAO, *Individual Retirement Accounts: IRS Could Bolster Enforcement on Multimillion Dollar Accounts, but More Direction from Congress is Needed*, GAO-15-16 (Washington, D.C.: Oct. 20, 2014).

[52]Joint Committee on Taxation, *Memorandum: Revenue Estimate,* July 27, 2021, https://www.finance.senate.gov/download/jct-mega-ira.

IRAs to accumulate large account balances and consider ways to improve the equity of the existing tax expenditure on IRAs.[53] As of March 2023, Congress has not taken action on this matter.

Saver's Credit Provided an Estimated Average of $187 in 2018 to a Small Share of Low- and Middle-Income Households, However the Credit's Structure will Change

According to our analysis of 2018 IRS Statistics of Income (SOI) data, an estimated 6 percent of all income tax return filers claimed the Saver's Credit.[54] All filers who claimed the credit reported an adjusted gross income (AGI) within our low- and middle-income groups based on HRS data.[55] Specifically, about 6 percent of low-income filers and about 11 percent of middle-income filers claimed the credit. High-income workers did not benefit from the Saver's Credit because filers reporting more than $63,000 in AGI for 2018 could not claim the credit.

We estimated that the Saver's Credit awarded an average of about $187 to filers who claimed the credit. Low-income filers claimed an estimated average credit of $199 while middle-income filers claimed an estimated average credit of $163.

Two alterations to the Saver's Credit would make it more effective at increasing retirement account balances of low-income workers, according to experts on retirement security we interviewed. First, four of seven experts said the Saver's Credit would be more effective if workers with no tax liability could claim it. However, this would decrease federal revenue and increase IRS's administrative responsibilities. Second, a different four of the seven experts suggested the Saver's Credit should be directly deposited into a retirement account. Workers are not currently required to contribute money from the credit to their retirement accounts, though the structure of the Saver's Credit will change in 2027. (See text box).

[53]GAO-15-16. We suggested that Congress could include limits on (1) the types of assets permitted in IRAs, (2) the minimum valuation for an asset purchased by an IRA, or (3) the amount of assets that can be accumulated in IRAs and employer sponsored plans that get preferential tax treatment.

[54]A tax return filer is usually a household or a worker. Not everyone files an annual return, especially low-income workers without a tax liability.

[55]The median income was about $18,700 for low-income older households and about $76,400 for middle-income older households.

Selected Countries Use Government-Sponsored Accounts, Automatic Enrollment, and Various Financial Incentives to Encourage Retirement Account Savings

Germany, New Zealand, and the United Kingdom use various strategies to encourage retirement account savings, including offering government-sponsored retirement accounts, mandating automatic enrollment, and providing various financial incentives (see table 2).[56]

Table 2: Strategies Used by Selected Countries to Encourage Retirement Account Savings

	Germany	New Zealand	United Kingdom
Government-sponsored retirement account	–	Yes	Yes
Mandated automatic enrollment in workplace account[a]	–	Yes	Yes
General financial incentives	Yes	Yes	Yes
Targeted financial incentives	Yes	–	–

Source: GAO summary of information from government agency publications and Organisation for Economic Co-operation and Development reports. | GAO-23-105342

Note: GAO did not conduct an independent legal analysis to verify the information provided about the laws, regulations, or policies of the countries selected for this study. Instead, we relied on appropriate

[56]We did not conduct an independent legal analysis to verify the information provided about the laws, regulations, or policies of the countries selected for this study. Instead, we relied on appropriate secondary sources, interviews, and other sources to support our work. We note also that the fact that a legal feature may be successful in one or more of the countries we reviewed, which may have significantly different cultures, histories, and legal systems than the United States, does not necessarily indicate that the feature would be successful in the United States.

secondary sources, interviews, and other sources to support our work. GAO submitted key report excerpts to agency officials in each country for their review and verification, and we incorporated their technical corrections as necessary. GAO notes also that the fact that a legal feature may be successful in one or more of the countries we visited, which may have significantly different cultures, histories, and legal systems than the United States, does not necessarily indicate that it would be successful in the United States.

aGermany does not mandate automatic enrollment nationwide, though some private sector-employers include automatic enrollment in collective agreements. New Zealand requires automatic enrollment for new eligible workers each time they start a new job, and the United Kingdom requires employers to automatically enroll all eligible workers.

Germany's Financial Incentives Target Lower-Income and Younger Workers

According to government and OECD publications, the German government offers targeted financial incentives to encourage retirement account savings among particular groups that may face challenges saving for retirement, such as low-income workers. Specifically, for workplace retirement accounts, the government offers a tax refund for employers that contribute at least €240 ($333) per year for the benefit of low-income workers (those earning less than €2,575, or $3,577 per month).[57] This refunds 30 percent of the employer contributions to the low-income workers' retirement accounts, up to €288 ($400) per year.

Germany also offers direct subsidies to increase retirement savings among households with children and younger workers. For example, the government provides up to €300 ($417) per child per year to one parent (typically the mother) of a child born on or after January 1, 2008, and €185 ($257) for a child born before 2008 if the parent receives income-tested child allowances. Workers younger than 25 also receive a one-time subsidy of up to €200 ($278). These subsidies are deposited directly into workers' private retirement accounts (known as Riester accounts).

In addition to these targeted incentives, Germany's Riester account system has other financial incentives to encourage workers in general to save for retirement, according to government publications. For example, workers can generally receive up to €175 ($243) per year paid into their Riester account if they participate. In addition, total contributions to retirement accounts are tax-deferred, meaning the worker does not owe taxes until they withdraw money from the account. Further, certain contributions are tax deductible.

Moreover, German employers are required to offer retirement accounts in which workers may actively choose to participate, according to

[57]Here and elsewhere in this report, we converted local currency values to 2022 U.S. Dollar purchasing power parities to adjust for differences in currency values.

government and OECD publications. Additionally, if workers actively request to save part of their earnings in a workplace retirement account, employers must provide one and are required to make matching contributions of at least 15 percent of the workers' earnings.

German government officials said that income is more evenly distributed among older households relative to younger households, and a key reason is the importance of income from Germany's Social Security program (see text box). These officials added that while Social Security program benefits are based primarily on a worker's income history, Germany's tax-financed and means-tested social assistance program guarantees a basic living standard for older households, even those with little work history.

