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The Retirement Savings Crisis: Is It Worse Than We Think?

By Nari Rhee, PhD

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EXECUTIVE SUMMARY

Americans are highly anxious about their retirement security,¹ and for good reason. Private sector employers have shifted away from traditional defined benefit (DB) pensions, which provide a stable source of income that lasts through retirement and are managed by professionals. Instead, most private sector employees with workplace retirement plans must rely upon defined contribution (DC) individual investment accounts, such as 401(k) plan accounts, which were originally designed to supplement—rather than replace—DB pensions. Now, the risk and much of the funding burden falls on individuals, who tend to have difficulty contributing enough on their own and who typically lack investment expertise. This shift from DB pensions to DC plans has significantly eroded the retirement readiness of Americans.

The financial crisis of 2008 highlighted the vulnerability of household retirement wealth in the new DC-centered system. Financial experts suggest that people need 8-11 times income in retirement assets in order to maintain their standard of living in retirement. In the current economic environment, some have increased the recommended contribution rate from 10 percent of pay to 15 percent in order to reach this target by retirement age. This is a hefty savings burden. The vast majority of households have not been able to accumulate sufficient retirement assets.

This report examines the readiness of working-age households, based primarily on an analysis of the 2010 Survey of Consumer Finances (SCF) from the U.S. Federal Reserve. This study analyzes workplace retirement plan coverage, retirement account ownership, and household retirement savings as a percentage of income, and estimates the shortfall in working families' savings as compared to financial industry recommended benchmarks.

The key findings of this report are as follows:

1. **Account ownership rates are closely correlated with income and wealth. More than 38 million working-age households (45 percent) do not own any retirement account assets, whether in an employer-sponsored 401(k) type plan or an IRA.** Households that do own retirement accounts have significantly higher income and wealth—more than double the income and five times the non-retirement assets—than households that do not own a retirement account.
2. **The average working household has virtually no retirement savings.** When all households are included—not just households with retirement accounts—the median retirement account balance is \$3,000 for all working-age households and \$12,000 for near-retirement households. Two-thirds of working households age 55-64 with at least one earner have retirement savings less than one times their annual income, which is far below what they will need to maintain their standard of living in retirement.
3. **The collective retirement savings gap among working households age 25-64 ranges from \$6.8 to \$14 trillion, depending on the financial measure.** A large majority of households fall short of conservative retirement savings targets for their age and income based on working until age 67. Based on retirement account assets, 92 percent of working households do not meet targets. Under broader measures, most households still have insufficient assets: 90 percent fall short based on retirement account balances and estimated DB pension assets combined, 84 percent fall short based on total financial assets, and 65 percent fall short based on net worth.
4. **Public policy can play a critical role in putting all Americans on a path toward a secure retirement by strengthening Social Security, expanding access to low-cost, high quality retirement plans, and helping low-income workers and families save.** Social Security, the primary edifice of retirement income security, could be strengthened to stabilize system financing and enhance benefits for vulnerable populations. Access to workplace retirement plans could be expanded by making it easier for private employers to sponsor DB pensions, while national and state level proposals aim to ensure universal retirement plan coverage. Finally, expanding the Saver's Credit and making it refundable could help boost the retirement savings of lower-income families.

INTRODUCTION

Americans are highly anxious about their retirement security,² and for good reason. Private sector employers have shifted away from traditional defined benefit (DB) pensions, which provide a stable source of income that lasts through retirement and are managed by professionals. Instead, most private sector employees with workplace retirement plans must rely upon defined contribution (DC) individual investment accounts, such as 401(k) plan accounts, which were originally designed to supplement—rather than replace—DB pensions. Now, the risk and much of the funding burden falls on individuals, who tend to have difficulty contributing enough on their own and who typically lack investment expertise. This shift from DB pensions to DC plans has significantly eroded the retirement readiness of Americans.

The catastrophic financial crisis of 2008 exposed the vulnerability of the new DC-centered retirement system. Americans saw the value of their hard-earned nest eggs plummet when the financial markets crashed and destroyed trillions of dollars of household wealth. In the difficult years since then, slow employment recovery has eroded median family income and made it more challenging than ever to save for retirement. At the same time, the national public policy debate is focused on proposals to reduce the benefits provided by Social Security, which serves as the primary foundation of retirement income security for most Americans and provides a critical bulwark against old-age poverty.

In this uncertain environment, working families face an ongoing quandary: how much income will they need to retire, and will they ever have enough? To maintain its standard of living in retirement, the typical working American household needs to replace roughly 85 percent of pre-retirement income.³ This replacement rate may seem high, but it does not fully account for medical costs which can escalate rapidly during retirement.⁴ Social Security, under the current benefit formula, provides a replacement rate of roughly 35 percent for a typical household, leaving a retirement income gap equal to 50 percent of pre-retirement earnings. For some families—most of whom are now approaching retirement—a portion of this gap will be closed by a DB pension. Most families, however, rely predominantly

on their own investments through an employer-sponsored plan such as a 401(k) if available or, if not, an Individual Retirement Account (IRA).⁵ Financial experts suggest targets of 8-11 times income in retirement assets in order to replace 85 percent of pre-retirement income. Since the 2008 crisis, some experts have begun to recommend a contribution rate of 15 percent of pay—rather than the previous 10 percent—over a 40-year career in order to meet this target.⁶

This is a hefty savings burden, one that the vast majority of households have not been able to meet.⁷ The magnitude of this crisis is considerably worse than many realize. For instance, a commonly cited statistic is the average 401(k) balance of \$100,000—or higher, depending on the source—for households near retirement age.⁸ Not only is this sum inadequate to provide meaningful income security for the typical household; it also only counts those that own retirement accounts in the first place.

This report examines the readiness of *all* working-age households, based primarily on the author's analysis of the 2010 Survey of Consumer Finances (SCF) from the U.S. Federal Reserve.⁹ This report analyzes workplace retirement plan coverage, retirement account ownership, and retirement savings as a percentage of income among U.S. households age 25-64. The report also estimates the magnitude of the shortfall in working families' savings compared to financial industry recommended benchmarks. The study is organized as follows:

- **Section I** summarizes historical and generational trends in access to and participation in employer-sponsored retirement plans, which remain the primary vehicle for tax-advantaged retirement wealth accumulation for workers.
- **Section II** examines rates of household participation in DC retirement accounts—including employer-sponsored, 401(k) type plans or private retirement accounts like traditional and Roth Individual Retirement Arrangements (IRAs)—and identifies differences by income and wealth.

- **Section III** analyzes DC account balances and ratios of retirement savings to income for working-age households with at least one earner.
- **Section IV** estimates the retirement savings gap by comparing various household financial measures with recommended benchmarks.
- **Section V** explores the policy implications of these findings, focusing on Social Security, access to retirement savings vehicles, and lower-income households' ability to save.

I. LOWER COVERAGE, LESS SECURITY: EMPLOYER-SPONSORED RETIREMENT PLANS

Employer-sponsored retirement plans remain the most important vehicle for providing retirement income among working households after Social Security. However, a large share of American workers lack access to an employer-sponsored retirement plan through their employer. Those who do participate in a retirement plan are much likely to be enrolled in an individual 401(k) type account rather than a group DB pension. DC plans like 401(k)s offer the advantage of portability for a mobile labor force, but place all of the investment risk and most (if not all) of the contribution burden on individual workers. In traditional DB plans, employers bear the investment risk and primary funding responsibility, assets are usually managed by professionals, and workers benefit from secure monthly income that lasts through retirement. Because they are pooled, DB pensions provide significantly higher retirement income than DC plans for the same contribution rate.¹⁰

In this section, we analyze worker and household level participation in employer sponsored retirement plans drawing on the U.S. Bureau of Labor Statistics' Current Population Survey (CPS)¹¹ and the SCF. We find declining access to workplace retirement benefits at the worker and household level, a decline in DB coverage and increase in DC coverage among households that participate in workplace plans since