Selected Facts about Retirement Systems in Selected Countries and the United States

	Germany	New Zealand	United Kingdom	United States
Public spending on old-age and survivors benefits (as a percentage of gross domestic product in 2017)	10.2	4.9	5.6	7.1
Net pension replacement rates (as a percentage of average individual earnings in 2020)	52.9	43.3	58.1	50.5
Assets in retirement accounts (as a percentage of gross domestic product in 2020)	8.2	34.1	126.8	169.9

Source: Organisation for Economic Co-operation and Development, Pensions at a Glance 2021: OECD and G20 Indicators (Paris, France: OECD Publishing, December 2021). | GAO-23-105342

Notes: Old-age and survivors benefits provide income for retirees and their surviving family members, such as the Social Security program in the U.S. The benefits may be based on a worker's earnings history among other things. Net pension replacement rates are a measure of how effectively a pension system provides retirement income to replace earnings and are expressed as a percentage of pre-retirement earnings.

New Zealand Uses a Government-Sponsored Account, Automatic Enrollment, and a Government Match to Encourage Savings and Increase Participation

The New Zealand government established KiwiSaver in 2007 as a government-sponsored workplace retirement savings account to which nearly all workers have access, according to government publications. KiwiSaver was created in part to increase national retirement savings and to address the declining trend in private sector retirement account coverage of the under-65 population—from about 20 percent in 2001 to about 15 percent in 2007. As of March 2022, about three in four domestic New Zealanders age 15 and older participated in KiwiSaver (nearly 3.2 million people participated out of 4.1 million domestic New Zealanders age 15 and older).

GAO-23-105342 Retirement Account Disparities

Employers have been required to automatically enroll new eligible workers in KiwiSaver or another qualifying private retirement account since 2007, according to government publications.[58] Specifically, all new workers are automatically enrolled in KiwiSaver if they are eligible (i.e., they are age 18 to 65, have worked or plan to work for more than 28 days, and are New Zealand citizens).[59] Moreover, existing workers can enroll through their employer at any time.

According to New Zealand government officials, automatic enrollment had a major positive impact on KiwiSaver's participation rate. Any participants who opt out of KiwiSaver are automatically re-enrolled whenever they start a new job. Moreover, workers keep the same account if they change jobs, and the government maintains membership records regardless of a job change. New Zealand government officials said these features make the accounts portable and reduces the risk that a participant will lose track of the funds in their account.

Since April 1, 2013, the default contribution rate to KiwiSaver has been 3 percent of a worker's wage or salary, which was chosen with low-income workers in mind, according to New Zealand government officials. Specifically, the default rate was previously 4 percent but was subsequently lowered to 3 percent, recognizing that 3 percent of one's income can still be burdensome for a lower-income participant to save.[60] To complement the workers' contributions, employers in New Zealand are required to provide contributions of at least 3 percent for workers who contribute.

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[58]All employers must participate unless they offer a pre-existing and qualifying retirement account. As of 2021, 120 employers have such pre-existing accounts in place and are able to offer a private account, as opposed to KiwiSaver, to their employees. Workers may opt out of KiwiSaver during a 42-day window that is on or after day 14 of starting work or on or before day 56. In some cases a late opt out may be accepted (up to 3 months from the worker's first contribution). For more information, see GAO, *Retirement Security: Recent Efforts by Other Countries to Expand Plan Coverage and Facilitate Savings*, GAO-22-105102 (Washington, D.C.: Aug. 29, 2022).

[59]Workers under age 18 cannot enroll in KiwiSaver through their employer, but may enroll directly with a KiwiSaver provider.

[60]Worker contributions to KiwiSaver are calculated based on the worker's pre-tax income but are deducted from their post-tax income. According to New Zealand government officials, there are no minimum or maximum income thresholds (i.e., contributions apply to all pre-tax income).

The New Zealand government also incentivizes contributions with government matching contributions, up to a limit. Specifically, the government matches 50 percent of the first NZ$1,043 (US$723) that workers contribute annually to their accounts (up to NZ$521 or US$361 paid directly to the worker's account).[61] New Zealand government officials said the government match is not well-targeted to low-income individuals. They also called the government match quite expensive as it costs the government more than NZ$900 million (about US$624 million) a year.

The United Kingdom Offers a Public Account Option and Mandates Automatic Enrollment and Employer Contributions to Encourage Savings

According to government publications, the United Kingdom established a public retirement account option–the National Employment Savings Trust (NEST)—to ensure that all employers are able to access a high quality, low-cost program for their workers without set-up charges. NEST functions as the default qualified workplace account and is the largest retirement account provider in the United Kingdom, with over one in three workers using NEST in 2022. NEST was established in 2010 to support the introduction of automatic enrolment.[62]

Employers in the United Kingdom must automatically enroll eligible workers into a qualifying workplace account, such as NEST, if they earn £10,000 ($15,069) or more per year, and fulfil other qualifying criteria, according to government publications.[63] The typical worker contribution rate is 5 percent. While workers may decline to participate, fewer than one in 10 NEST enrollees opted out in the 1-year period ending in March 2022.[64] Moreover, employers are required to assess their workforce at least every three years and, where necessary, re-enroll eligible workers into a qualifying workplace plan.

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[61]To be eligible for the full match, workers must have contributed at least NZ$1,042.86 from July 1 to June 30 and be aged 18 to 65.

[62]According to United Kingdom government officials, NEST is part-funded by a government loan but is designed to be self-funding longer term, at no cost to taxpayers and is forecast to "break-even" (i.e. stop drawing down the loan) by March 2024 and to have repaid it by 2038. It has a public service obligation to accept all employers that want to use it as a workplace retirement account to fulfil their automatic enrolment duties under the Pensions Act 2008. NEST must also accept self-employed savers, if they choose to save using NEST.

[63]For more information on the United Kingdom's automatic enrollment features, such as default contribution rates, see GAO-22-105102.

[64]Workers may opt out of the qualified workplace account within 1 month and receive a refund of any contributions made. A worker can decide to stop saving after the initial, one-month, opt-out window, but a refund of contributions does not have to be made.

Workers making less than £10,000 per year are not eligible for automatic enrollment, but they may opt in to their workplace account (see fig. 14). According to NEST documentation, about 4 percent of total NEST enrollments opted in to NEST as of March 2022. A NEST representative questioned whether it makes sense for low-income workers making less than £10,000 per year to defer some of their salary to future retirement income. For those eligible for automatic enrolment, the government also mandates that employers contribute at least 3 percent of all but the lowest-income workers' qualified earnings to their workplace account, according to government publications. Specifically, workers earning less than £6,240 ($9,403) per year do not have the right to receive an employer contribution, but their employer can still choose to make contributions, if they wish.

Figure 14: Employer Contributions and Automatic Enrollment in the United Kingdom

Annual income (in pounds)

| 0 | 2,000 | 4,000 | 6,240 | 8,000 | 10,000 |

Not entitled to 3% employer contribution ◄ ► Entitled to 3% employer contribution

Enrollment optional ◄ ► Automatic enrollment
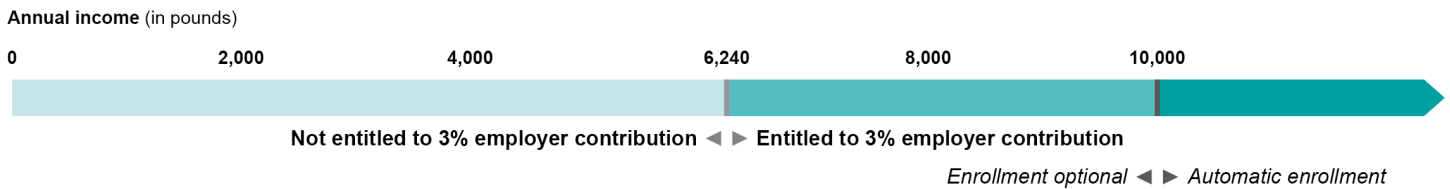
Source: GAO summary of United Kingdom government documents. | GAO-23-105342

Note: We did not conduct an independent legal analysis to verify the information in this figure. Instead, we relied on appropriate secondary sources. In 2022, the purchasing power parity of one U.S. dollar was 0.66 British pounds.

The United Kingdom government also provides tax incentives to encourage savings up to a limit, according to government publications. Specifically, contributions to private retirement accounts are not taxed when worker and employer contributions combined do not exceed the annual allowance of £60,000 ($90,417). Contributions that exceed this annual limit are taxed. Moreover, workers pay tax when their total balance of all retirement accounts exceeds the lifetime allowance of £1,073,100 ($1,617,101).[65] According to NEST documentation, most workers will

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[65]For those who withdrew before April 6, 2023, the marginal tax rate is 55 percent if the balance exceeding the limit is withdrawn as a lump sum, and 25 percent if it is withdrawn in any other way, such as periodic withdrawals. For those who withdraw on or after April 6, 2023, there is no lifetime allowance and income tax is paid on some or all of the withdrawn amounts.

never exceed these limits, in part because the median annual contribution was £730 ($1,100) per worker in 2021/22.[66]

In addition to these tax incentives, which are limited based on contribution level or total retirement savings amount, other tax incentives exist for all workers, according to government publications. Specifically, workers receive tax benefits on their contributions paid either directly into their accounts or through the tax system, depending on their plan's features. For example, if an eligible worker's provider is NEST and the worker contributes £40, NEST may claim £10 tax credit from the government and add it to the worker's account.[67] Further, the first 25 percent of withdrawals from retirement accounts are generally tax-free starting at age 55.

Agency Comments

We provided a draft of this report to the Department of Labor, Department of the Treasury and its Internal Revenue Service, and the Social Security Administration for their review and comment. We also provided relevant report excerpts to officials in Germany, New Zealand, and the United Kingdom for their review and comment. We received technical comments from the Department of Labor, the Department of the Treasury and its Internal Revenue Service, and the Social Security Administration as well as from agency officials in Germany, New Zealand, and the United Kingdom, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Labor, the Secretary of the Treasury, the Commissioner of the Internal Revenue Service, the Acting Commissioner of the Social Security Administration, and other interested parties. In addition, the report will be available at no charge on the GAO website at http://www.gao.gov.

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[66]NEST is the largest retirement account provider in the United Kingdom.

[67]The minimum worker contribution rate is 5 percent of qualifying earnings, which includes tax benefits.

GAO-23-105342 Retirement Account Disparities

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 IV.

Tranchau (Kris) T. Nguyen, Director
Education, Workforce, and Income Security Issues

Appendix I: Objectives, Scope, and Methodology

In this report we describe (1) how the distribution of retirement account balances among older households by income groups has changed over time; (2) what factors are associated with the distribution of retirement account balances among older households by income groups; (3) how selected strategies meant to increase retirement savings, such as increasing contribution limits, affect high-, middle-, and low-income workers; and (4) how selected countries encourage retirement account savings by low- and middle-income workers.

Survey of Consumer Finances

To describe how the distribution of retirement account balances among older households by income groups has changed over time, we analyzed 2007-2019 Survey of Consumer Finances (SCF) data. SCF is a nationally representative survey sponsored by the Board of Governors of the Federal Reserve System. It examines a different, representative sample of households every 3 years. It captures detailed information on the financial situation of these households and oversamples higher-income households, which allows deeper analysis of wealthier households' assets. We chose 2007 as the beginning date to include data before the Great Recession. We chose 2019 as the end date because it was the most recent year for which data were available at the time of our analysis. We analyzed households in which the reference person is from 51 to 64 years old. For simplicity, we call these households "older households" or "households aged 51 to 64."

For all of our estimates using SCF data, we estimated the standard errors and constructed the confidence intervals taking into account the survey's dual-frame sample design in order to estimate the sampling variance for these estimates. The two parts of the sample are adjusted for survey nonresponse and combined using weights to make estimates from the survey data nationally representative of households overall. To the extent possible, we used variables from the Summary Extract Public Data file, which is what the Board of Governors of the Federal Reserve System uses to produce its Federal Reserve Bulletin articles. We adjusted our estimates for inflation to 2022 dollars, consistent with other analyses in the report, using the Consumer Price Index for All Urban Consumers, which is commonly used for this dataset.

To determine income groups, we ranked households aged 51 to 64 by income, and split them into five groups, or income quintiles. Household

income is for the previous calendar year.[1] To measure retirement account balances, we summed the total value of IRAs, Keoghs (plans for unincorporated businesses or self-employed persons), 401(k)-type plans, and future and current account-type pensions held by each household ages 51 to 64. We also examined other financial assets that may help households in retirement, including rates of homeownership and having a defined benefit pension plan. Finally, we examined race and ethnicity groups for households aged 51 to 64.[2]

We found the SCF to be reliable for the purposes of our reporting objectives. While the SCF is a widely used federal data source, we conducted an assessment to ensure its reliability. Specifically, we reviewed related documentation and conducted electronic testing. When we learned that particular estimates were not reliable for our purposes, or had sample sizes too small to produce reliable estimates, we did not use them.