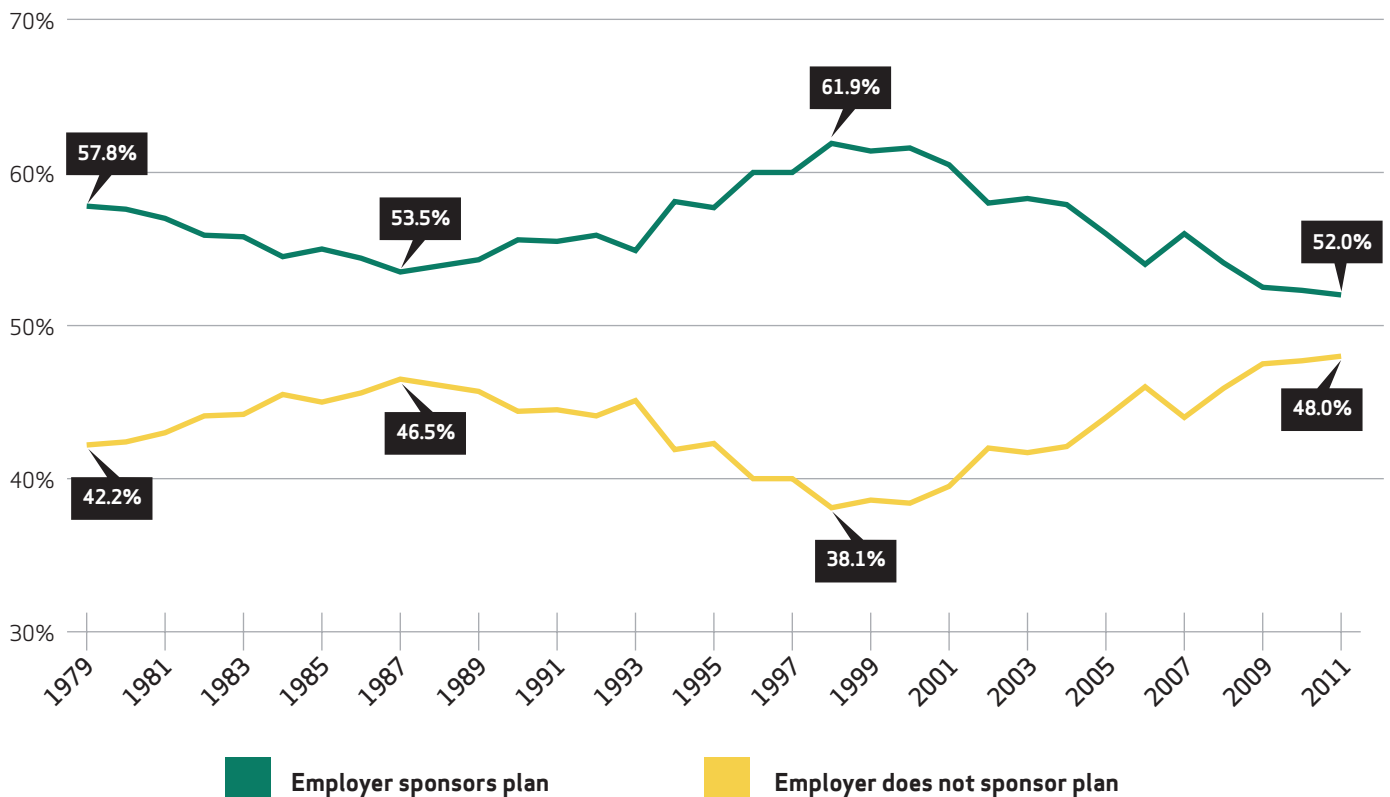
the late 1990s, and a resulting generation gap in which younger households are half as likely to be covered by a DB pension through their workplace as those near retirement.

Figure 1 illustrates historical trends in access to employer-sponsored retirement benefits, whether DB or DC, among private sector wage and salary employees age 25-64 based on an analysis of the CPS. "Access" denotes working for an employer that sponsors a retirement plan of some kind, regardless of whether an individual worker qualifies or participates. The percentage of workers whose employers sponsored a retirement plan declined during the 1980s, to 54 percent in 1988. Workplace retirement plan access increased during the next decade—particularly the mid to late 1990s when economic growth and low unemployment lifted wages across the board—reaching 62 percent in 1999-2001. Access dropped steeply in the aftermath of the 2001 recession and then again after 2008 financial collapse. By 2011, only 52 percent of private sector employees age 25-64 had access to a retirement plan on the job—the lowest rate since 1979.

Conversely, 48 percent—44.5 million individuals—worked for an employer that did not sponsor a retirement plan in 2011. Even among full-time employees in the same age group, 44 percent—or 35.2 million—had no access.

Figure 1: Only Half of Private Sector Employees Have Access to Workplace Retirement Benefits—the Lowest Share Since 1979

Private sector wage and salary workers age 25-64 by employer retirement plan sponsorship, 1979-2011



Source: Author's analysis of CPS Annual Social and Economic Supplement (ASEC), various years.

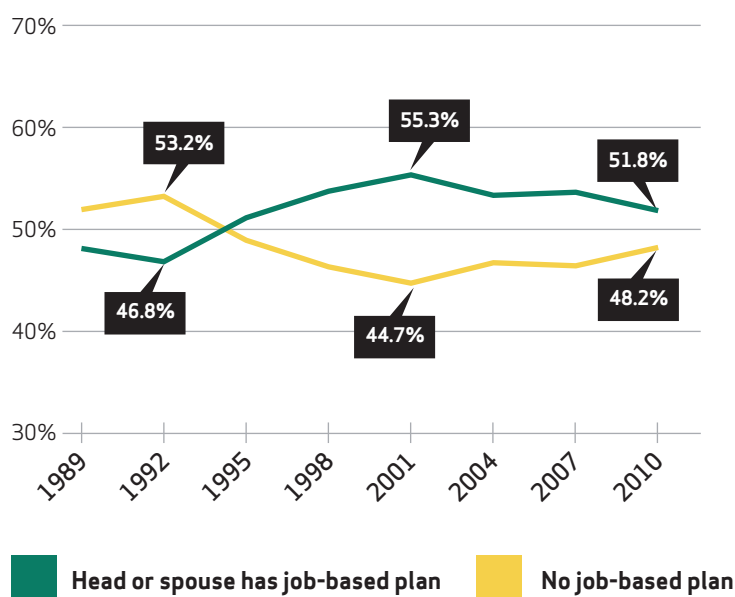
Workers who lack access to an employer-sponsored retirement plan tend to work for smaller firms, and to be low- to middle-wage employees.¹² Large firms generally offer more generous benefits. For example, in 2012, 46 percent of workers in firms with 500 or more employees had access to a DB pension.¹³ Small businesses—which account for approximately two-thirds of workers that lack access to a retirement plan—often find it too expensive and complicated set up any kind of retirement plan. In addition, earnings levels make a difference; firms that employ high-wage labor tend to offer at least a 401(k) type benefit with matching contributions as a recruitment tool, and those small businesses that offer a retirement plan tend to fall into this category. Small and large employers in low-wage industries are less likely to offer a retirement plan.

The trend toward declining access over the past decade in the private sector, which accounts for most employment, is also reflected at the household level (**Figure 2**). The share of working-age households in which the head or spouse reported *participating* in—not just having access to—a workplace retirement plan peaked in the 2001 SCF and has declined since. Consequently, the share of U.S. working families in which neither the head of household nor the spouse participated in a retirement plan through their job increased from 42.7 percent in 2001 to 44.6 percent in 2010.

Some observers discount the size of the gap in employer-sponsored retirement plan access in official statistics by arguing that employers that do not provide retirement plans are merely

Figure 2: Only 52 Percent of Working-Age Households Participate in Workplace Retirement Plans

Employer-sponsored retirement plan coverage among households with heads age 25-64, 1989-2010



Source: Author's analysis of SCF, various years.

accommodating the voluntary preferences of employees who are not “focused on” retirement savings because they are young (e.g., below age 30), are lower income, or work part-time.¹⁴ However, insofar as workers have a lack of *desire* to contribute to a retirement plan under current circumstances, this should not be confused with the lack of *need* to accumulate retirement assets, whether through a DB pension or a retirement account. Studies of projected retirement income adequacy from the financial services industry assume employee contributions starting at age 25, and assume no break in employment or savings.¹⁵ Every year of delay or interruption increases the contribution burden as a percentage of wages.