Nonetheless, the SCF data analysis has limitations. First, the SCF is a cross-sectional data set that uses a different sample of respondents for each survey year, so we cannot follow the same households over time. However, we determined that the depth of information on household assets outweighs this limitation for our purposes. For example, the SCF enabled us to examine the highest income quintile households. Another limitation is that the most recent SCF data available at the time of our analysis do not allow us to describe trends since the COVID-19 pandemic. Also, SCF household income and retirement account balance data are self-reported survey data subject to misreporting. We present descriptive statistics on the cross-section of income and retirement account balances, and these estimates imply correlations, not causal relationships.

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[1]Income includes wages, self-employment and business income, taxable and tax-exempt interest, dividends, realized capital gains, food stamps and other support programs provided by the government, pension income and withdrawals from retirement accounts, Social Security income, alimony and other support payments, and miscellaneous sources of income.

[2]The race and ethnicity groups in the SCF are White, Black or African American, Hispanic or Latino, and Other households, where Other includes Asians, American Indians, Alaska Natives, Native Hawaiians, Pacific Islanders, other races, and all respondents reporting more than one racial identification. In some analyses, we combined the Black or African American, Hispanic or Latino, and Other households to create an All Other Races than White group for a precise estimate of balances.

Health and Retirement Study

To describe factors associated with the distribution of retirement account balances among older households by income groups, we analyzed 2018 RAND Health and Retirement Study (HRS) data.[3] The data were released July 2022 and were the most recent available at the time of our analysis. We analyzed "older households" or "households aged 51 to 64" in which the respondent or spouse is 51 to 64 years old.

The HRS is a nationally-representative survey of households aged 51 and older and contains detailed data on their demographics, retirement account balances, and income. The HRS is a longitudinal survey, meaning that it follows the same households over the course of the study.[4]

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 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 HRS gives income and wealth variables in nominal dollars. We adjusted these variables to 2022 dollars using the Consumer Price Index for All Urban Consumers, which is commonly used for this dataset. For all 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.

To determine income groups, we ranked older households by income, and split them into three groups, or income terciles. We refer to the lowest third as "low-income," the middle third as "middle-income," and the highest third as "high-income." Total household income is for the last

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[3]Health and Retirement Study, (RAND HRS Longitudinal File 2018 (V2)) public use dataset. Produced and distributed by the University of Michigan with funding from the National Institute on Aging (grant number NIA U01AG009740). Ann Arbor, MI, (July 2022). RAND HRS Longitudinal File 2018 (V2). Produced by the RAND Center for the Study of Aging, with funding from the National Institute on Aging and the Social Security Administration. Santa Monica, CA (July 2022).

[4]The SCF's oversampling of wealthy households allowed us to more accurately describe how the distribution of balances changed over time. In contrast, the HRS's large number of older households and oversamples of Black or African American and Hispanic or Latino households better allowed us to describe factors associated with the distribution of balances among older households.

calendar year.[5] To measure retirement account balances, we summed workplace retirement accounts of the respondent and any spouse as well as the household's net balance of all IRA and Keogh accounts.

For all of our estimates using HRS data, we used the balanced repeated replication method to estimate standard errors. We used these standard errors to calculate 95 percent confidence intervals and test the statistical significance of differences among estimates. We performed sensitivity analyses for RAND's missing data imputation by replicating selected retirement account balance estimates by income without using imputed data. We found these estimates without imputations were statistically similar to those with imputations. As a result, we report estimates with imputations.

We conducted a data reliability assessment of selected HRS variables through electronic data tests and reviewing documentation. We found the HRS variables presented in this report to be sufficiently reliable for the purposes of our analyses. Nonetheless, our analysis of these data has limitations. Respondents report their own financial data and may not always give accurate responses, such as inaccurate reports of their account balances and income.[6] As the HRS data has a limited sample size of older households with a retirement account balance we used income terciles rather than quintiles. In addition, our descriptive statistics on income and retirement account balances across various groups represent correlations, as we did not design the analysis to estimate causal relationships.

Lifetime Income Estimates

To provide context for estimates of older households' retirement account balances, we converted their median balances to estimated lifetime income using two methods. The first method, which we cite in the report, was purchasing a retail single premium immediate annuity that makes

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[5]Income includes earnings, pensions and annuities, Supplemental Security Income and Social Security Disability, Social Security retirement, unemployment and workers compensation, other government transfers, household capital income, and other income.

[6]A prior study found those age 65 and older underreport pension income. I. Dushi, and B. Trenkamp. "Improving the measurement of retirement income of the aged population." *Social Security Administration, ORES Working Paper Series*. No. 116 (Jan. 2021).

level nominal-dollar payments through the lifetime of the last survivor of a
couple.[7] The second method was systematic withdrawals (see table 3).

Table 3: Estimated Annual Lifetime Income from Median Retirement Account Balance for Older Households with a Balance, by Income Group

Income Group	Median Balance in 2018	Annual Annuity Beginning in 2022	Initial Systematic Withdrawal in 2022
Low-Income	$30,000	$2,084	$1,253
Middle-Income	$70,000	$4,863	$2,925
High-Income	$250,000	$17,368	$10,445

Source: GAO analysis of 2018 Health and Retirement Study Data | GAO-23-105342.

Note: Estimated annual lifetime income values are for a couple that are both age 65 in 2022 and had the median balance for their income group in 2018. We assumed annuities were purchased at market rates in 2022, and systematic withdrawals were calculated using factors published by the IRS for complying with required minimum distributions. Older households are those where the respondent or spouse was age 51 to 64. We ranked households by their income and broke them into three equally sized groups.

For both methods, we projected retirement account balances forward 4 years, from July 1, 2018 to June 30, 2022, assuming no contributions or withdrawals. We assumed retirement account balances earned a 4 percent annual nominal rate of return over the projection period based on an analysis of actual target-date mutual fund returns over that period.[8] We then calculated the estimated annual income distributed in the 12 months following June 30, 2022 under each of the lifetime income options. We estimated income for a married male-female couple who both turned 65 on July 1, 2022.

For the annuity purchase method, we assumed annuity conversion of the entire account balance for payments starting July 1, 2022, and we obtained market annuity prices as of this date. We collected annuity prices from an online marketplace and used an average of prices from several providers. We found that the prices were comparable. Annuity pricing can be sensitive to interest rate changes. To illustrate the sensitivity, we substituted January 1, 2023 for July 1, 2022 annuity pricing, and found participants would receive approximately 4.5 percent more income for conversion at the later date, which can partially be

[7]We cite this method in the report as, unlike the systematic withdrawals, the annual amount of nominal income does not vary over time depending on market returns and the couple's longevity.