In addition, lower-income workers and households face higher risk of not having enough income to meet basic expenses in old age. While a typical low-wage worker will have a higher percentage of her pre-retirement income replaced by Social Security compared to a middle-wage worker—approximately

10 percentage points higher—this is generally offset by the fact that she will also need to replace a greater share of her income in retirement.¹⁶ This is because the costs that decrease or disappear in retirement—income taxes, savings, and work related expenses—take up a smaller share of a typical low-wage worker’s pay.¹⁷ Importantly, low-wage workers also have less disposable income, after basic expenses, with which to save. This challenge is reflected in the fact that low-income households that contribute to a 401(k) do so at a much lower average percentage of pay than do middle- and high-income households.¹⁸

The reality is that every working American needs to accumulate retirement assets throughout their entire career, no matter their wage level or whether they work full- or part-time. Enabling workers and families to accumulate adequate retirement resources is an urgent public policy issue, given the massive retirement savings shortfall documented in Section IV of this paper.

While a shrinking percentage of workers have access to workplace retirement plans, the retirement income security provided by such plans has also diminished. Among working-age households in which the head or spouse *participated* in an employer sponsored retirement plan through a current job, the share that had a DB pension—whether alone or with a DC account—declined rapidly from 73 percent in 1989 to 45 percent in 1998 (**Figure 3**). Conversely, the share of participating households that only had a DC plan grew from 27 to 55 percent during the same period. The decline in DB pensions and the increase in DC plans has continued since 1998, albeit more slowly. In 2010, 42 percent of households participated in a DB plan through a job held by the head and/or spouse, and 58 percent participated in only a DC plan.

Households currently near retirement represent the last generation of workers to enjoy widespread DB pension coverage. As illustrated in **Figure 4**, among households covered by workplace retirement benefits, a majority (60 percent) of older households age 55-64 are covered by a DB pension. In contrast, younger households are half as likely to have a DB pension—31 percent for age 25-34 and 32 percent for age 35-44.

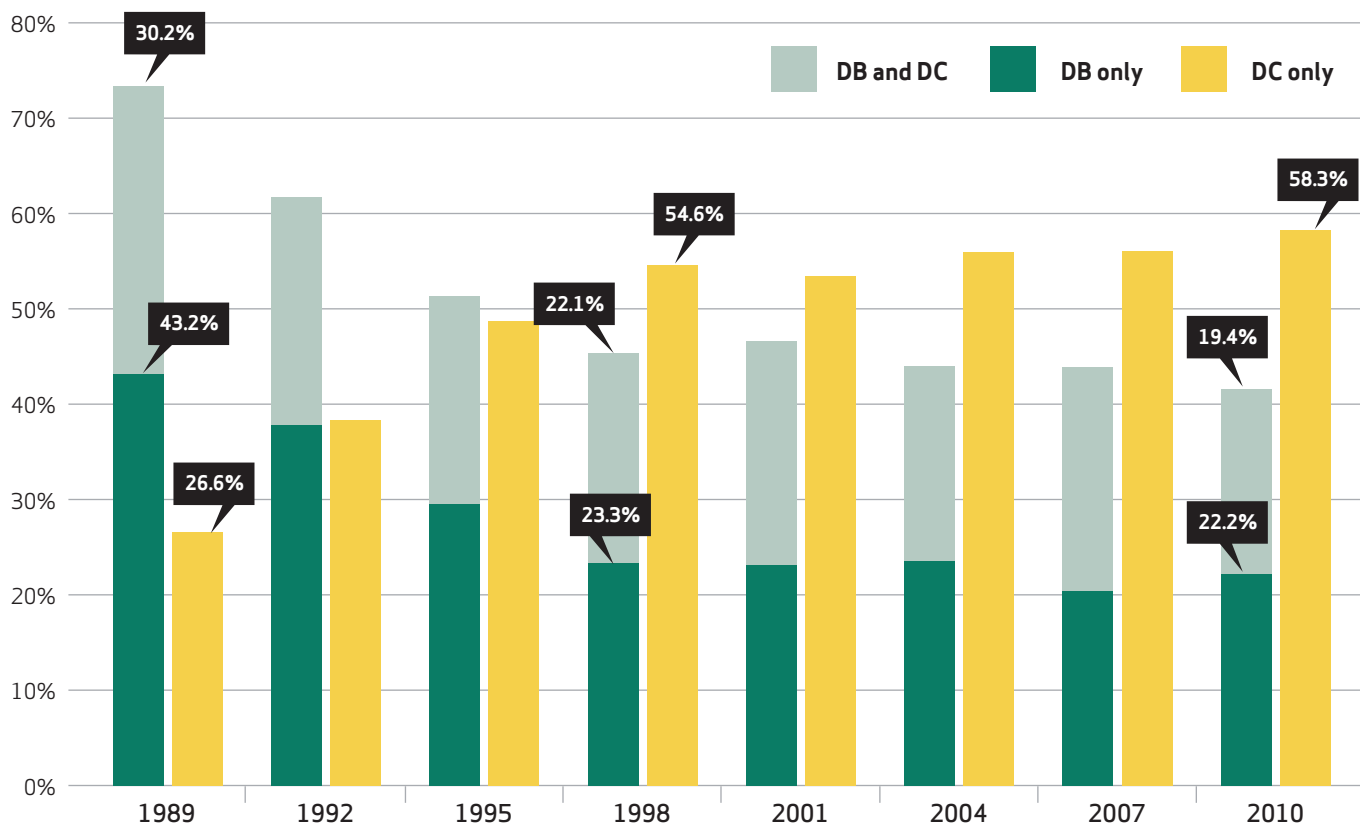
This trend has had profound implications for the retirement income security of working households. When the federal law creating 401(k) plans was originally passed in 1978, they were intended to supplement—not replace—DB pensions. These 401(k) plans have the advantage of portability and immediate vesting of benefits, compared to traditional DB pensions in which workers usually must wait several years to vest, and where benefits are tied to a single employer or group of employers. However, it is widely recognized that 401(k)s also

expose workers to a host of risks that they are ill-equipped to bear as individuals: inadequate contributions, poor investment choices, financial market volatility, and outliving their retirement savings.

The following section will examine how American working-age families are faring in wealth accumulation in the DC-centered retirement system.

Figure 3: Three out of Five Households Covered by a Workplace Retirement Plan Have Only a 401(k) Type Benefit