[8]We used 4 percent based on actual data for this time period rather than the 6 percent we used in the 10 year projection for illustrations of automatic escalation.

attributed to an increase in interest rates over the period. The annuity prices are for nominal-dollar payments, meaning there is no annual adjustment for inflation.

For the systematic withdrawals, we assumed participants withdraw amounts from their account balance using factors published by the Internal Revenue Service (IRS) for complying with required minimum distributions (RMD) and assuming substantially equal periodic payments. Consistent with the type of annuity used in our annuity purchase method, we used the IRS joint life RMD tables. Unlike the annuity, the pattern of payments after 2022 will fluctuate with asset returns and the timing of the first partner to die. This method will also leave a residual sum after both partners die or it could allow households to withdraw more in a given year to meet an unexpected expense, such as a medical bill. The estimate in table 3 does not reflect the effect that actual lifespan (i.e., longevity risk), investment returns, and inflation could have on the lifetime income.

Neither of the lifetime income estimates reflect any federal or state taxes. Dollar amounts in the lifetime income estimates are for illustrative purposes only, and should not be considered representative of individual circumstances or the pricing of annuities available in the market as of publication. This illustrative example should not be construed or used as financial advice.

Review of Relevant Literature and Expert Interviews

To inform multiple objectives, we reviewed relevant literature and federal laws and regulations. We also conducted semi-structured interviews with seven experts on retirement security and inequality. We identified these experts based on our review of relevant literature and referrals from agency officials. The experts represent a diversity of perspectives and a variety of fields, including academia, government, the private sector, and think-tanks.

Illustrative Scenarios on Selected Strategies

To describe how selected strategies meant to increase retirement savings affect high-, middle-, and low-income workers, we selected four strategies meant to increase retirement savings: automatic enrolment, automatic escalation, increased contribution limits, and the Retirement Savings Contributions Credit (commonly referred to as the Saver's Credit). The strategies we selected are not a complete list of strategies meant to increase retirement savings. To select the strategies, we reviewed relevant Congressional Research Service and Congressional Budget Office reports and interviewed agency officials. We also discussed our selection in interviews with seven experts on retirement security and inequality. Six of seven experts agreed that the four selected strategies

generally cover a variety of existing strategies meant to increase retirement savings that affect a variety of income levels.[9] We recognize that national policies affecting the distribution of income would also affect the distribution of retirement account balances, though such policies are beyond the scope of this objective.

We then developed illustrative scenarios showing each strategy's hypothetical effect on high-, middle-, and low-income workers. We designed the scenarios to illustrate the hypothetical impacts of each strategy. Our analysis is not an evaluation of each strategy's effects. In each case we made certain assumptions, but noted in the text when warranted if we believe our illustrations and the underlying assumptions could substantially under- or over-state the effect. As discussed above, the scenarios are meant to illustrate the effect, not model or predict the effect of the selected strategies.

To illustrate the effect of automatic enrollment by household income terciles, we first analyzed 2019 SCF data on access to and participation in a workplace retirement account for households aged 51 to 64.[10] Then, for both households with and without access to a workplace retirement account, we calculated the maximum potential increase in their estimated participation rate if all those who were not participating were automatically enrolled and began participating. In both calculations, our analysis assumed all workers with access to a workplace retirement account would participate, regardless of other factors (e.g. income, job tenure), and that no workers opted out.

To illustrate the impact of automatic escalation by household income terciles, we analyzed 2018 HRS data on retirement savings for households aged 51 to 64. We estimated the percentage and dollar amount difference in cumulative retirement savings over a hypothetical 10 years between hypothetical older workers from each income tercile. In one scenario, we assumed that the worker's contribution rate remained constant while in the second, the worker's contribution rate increased 1

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[9]The seventh expert did not comment on the question.

[10]We used income terciles, rather than quintiles, for consistency across all strategies. Workers have access to a workplace retirement account if their employer offers it and they are eligible. Workplace retirement accounts include all retirement account types in the SCF previously discussed except Keogh accounts.

percentage point each year, up to 10 percent.[11] We assumed that the worker experiencing automatic escalation would not opt out of automatic escalation.

We used 2018 HRS data to estimate the initial median workers' percent of pay contributed for contributing older households (contribution rate) and the median worker's contribution to a workplace retirement account (contribution amount) by income tercile.[12] Using these estimates, we calculated an estimated annual salary for hypothetical workers by income tercile, which we assumed stayed constant. At the end of each year, we added the estimated worker contribution and applied a hypothetical yearly rate of return on the existing account balance with compounding interest. We examined the long-term capital market assumptions of several professional forecasters to make an assumption about future market returns.[13] Using those estimates we selected a 6 percent rate of return as a rounded average.[14]

To illustrate the effect of increased contribution limits, we used 2018 HRS data to estimate the percentage of older households by income tercile with workers who are contributing to a workplace retirement account at least at the individual limit and catch-up limit. Specifically, we identified

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[11]We assumed that contribution rates under the automatic escalation strategy increased by 1 percentage point each year for two reasons. First, the Pension Protection Act of 2006 provides an automatic enrollment safe harbor for workplace retirement plans that include minimum contribution rates that increase by one percentage point each year. Second, a Vanguard study recommended to us by retirement security experts at the Congressional Research Service found that 98 percent of plans with automatic increases had a default increase of 1 percentage point each year. We assumed that the automatic escalation strategy capped worker contributions at 10 percent because of data from the Vanguard study. In 2021 Vanguard found that 47 percent of Vanguard plans with automatic increases were capped at ten percent. See Clark, Jeffrey W. and Young, Jean A; *Automatic Enrollment: The Power of the Default*; Vanguard (February 2021).

[12]Both calculations excluded contributions to IRAs because the data were not available and because IRAs are not typically workplace plans.

[13]The forecasts we examined were J.P. Morgan Asset Management's 2023 Long-Term Capital Market Assumptions, The Federal Reserve Bank of Philadelphia's First Quarter 2022 Survey of Professional Forecasters, BlackRock Investment Institute's November 2022 Capital Market Assumptions, and Callan's 2022-2031 Capital Market Assumptions. These forecasts were the most recent available from each of the sources as of date we performed our analysis.

[14]To examine the robustness of our analysis, we also tested the scenario with a 4 percent and 8 percent rate of return. The relative increase in savings for each income group of the scenario remained the same regardless of the rate of return we selected.

which households (the total of respondent and spouse) contributed at
least the annual limit on individual employee pre-tax and Roth
contributions for and, separately, the limit on catch-up contributions for
workers aged 50 and older among households who contribute at all.
Because of rounding and data limitations (e.g., imputation of contribution
amounts), we were unable to identify which individuals (respondent or
spouse) contributed exactly at the limit. We assumed that households
with workers contributing at least the limit were the only ones who benefit
from increased limits.[15]

To illustrate the effects of the Saver's Credit, we analyzed 2018 IRS
Statistics of Income estimates of filers that claimed the credit broken out
by adjusted gross income (AGI). Statistics of Income data compiled by
IRS are based on information from a probability sample of all individual
returns (Form 1040) processed during tax year 2018 except tentative and
amended returns. These were the most recent estimates available at the
time of our review, and they are subject to sampling errors. We estimated
the percentage of filers claiming the credit and the average credit amount
by income tercile, based on our HRS estimates. We chose not to estimate
percentage claiming the credit and average credit amount for returns that
reported AGI less than $10,000 because we could not verify the reliability
of IRS reported estimates.

International Case Studies

We conducted case study reviews of Germany, New Zealand, and the
United Kingdom, which all have retirement account systems. To select
countries, we obtained recommendations from Organisation for Economic
Co-operation and Development (OECD) retirement account experts and
U.S. agency officials from the Internal Revenue Service, the Department
of Labor, the Department of the Treasury, and the Social Security
Administration. We also reviewed GAO and OECD reports. To conduct
the case study reviews, we reviewed prior GAO and OECD reports and
government publications, and interviewed international retirement
representatives.[16] We submitted key report excerpts to agency officials in
each country for their review and verification, and we incorporated their
technical corrections as necessary. We also coordinated with national
audit offices in the selected countries. We converted local currency

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[15]We previously found that primarily high-income workers contributed at the new limit
following past contribution limit increases. GAO, *Private Pensions: Some Key Features
Lead to an Uneven Distribution of Benefits,* GAO-11-333 (Washington, D.C.: Mar. 30,
2011).

[16]For example see OECD, Annual Survey on Financial Incentives for Retirement Savings
(2022).

values to 2022 U.S. Dollar purchasing power parities—the most recent available at the time of our analysis—to adjust for differences in currency values.

We did not conduct an independent legal analysis to verify the information provided about the laws, regulations, or policies of the countries selected for this study. Instead, we relied on appropriate secondary sources, interviews, and other sources to support our work. We note also that the fact that a legal feature may be successful in one or more of the countries we reviewed, which may have significantly different cultures, histories, and legal systems than the United States, does not necessarily indicate that it would be successful in the United States.

We conducted this performance audit from July 2021 to July 2023 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: Regression Analysis of the Impact of Income, Demographic, and Other Factors on Household Retirement Account Balance

By analyzing 2018 RAND Health and Retirement Study (HRS) data using multivariate linear regressions, we identified income, demographic, and other factors that were independently correlated with older households' retirement account balances, limited to those aged 51 to 64 having with any positive balances. This appendix provides more information about our analysis and the results.

Data and Methodology

The outcome variable in the regression model is the log of the older household's retirement account balance defined as the sum of the respondent's and spouse's workplace retirement accounts as well as the household's IRA and Keogh accounts' net balance. We use the log form of this variable to address the skewed distribution of balances and to interpret the coefficients as the percent change in balances associated with each statistically significant factor. By repeating the analysis for each income tercile separately, we also identify the factors associated with balances within each income group. This allows us to understand any differences in magnitude by income of factors' relationship with balances.

To determine our model's factors associated with the distribution of retirement account balances, we reviewed relevant literature as well as interviewed experts on retirement security and inequality to discuss their research methods and findings. The model used the following household characteristics as explanatory variables for the household's balance:

- Log of Household Income. Given our interest in analyzing the relationship between income and retirement account balances, our main variable of interest is the log of household income. We include this variable as it reflects the generally greater ability to save in retirement accounts at higher income levels. We use the log form to normalize a skewed income distribution and to interpret the relationship between households' account balance and income as an elasticity.[1]

- Household's Number of Children. We include this variable as the expense of each additional child may influence the ability to save in retirement accounts or create other savings goals.

We also used the following characteristics of the respondent:

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[1]This variable is defined the same as in our descriptive analyses of HRS data.

**Appendix II: Regression Analysis of the Impact
of Income, Demographic, and Other Factors on
Household Retirement Account Balance**

- Age. To account for older individuals having more time to accumulate larger account balances, we include the age of the respondent in years at the interview end date.

- All Other Race. To measure respondents' race and ethnicity, we identify respondents as either the omitted White (Not Hispanic or Latino) group or All Other Race.[2] We include this variable to control for racial/ethnic differences in employment experiences, workplace retirement account access, and retirement savings behavior that may affect balances.

- Completed At Least Some College. To measure respondents' education level, we sort them into two groups: those who completed at least some college education and the omitted group who did not attend college. We add this variable to account for the potential relationship of education with a household's balance, such as an increased awareness about the need to save or achieving higher rates of return on savings.

- Female and Single; Male and Single. To account for disparities in balances by sex/gender and household size, which may influence households' spending and ability to save in a retirement account, we include data on the gender and marital status of the respondent. The omitted group is "Coupled", the respondent's marital status is married or partnered and is either sex.

- Tenure at Longest Job. We add this variable for years at the longest job to account for the relationship with workplace retirement account eligibility, cash outs at employer changes, and contribution rates.

- Log of Employer Size. We include this variable to account for differences by employer size in access and employer contributions to workplace retirement accounts. We use the log form to address the skewed distribution of employer size.

As robustness checks, we also included additional variables in supplemental regression models to ensure the estimates of the main model are not sensitive to their inclusion.[3] The estimates for the coefficient on log of household income in all of our alternative specifications was not detectably different from the main model.

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[2]All Other Race includes Black or African American, Other Race, or Hispanic or Latino.

[3]These included the following variables: Household Has Any Defined Benefit Plan, Log of Worker Contributions, Log of Employer Contributions, Log of Net Value of Total Assets (less IRAs), Respondent's Employer Size, or Respondent Participates in the Labor Force.

Appendix II: Regression Analysis of the Impact
of Income, Demographic, and Other Factors on
Household Retirement Account Balance

Limitations

Our results have limitations and should be interpreted with caution. Importantly, results from the multivariate regressions present correlations, not causal estimates. We report on associations and make no determination of the potential causality of income or any other demographic variable on retirement account balances.