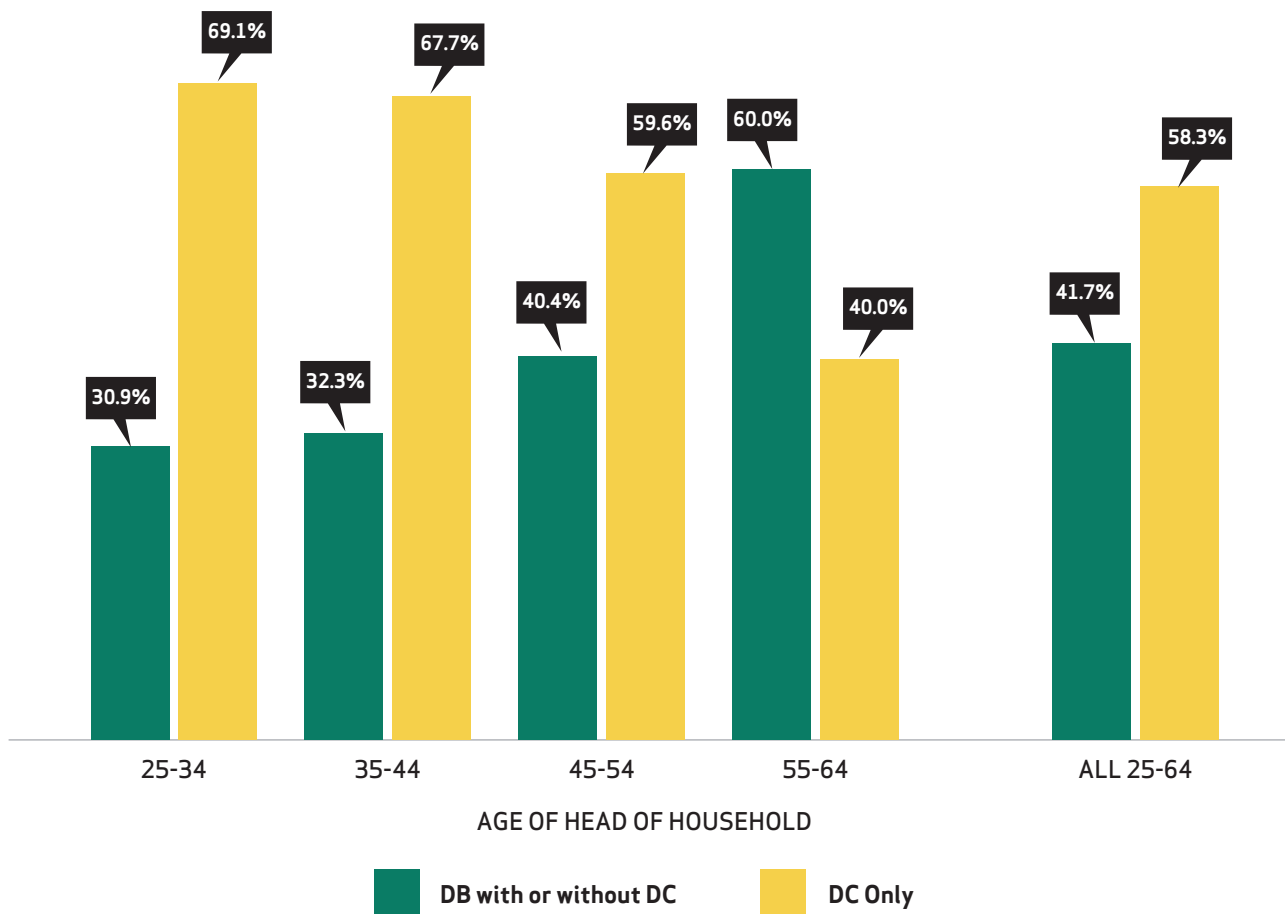
DB and DC plan participation among households covered by an employer-sponsored retirement plan, 1989-2010



Source: Author's analysis of 2010 SCF. Universe is households with heads age 25-64 in which the head or spouse is covered by a retirement plan through their current job.

Figure 4: Young Households with Workplace Retirement Benefits Are Half as Likely As Near-Retirement Households to Have a DB Pension

DB and DC plan coverage among households covered by an employer-sponsored retirement plan, by age of head of household, 2010



Source: Author's analysis of 2010 SCF. Universe is households with heads age 25-64 in which the head or spouse is covered by a retirement plan through their current job.

II. MARKED DISPARITIES: RETIREMENT ACCOUNT OWNERSHIP

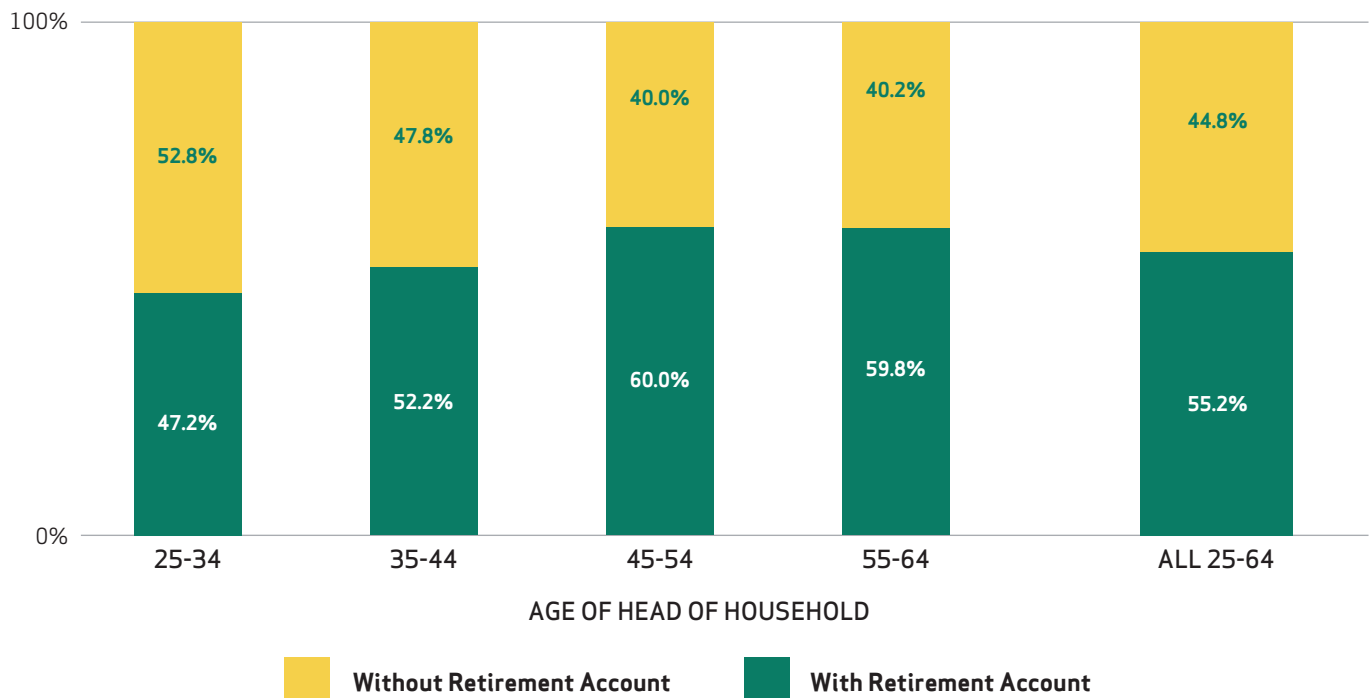
A large share of U.S. working-age households do not own any retirement account assets, and retirement account asset ownership rates are characterized by marked disparities according to income and wealth. This section examines rates of participation in retirement accounts among working-age households. Retirement accounts include both employer-sponsored plans like 401(k)s, 403(b)s, 457(b)s, SEP IRAs, and Simple IRAs, and private retirement accounts like traditional IRAs and Roth IRAs. They do not include DB pensions.¹⁹ This section also draws out key socioeconomic distinctions between households that own at least one retirement account and those with no assets held in a retirement account.

For the purposes of this analysis, a household is considered to own a retirement account if its total retirement account assets are greater than zero, consistent with the Federal Reserve's analysis of SCF retirement accounts data.²⁰ This definition includes households whose only retirement account is a 401(k) still held through a former employer, and excludes households with a total retirement account asset balance of zero.

Figure 5 shows retirement account ownership rates among working-age households by age group. Significantly, a large share of households lack retirement account assets: 45 percent of all working-age households, and 40 percent of near-retirement households.²¹ All told, 38.3 million working-age households in the U.S. do not have retirement account assets (**Table 1**).

Figure 5: Nearly 45 Percent of All Working-Age Households Do Not Own Assets in a Retirement Account

Household retirement account ownership by age of head of household, 2010



Source: Author's analysis of 2010 SCF.

Table 1.

38.3 Million Working-Age Households Do Not Own Assets in a Retirement Account

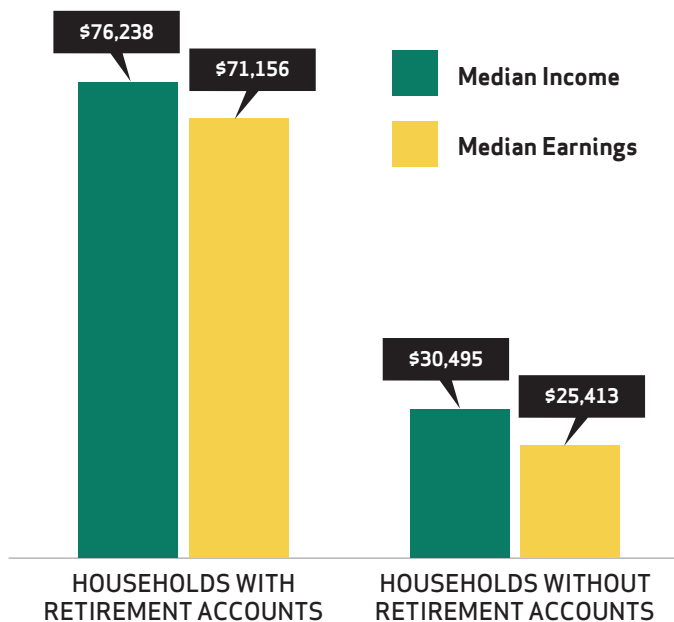
Number of households with no retirement account assets by age of head of household, 2010

Age of Head	Number of Households (millions)
25-34	9.9
35-44	10.2
45-54	9.9
55-64	8.3
Total 25-64	38.3

Source: Author's analysis of 2010 SCF.

Figure 6: Households with Retirement Accounts Have 2.5 Times the Income of Households without Retirement Accounts Assets

Median income and earnings among working-age households by retirement account ownership status, 2010.



Source: Author's analysis of 2010 SCF. Universe is households with heads age 25-64. Households with negative earnings excluded. Retirement account ownership status in 2010; income reported for 2009.

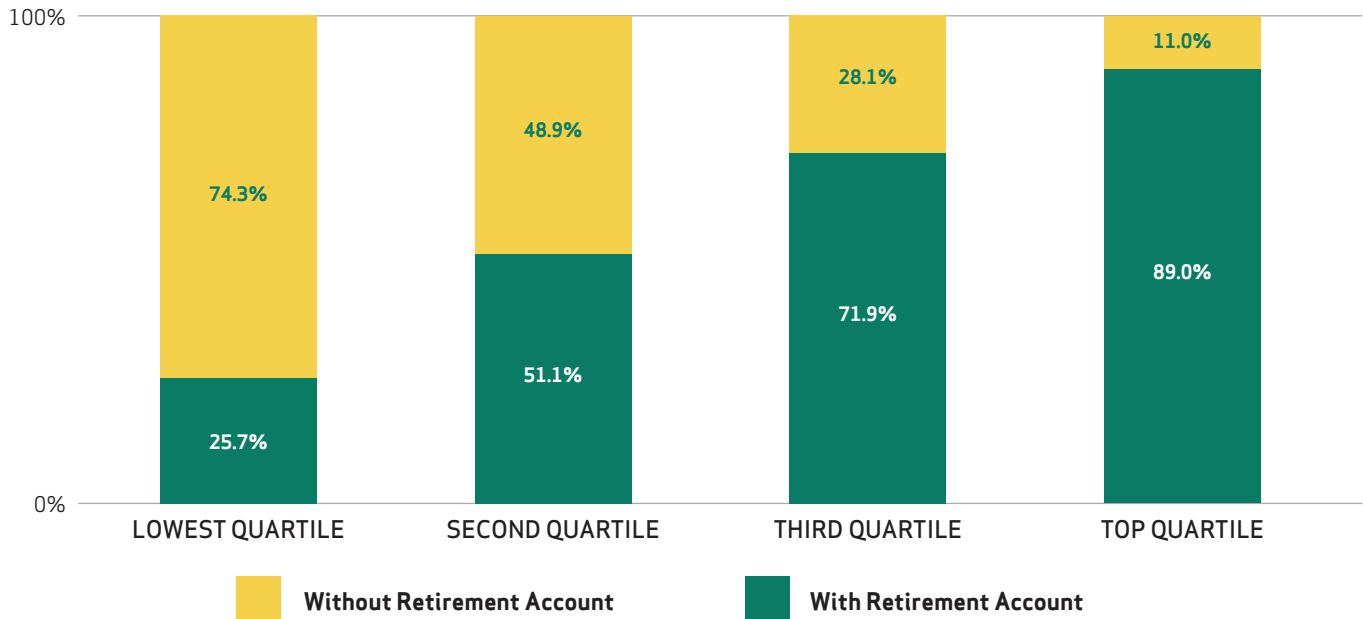
While there is a notable gap between older and younger households in retirement account ownership—47 percent among households age 25-34 versus 60 percent among households age 55-64—the participation gap is much wider across income groups. To begin, households with retirement accounts have a median income of \$76,238, compared to \$30,495 among households without retirement accounts—two and a half times as large (Figure 6). The disparity in account ownership between high and low income groups is stark. Figure 7 shows the retirement account asset ownership of households by income quartile. (See Appendix for methodology.) The vast majority (89 percent) of households in the top income quartile own retirement account assets, as do 72 percent of the third (second-highest) income quartile. In comparison, 51 percent of the second-lowest income quartile and only 26 percent of households in the bottom income quartile own retirement account assets. In other words, retirement accounts are sharply concentrated in the top half of the income distribution.

Finally, Figure 8 compares the median net worth (exclusive of retirement accounts) of households with and without retirement account assets, controlling for age. In each age group, households that own retirement accounts have between five and six times the non-retirement wealth of those that do not own a retirement account. Among near-retirees, for example, retirement account-owning households have nearly \$245,000 in non-retirement wealth compared to nearly \$40,000 among non-owners.

This data is consistent with previous studies on differences in retirement account ownership rates by income.²² Additionally, according to a recent analysis of the 2010 SCF by the Congressional Research Service, the distribution of retirement account assets is skewed by marital status; couples are more likely to own a retirement account and have substantially higher balances than singles.²³

Figure 7: Retirement Account Ownership Is Heavily Concentrated Among Higher-Income Households

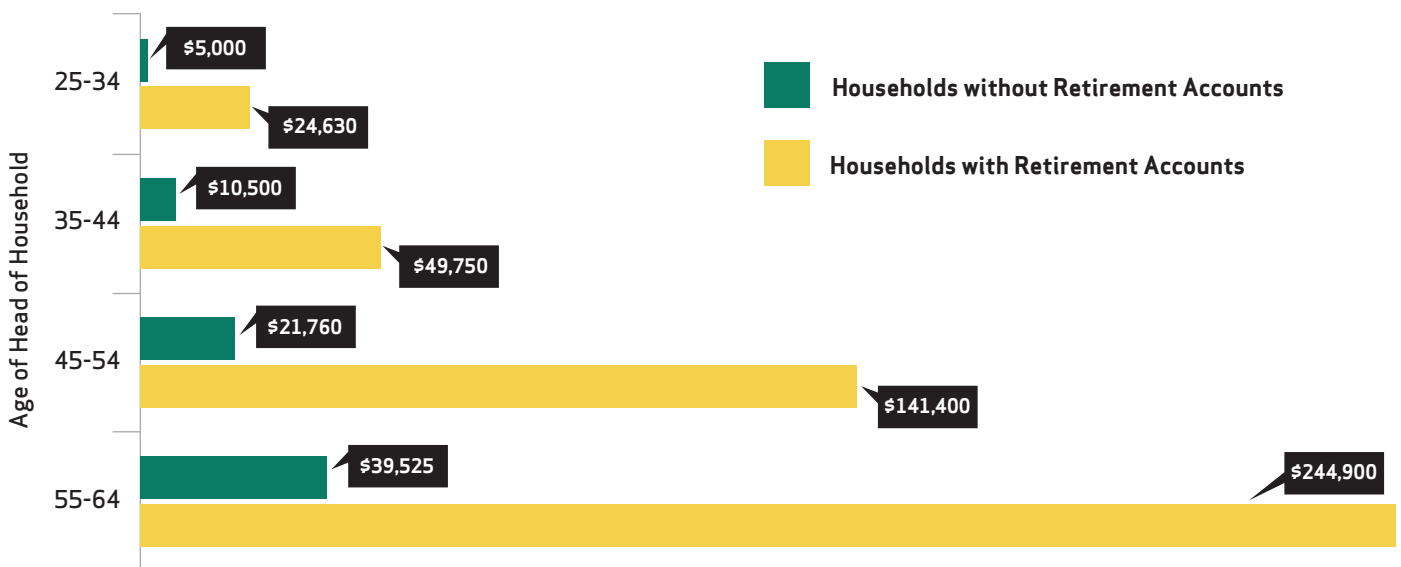
Retirement account ownership status by household income quartile, 2010



Source: Author's analysis of 2010 SCF. Universe is households with heads age 25-64. Households with negative earnings excluded. Household income adjusted by marital status for ranking purposes; see Appendix for methodology.