There may be omitted variables that are not included in our models. Some of the differences in older households' retirement account balances by income seen here could be explained by other factors for which we lacked data, such as investment skill, risk tolerance, or stochastic stock market variation, all of which may be associated with account balances and income.

The HRS data also has limitations. Our estimates of factors associated with a larger (or smaller) retirement account balances are conditional on a household having survived to at least age 50, a prerequisite of the HRS survey. These factors' association with account balances may differ for other age groups. Also, as the HRS data has a limited sample size of older households with a retirement account balance, we used income terciles rather than quintiles. Further, we use 1 year of income data to form our three income groups, but a snapshot of a household's income may not be representative of their income over their lifetime.

Results

Table 4 presents the coefficient estimates and 95 percent confidence intervals from our regression model (with the omitted categories). Estimates that are statistically significant are indicated in table 4.

Table 4: Multivariate Regression: Outcome Is Log of Retirement Account Balance for Older Households with Any Balance, by Income Group

	All Incomes		Low-Income		Middle-Income		High-Income	
Characteristic	Est.	95% C.I.	Est.	95% C.I.	Est.	95% C.I.	Est.	95% C.I.
Log of Household Income	0.696***	0.507 - 0.885	0.169	-0.151 - 0.490	1.425***	0.735 - 2.114	0.534***	0.242 - 0.826
Age (years)	0.0215	-0.00460 - 0.0476	-0.111*	-0.228 - 0.00646	0.0147	-0.0302 - 0.0596	0.0437**	0.00721 - 0.0801
All Other Race (vs. White Not Hispanic or Latino)	-0.282*	-0.565 - 0.000870	-0.198	-1.795 - 1.399	-0.345*	-0.699 - 0.00822	-0.116	-0.452 - 0.220
Completed at least Some College (vs. did not attend college)	0.632***	0.367 - 0.897	0.742	-0.292 - 1.776	0.478**	0.0528 - 0.903	0.573**	0.104 - 1.042

Appendix II: Regression Analysis of the Impact
of Income, Demographic, and Other Factors on
Household Retirement Account Balance

Characteristic	All Incomes		Low-Income		Middle-Income		High-Income	
	Est.	95% C.I.	Est.	95% C.I.	Est.	95% C.I.	Est.	95% C.I.
Single Female (vs. Coupled)	-0.603***	-1.009 - -0.198	-1.461**	-2.750 - -0.173	-0.174	-0.591 - 0.242	-0.475	-1.123 - 0.174
Single Male (vs. Coupled)	-0.490*	-1.026 - 0.0453	-2.699***	-4.506 - -0.892	-0.116	-0.636 - 0.405	-0.200	-1.151 - 0.751
Number of Children	-0.202***	-0.276 - -0.128	-0.361***	-0.527 - -0.194	-0.183***	-0.270 - -0.0961	-0.167***	-0.264 - -0.0700
Tenure at Longest Job (Years)	0.0370***	0.0280 - 0.0460	0.0448**	0.00201 - 0.0876	0.0529***	0.0384 - 0.0674	0.0225***	0.00990 - 0.0350
Log of Employer Size	0.0482**	0.00430 - 0.0921	-0.221*	-0.454 - 0.0108	-0.0193	-0.107 - 0.0686	0.0971***	0.0417 - 0.152

Source: GAO analysis of 2018 Health and Retirement Study (HRS) data. | GAO-23-105342

Notes: These are results from multivariate regressions of the Log of Retirement Account Balance for older households where the respondent or spouse was age 51 to 64. Estimates (Est.) and 95% Confidence Intervals (95% C.I.) are presented; a statistically significant positive estimate indicates that the characteristic is independently associated with a larger balance, and a statistically significant negative estimate indicates that the characteristic is associated with a decreased balance. We ranked households by their income and broke them into three equally sized groups. *** indicates the coefficient estimate is statistically significant at the 99% confidence level. ** indicates the coefficient estimate is statistically significant at the 95% confidence level. * indicates the coefficient estimate is statistically significant at the 90% confidence level.

The estimated regression model shows that income, job tenure, and college education are each associated with substantially larger retirement account balances while one more child in a household is associated with considerably smaller balances. These relationships were also generally present within each income group individually.

Income. 10 percent more income is associated with about 14 percent larger retirement account balances for middle-income households and about 5 percent larger balances for high-income households.[4] There may be a stronger relationship between income and balances for middle- than high-income households as more high-income than middle-income households already contribute at the limit and could not contribute more if their income increased.

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[4]This difference between income groups was not statistically significant. Our finding is consistent with prior research that found higher income is associated with increased workplace retirement plan contributions. Dushi, Irena, Howard M. Iams, and Christopher R. Tamborini. "Contributory Retirement Saving Plans: Differences Across Earnings Groups And Implications For Retirement Security." *Social Security Bulletin* 77, no. 2 (2017).

**Appendix II: Regression Analysis of the Impact
of Income, Demographic, and Other Factors on
Household Retirement Account Balance**

Job Tenure. Another 10 years tenure at the longest job of the household head of a middle-income household is associated with about 53 percent larger balances, which is over double the about 23 percent larger balances for high-income households.[5] The stronger relationship between job tenure and balances for middle- than high-income households may be due to (1) fewer middle-income households already contributing at the limit and (2) more middle-income households being able to contribute more if they worked another year for their employer (e.g., workers subject to automatic escalation).

College Education. A household head with at least some college education is associated with about 48 percent larger balances for middle-income households, and about 57 percent larger balances for high-income households, than a similar household with a head who did not attend college.[6]

Children. Another child is associated with more than double the decreased balance for low-income households than for high-income households. Specifically, one more child is associated with smaller balances within each income group, ranging from about 36 percent smaller balances for low-income households to about 17 percent smaller balances for high-income households.[7]

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[5]This result is aligned with a prior study that found short job tenure was associated with smaller retirement savings. Saad-Lessler, Joelle, Teresa Ghilarducci, and Gayle L. Reznik.. "Retirement Savings Inequality: Different Effects of Earnings Shocks, Portfolio Selections, and Employer Contributions by Worker Earnings Level." *Social Security Bulletin* 78, no. 3 (2018): 1–17.