Figure 8: Typical Retirement Account Owning Household Has 5 to 6 Times the Non-Retirement Wealth of Non-Owning Household in Same Age Group

Median net worth (excl. retirement assets) of households by retirement account ownership status, 2010



Source: Author's analysis of 2010 SCF. Universe is households with heads age 25-64. Those with negative earnings excluded. See Appendix for methodology.

III. RETIREMENT ACCOUNT BALANCES

While private saving has always played an important role in retirement, changes in the U.S. retirement system have put increasing emphasis on DC accounts in lieu of the DB pensions that previously covered most workers who participated in retirement workplace plans. The share of older adults who received DB pension income through their own or other spouse's former employer dropped from 52 percent in the late 1990s and early 2000s to 43 percent in 2010, and will continue to decline in the coming years.²⁴

The shift from DB pensions to DC plans has had profound consequences for American workers and families in terms of the risks and costs they now bear in saving and investing to fund their own retirement. Unfortunately, the truth is that the typical household—even one near retirement—has only a few thousand dollars in retirement account assets. A large majority of working-age households have dangerously low retirement savings in relation to their income, and are nowhere near the recommended benchmarks for their age.

This section examines median retirement account balances for the entire population of working-age households with heads age 25–64 and analyzes the retirement account assets of working households as a multiple of income.

Given that 45 percent of households do not own a retirement account, there is a large disparity between median (50th percentile) retirement asset balance figures counting only working-age households with retirement accounts, and those that count *all* working-age households (**Figure 9**). The median retirement account balance for households with retirement assets was \$40,000 in 2010, compared to \$3,000 for

all households with heads age 25–64. Even more significantly, among households approaching retirement (age 55–64), the median balance was \$100,000 for account-owning households and only \$12,000 for all households in that age group. In other words, the average U.S. working-age household has virtually no retirement savings.

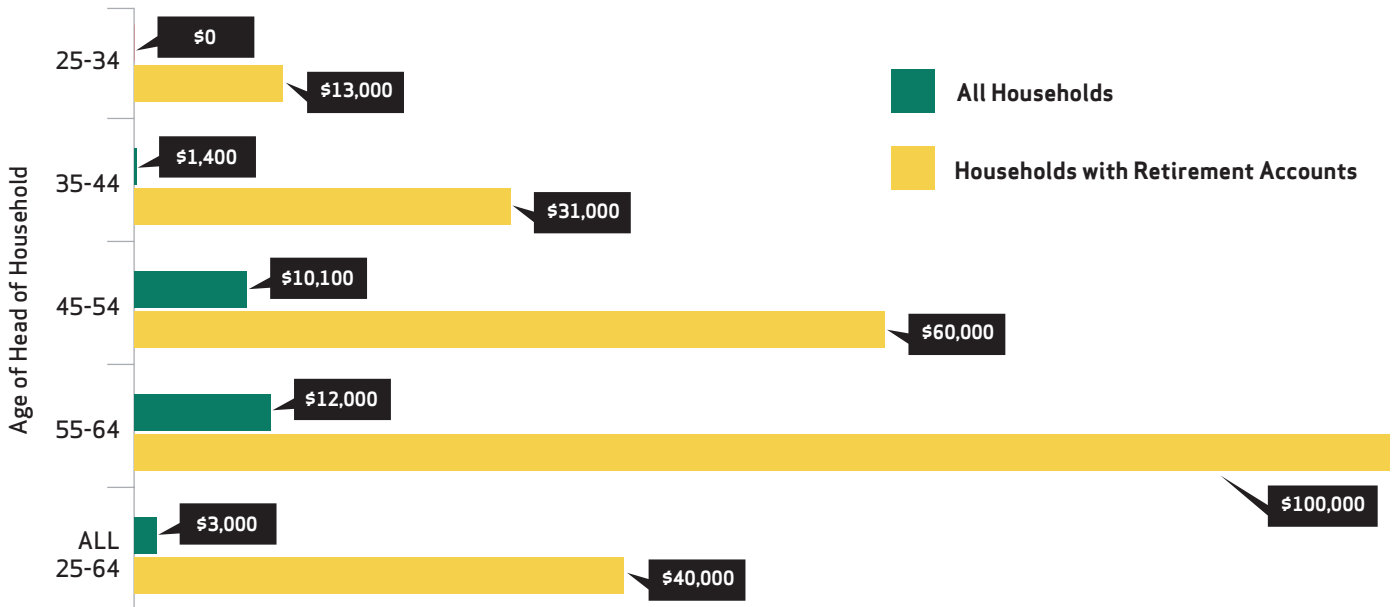
Even among households with retirement accounts, account balances are inadequate. For instance, the median balance of \$100,000 for those nearing retirement will only provide a few hundred dollars per month in income if the full account balance is annuitized, or if the household follows the traditionally recommended strategy of withdrawing 4 percent a year, which is risky in the current low-interest environment.²⁵

Another way to look at retirement savings is as a multiple of annual income. This provides a simple gauge with which to evaluate how well households are doing in preparing for retirement given their income level.²⁶ **Figure 10** illustrates ratios of retirement account balances to household income among working-age households with at least one earner.

Overall, over 40 percent have no retirement savings. Another 40 percent have retirement savings less than 100 percent of income. Among working households age 55–64, nearly 32 percent have no retirement savings, and another 32 percent have retirement savings less than 100 percent of their income. That is, 80 percent of all working households age 25–64 and 60 percent of working households approaching retirement have less than their annual income saved in retirement accounts. This reflects a huge shortfall compared to the amount they will need, as illustrated in the following section.

Figure 9: Typical Working-Age Household Has Only \$3,000 in Retirement Account Assets; Typical Near-Retirement Household Has Only \$12,000

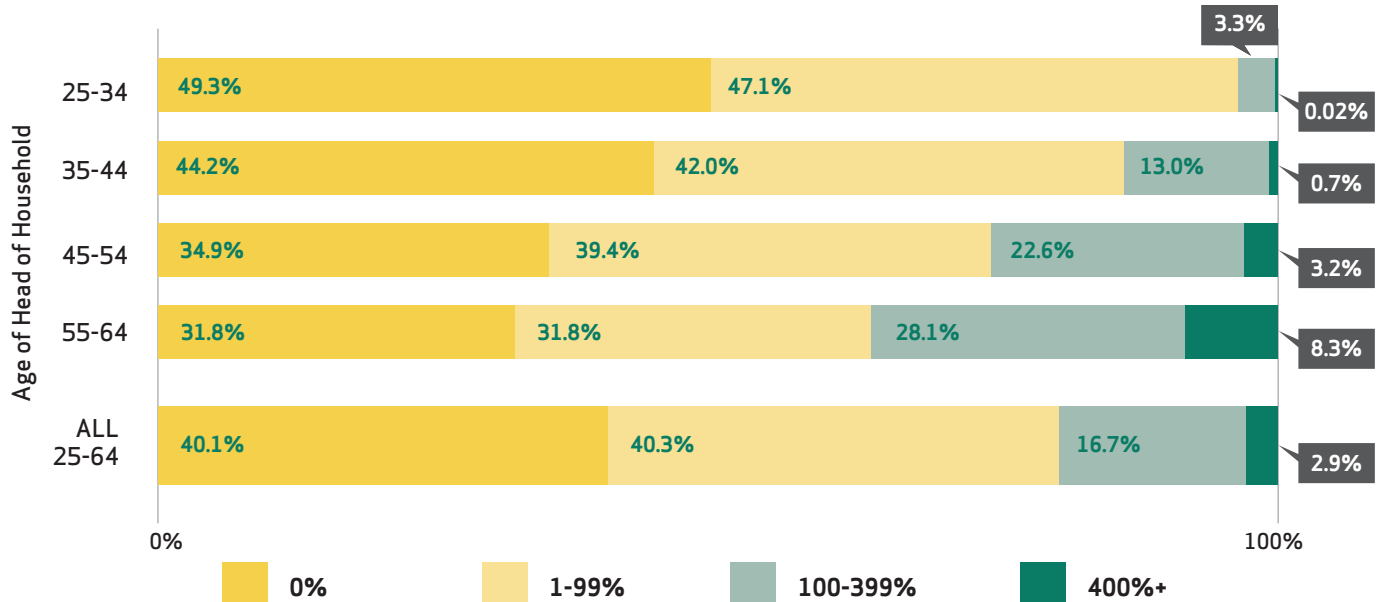
Median retirement account balances, households with retirement accounts vs. all households, 2010



Source: Author's analysis of 2010 SCF.

Figure 10: Four out of Five Working Households Have Retirement Savings Less than One Times Their Annual Income

Retirement account balance as a percentage of income among working households, 2010



Source: Author's analysis of 2010 SCF. Universe is households with heads age 25-64, with total earnings \geq \$5,000 and $<$ \$500,000 and total income $<$ \$1M.

IV. FALLING SHORT BY ANY MEASURE: WORKING HOUSEHOLDS' RETIREMENT SAVINGS GAP

Most people do not have a clear idea of how much they need to save to have enough income—including Social Security—to maintain their standard of living in retirement. For instance, a \$200,000 retirement account balance may seem high, but is less than half of the minimum amount that a couple with \$60,000 in combined annual income will need, according to conservative estimates. The financial services provider Fidelity Investments recommends a minimum of 8 times income in retirement savings for retirement at age 67 and provides benchmarks in 5-year age intervals (Table 2).²⁷ Aon Hewitt, a large human resources consulting firm, estimates that 11 times salary is needed in retirement assets in order to retire at age 65.²⁸ Both models include a target replacement rate of 85 percent of pre-retirement income. Significantly, given the current median Social Security claiming age of approximately 62, high long-term unemployment among older adults, and large disparities in life expectancy and health status by income, delaying retirement until age 67 may not be realistic for a significant share of workers.²⁹

In order to determine how American households' savings measure up to the standards suggested by some financial services experts as retirement savings goals, the following analysis compares key measures of household wealth to the Fidelity retirement savings goals. We chose the Fidelity standards as a benchmark because they represent a conservative, lower-bound estimate of savings needs.

An important caveat is that the following estimates rely on rule-of-thumb multipliers and are not based on detailed projections of the income needs of individual households, which vary with family size, marital status, income level and tax rates, health care needs, actual Social Security benefits, and other factors. Thus the following estimates are not definitive, but broadly suggestive of American households' retirement readiness.

Table 2. Financial Services Industry Recommends Saving 8-11 Times Income for Retirement

Recommended retirement savings targets as a ratio of income

Age	Savings Target as Multiple of Current Income	
	Fidelity (retire @ 67)	Aon Hewitt (retire @ 65)
25	0x	
30	.5x	
35	1x	
40	2x	
45	3x	
50	4x	
55	5x	
60	6x	
65	7x	11x
67	8x	

Source: Fidelity (2012), Carns (2012), and Aon Hewitt (2012). Both target 85% income replacement at retirement age.

We calculated the percentage of working households age 25-64 in the 2010 SCF sample that met Fidelity savings benchmarks listed in Table 2. Four measures were used, including three ready measures from the SCF: retirement account balances, total financial assets, and net worth. As explained above, retirement account balances include all assets held in account-type retirement plans, whether through an employer or, as in the case of IRAs, directly through a financial institution. Total financial assets include checking accounts, savings, stocks, bonds, life insurance policies, retirement accounts, and similar assets. Net worth is total household assets—including financial assets and nonfinancial assets such as personal and business property and home equity—minus household debt. In addition, the author constructed a “total retirement assets” measure, the sum of retirement account balances and imputed DB pension assets.

The above measures of household savings and wealth were compared to the savings requirements that resulted from applying the target multipliers to household income. For instance, the median target retirement savings for households age 25-64 was approximately \$380,000 and the mean was \$520,000. A more detailed description of the methodology can be found in the Appendix.

By any of these measures, most working households fall short of recommended retirement savings targets (**Figure 11**):

- **Retirement account balances.** The vast majority—92 percent—of working households age 25-64 have retirement account balances that do not meet minimum savings benchmarks recommended by the financial services industry.
- **Retirement assets (retirement account balances and imputed DB pension assets).** The share of working households that fall short decreases slightly, to 90 percent, for total retirement assets that include author’s estimates of DB pension assets in addition to reported 401(k) and IRA balances. One reason that the share of households not meeting benchmarks is only slightly reduced is that only 30 percent of households belong to a DB plan through a current or former employer, and because DB assets are concentrated among higher income households.

- **Total financial assets.** The share of households that fall short decreases to 84 percent when all financial assets are included.
- **Net worth.** Using the most generous measure, net worth, results in 65 percent of households not meeting the benchmark. The net worth measure includes home equity, which is an important asset for those retirees who own their homes outright and thus may gain from lower housing costs or can extract income from home equity. Among near-retirees in the sample, home equity accounts for approximately 20 percent of net worth. However, net worth also includes a variety of financial and nonfinancial assets that are not intended to serve as a source of retirement income—e.g., college savings funds and medical savings.

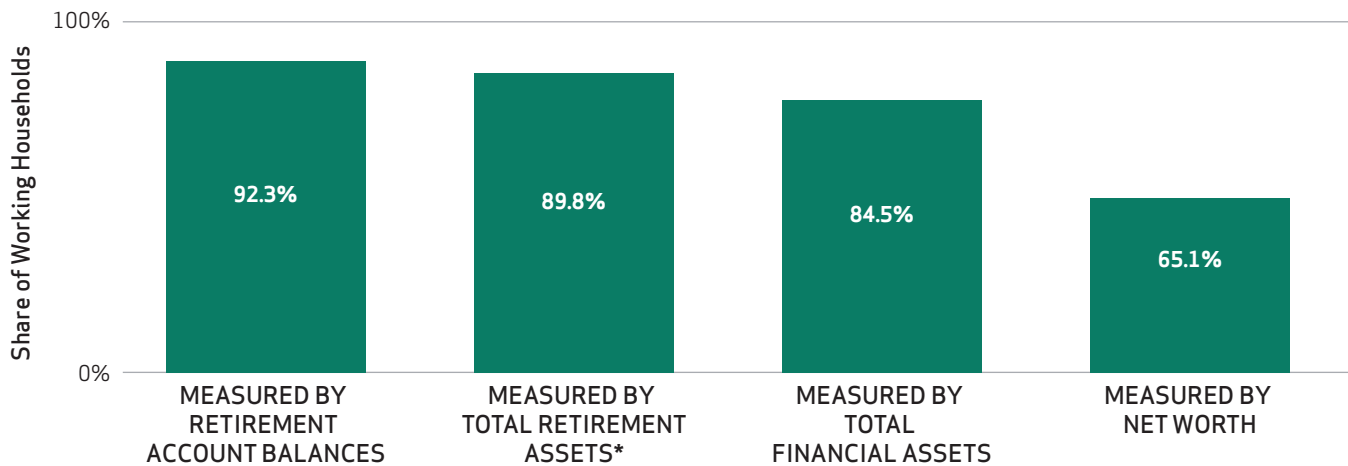
These results remain virtually the same when the sample is limited to households with earnings less than \$200,000. The results are slightly worse by most measures when earnings are limited to \$100,000.

Figure 12 presents approximate estimates of the collective retirement savings gap among households that fall short of the benchmarks under each of the four asset measures. The lowest estimate, \$6.8 trillion, is based on households’ net worth. In the middle, the total retirement assets measure (which includes DC and DB assets) yields a \$11.6 trillion shortfall, and the total financial assets measure yields a shortfall of \$11.1 trillion. At the high end, DC retirement account balances are \$14.0 trillion short of the retirement savings benchmark.