[6]This difference between income groups was not statistically significant. Our finding is consistent with a 2017 study that found higher education is associated with greater contributions to a workplace retirement account. Christopher R. Tamborini, ChangHwan Kim, Education and Contributory Pensions at Work: Disadvantages of the Less Educated, *Social Forces*, Volume 95, Issue 4, June 2017, Pages 1577–1606, https://doi.org/10.1093/sf/sox024

[7]This difference between income groups was not statistically significant. This finding is consistent with prior research that found a child leaving home is associated with households contributing modestly more to retirement accounts and may more often pay off their mortgage. Dushi, Irena, Alicia H. Munnell, Geoffrey T. Sanzenbacher, Anthony Webb, and Anqi Chen. "*Do Households Increase Their Savings When The Kids Leave Home?*" (September 2015). CRR WP 2015-26. Center for Retirement Research at Boston College. Although, other research suggests that when children leave, households both work and spend less instead of saving more for retirement. Biggs, Andrew G., Anqi Chen, and Alicia H. Munnell. "How do households adjust their earnings, saving, and consumption after children leave?" *Center for Retirement Research, Boston College,* (2021).

Appendix II: Regression Analysis of the Impact
of Income, Demographic, and Other Factors on
Household Retirement Account Balance

Table 5 presents the summary statistics of all variables for older
households with any retirement account balance.

Table 5: Estimated Mean Characteristics among Older Households with Any Retirement Account Balance

Characteristic	Mean Estimate	95% C.I.
Household Income ($2022)	$198,513	176,685 - 220,342
Retirement Account Balance ($2022)	$385,549	341,114 - 429,984
Age (years)	59.69	59.29 - 60.09
All Other Race	19.4%	17.3 - 21.6%
White (Not Hispanic or Latino)	80.6%	78.4 - 82.7%
Black or African American (Not Hispanic or Latino)	6.87%	5.63 - 8.11%
Other (Not Hispanic or Latino)	7.40%	5.07 - 9.73%
Completed at least Some College	78.9%	76.2 – 81.5%
Single Female	15.2%	13.2 - 17.3%
Single Male	10.8%	8.82 - 12.9%
Coupled	73.9%	71.2 - 76.6%
Number of Children	2.338	2.240 - 2.436
Tenure at Longest Job (Years)	19.65	18.92 - 20.38
Employer Size	720.8	540.2 - 901.4
In Labor Force	79.0%	76.2 - 81.9%
Has a Defined Benefit Pension	41.8%	38.6 - 45.0%
Net Value of Total Assets (less IRAs) ($2022)	$895,607	$709,471 – 1,082,000
Employer Contributions ($2022)	$6,347	$3,976 - 8,717
Worker Contributions ($2022)	$10,551	$9,120 - 11,981

Source: GAO analysis of 2018 Health and Retirement Study (HRS) data. | GAO-23-105342

Notes: Older households are those where the respondent or spouse was age 51 to 64. Estimates and
95% Confidence Intervals (95% C.I.) are presented.

Appendix III: Key Characteristics of Workplace Retirement Accounts, Defined Benefit Plans, and Social Security

Below is a description of how three potential retirement income sources (workplace retirement accounts, defined benefit plans, and Social Security) vary in terms of three key factors affecting their distribution: access, funding, and benefits.[1]

Workplace Retirement Accounts

- **Access.** About 62 percent of civilian workers had access to a workplace retirement account, according to data collected by the Bureau of Labor Statistics as part of the 2022 National Compensation Survey.[2] Workers may opt to participate in the plan or the plan may automatically enroll them. Employers may require a worker to work a certain length of time to become eligible.

- **Funding.** Typically a worker decides how much to contribute from current wages. The employer may also contribute. The worker often is responsible for managing the investment of his or her account, choosing from investment options offered by the plan. This can be difficult for some who lack the financial knowledge to make these decisions. In some plans, plan officials are responsible for investing all the plan's assets.

- **Benefits.** The account balance depends on contributions made by the worker and/or the employer, performance of the account's investments, and fees charged to the account. Participants may need to work up to 6 years to fully vest in the funds from employer contributions. The worker typically decides the amount and timing of account withdrawals.

Defined Benefit Plans

- **Access.** About 25 percent of civilian workers had access to a defined benefit plan, according to data collected by the Bureau of Labor Statistics as part of the 2022 National Compensation Survey. According to the same data, state and local government workers have greater access (86 percent) than private-sector workers (15 percent). Federal workers have near universal access. Eligibility and participation are typically automatic for workers working at least 1,000 hours per year.

- **Funding.** In private sector defined benefit plans, contributions are typically made by employers only. In public sector defined benefit plans, contributions are typically made by both employers and workers. Plan officials manage the investment. The employer is

[1]Throughout this appendix, we focus on a worker's individual income sources rather than any spousal or survivor's benefits for simplicity of presentation.

[2]National Compensation Survey estimates are for workers of all ages.

responsible for ensuring that the amount it has put in the plan plus investment earnings will be enough to pay the promised benefit.[3]

- **Benefits.** The worker's benefit is based on a formula in the plan, often using a combination of the worker's age, years worked for the employer, and/or salary. Participants may need to work up to 7 years to fully vest in the accrued benefits derived from employer contributions. The plan must offer an annuity option, which may or may not include inflation adjustments, to vested participants.

Social Security

- **Access.** All workers are generally eligible for Social Security retirement benefits after working at least 10 years (earning 40 Social Security credits) in a job with covered earnings.[4]

- **Funding.** Social Security retirement benefits are primarily funded through a payroll tax paid by current workers and employers (including self-employed workers).

- **Benefits.** Social Security retirement benefits are generally based on a worker's highest 35 years' of covered earnings and the age a worker claims benefits. The formula for calculating monthly benefits is progressive, which means that Social Security replaces a higher percentage of monthly earnings for lower-earners than for higher-earners. Social Security retirement benefits offer two features that offset some key risks people face in retirement: (1) they provide a monthly stream of payments that continue until death, so there is no risk of outliving scheduled benefits; and (2) they are generally adjusted annually for cost-of-living increases, which mitigates the risk of inflation eroding benefits' value.

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[3]The benefits owed by most private-sector plans are insured by the Pension Benefit Guaranty Corporation, up to certain limits.

[4]"Covered earnings" are work-related earnings, such as wage income, that are subject to Social Security taxation. According to the Social Security Administration, 94 percent of men aged 62 to 66 had 10 years of covered earnings in 2018, compared to 89 percent of women. Office of the Chief Actuary and Office of Research, Evaluation, and Statistics, Social Security Administration, *Population Profiles: Fully Insured Workers*, March, 2020.

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact	Tranchau (Kris) T. Nguyen at (202) 512-7215 or nguyentt@gao.gov
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