Table 3 shows the share of households that fall short of retirement savings targets, by age group. Readers should be cautious in interpreting the results for the youngest age cohort. A much larger share meet the retirement savings targets and thus appear to be doing much better than older generations, but this is largely an artifact of the way benchmarks are designed by Fidelity. Expected contribution rates are much lower for this group, and the overall savings balance requirements are disproportionately lower than those for the older age groups after controlling for compound interest. Other studies that incorporate detailed retirement income models, including those of The Center for Retirement Research (CRR) and

Figure 11: Large Majority of Working Households Fall Short of Age-Specific Benchmarks for Retirement Savings

Share of working households that do not meet retirement savings targets for their age, by type of measure, 2010

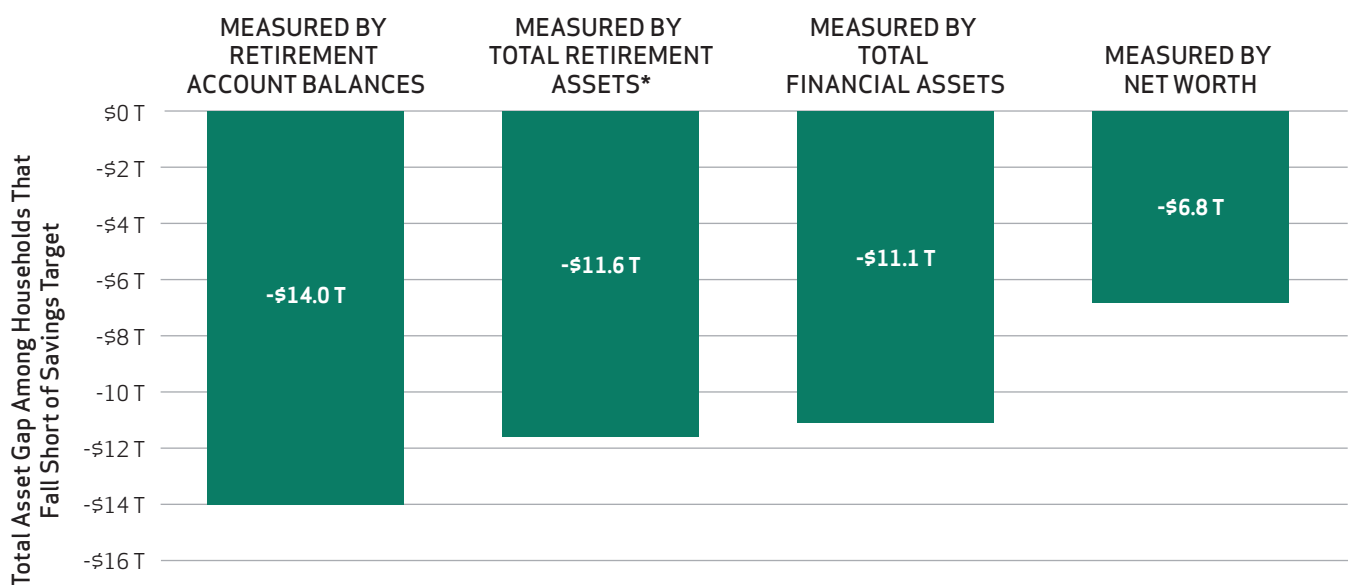


Source: Author's analysis of 2010 SCF based on retirement savings targets adapted from Fidelity (2012). Universe is households with heads age 25-64, with total earnings \geq \$5,000 and $<$ \$500,000 and total income $<$ \$1M. See methodology in Appendix.

*"Total Retirement Assets" measure includes retirement account balances reported in SCF and DB pension assets imputed by author.

Figure 12: U.S. Working Households Are \$6.8 to \$14.0 Trillion Short of Target Retirement Savings

Aggregate savings gap among working households that do not meet retirement savings targets for their age, by type of measure, 2010



Source: Author's analysis of 2010 SCF based on retirement savings targets adapted from Fidelity (2012). Universe is households with heads age 25-64, with total earnings \geq \$5,000 and $<$ \$500,000 and total income $<$ \$1M. See methodology in Appendix.

*"Total Retirement Assets" measure includes retirement account balances reported in SCF and DB pension assets imputed by author.

Table 3. Two-Thirds of Near-Retirement Households Have Net Worth That Is Less Than Retirement Savings Target

Share of working households that do not meet retirement savings targets for their age and income, by age group and type of measure, 2010

Age of Head of Household	Share of Households That Do Not Meet Retirement Savings Target			
	Measured by Retirement Account Balances	Measured by Total Retirement Assets*	Measured by Total Financial Assets	Measured by Net Worth
25-34**	80.3%	76.0%	65.8%	51.1%
35-44	95.3%	93.0%	89.8%	70.1%
45-54	96.8%	94.5%	91.3%	69.8%
55-64	95.4%	93.2%	88.8%	67.8%

Source: Author's analysis of 2010 SCF based on retirement savings targets adapted from Fidelity (2012). Universe is households with heads age 25-64, with total earnings \geq \$5,000 and $<$ \$500,000 and total income $<$ \$1M. See methodology in Appendix.

* Includes retirement account balances reported in SCF and defined benefit pension assets imputed by author.

** Fidelity retirement savings targets require significantly lower contribution rates for workers age 25-31 than for other ages, and thus set a relatively low bar for this age cohort.

the Employee Benefit Research Institute (EBRI), tend not to examine households under age 30. Analysis by CRR indicates that younger age cohorts are deemed at greater risk of experiencing a retirement income shortfall than older age cohorts.

The findings in this section echo those of academic and industry studies. CRR estimates the national Retirement Income Deficit, calculated for households with heads age 34-64, to be \$6.6 trillion after financial assets, DB pension income, Social Security, and home equity are included. In addition, the Center's National Retirement Risk Index indicates that the share of U.S. households with insufficient retirement assets has grown rapidly. The share of households at risk for being unable to maintain their standard of living in retirement increased from 44 percent in 2007 to 53 percent in 2010.³⁰ This estimate does not account for long term care costs, which the Center previously projected would increase the share of households at retirement risk by 16 percentage points.³¹ In

addition, EBRI's 2012 Retirement Income Projection Model estimates that approximately 44 percent of Baby Boomers and Generation Xers are at risk of having insufficient income to meet even *basic* expenses in retirement.³²

A study by Aon Hewitt based on 2.2 million employees at 78 large companies projects that full-career employees "who currently contribute to their employers' savings plans and who retire at age 65 . . . will, on average, accumulate retirement resources of 8.8 times their pay" counting DB pensions and DC accounts.³³ This is 20 percent short of Aon Hewitt's higher goal of 11 times pay, albeit 10 percent in excess of the goal set by Fidelity assuming a retirement age of 67 instead of 65. However, when *all* employees are included in the Aon Hewitt projection, including mid-career hires and those who do not contribute to their DC plans, the average private asset shortfall is 5.3 times pay. Ultimately, only 15 percent of employees in that study are projected to have sufficient retirement income at age 65.

V. POLICY IMPLICATIONS

With declining workplace retirement plan coverage and fewer workers covered by secure pensions, Americans face a retirement savings burden that is heavier than ever. Unfortunately, the findings of this study clearly indicate that most households—especially middle- and low-income—are not meeting this burden. Nearly 45 percent U.S. working-age households (38 million) do not have a retirement account, whether in or out of the workplace. Most are in the bottom half of the income distribution. The typical working-age household has only \$3,000 in retirement savings. Among households with at least one earner, 4 out of 5 have retirement savings less than their annual income. While experts recommend that people build a nest egg that is at least 8 to 11 times income in order to maintain their standard of living in retirement and some estimate that a contribution rate of 15 percent over a full career is necessary to meet this goal, a large majority of working households fail to meet conservative benchmarks modeled on the assumption that people will work longer, until age 67. The collective shortfall between household assets and retirement savings benchmarks ranges from \$6.8 to \$14 trillion, depending on the financial measure used.

This analysis clearly indicates the significant challenges facing baby boomers and upcoming generations of working families when it comes to retirement security. Clearly, more households need to increase their retirement contributions, to the extent that they are able to do so. Even so, the magnitude of the retirement savings gap is such that most people will have to work longer if they are able to stay employed, or experience a significant decline in their standard of living when they retire.

It is highly unlikely that most individuals and households will be able to fill such a large retirement income gap by themselves. They also need employers to become more engaged in assuring the retirement readiness of the workforce. In addition, public policy can play a critical role in putting all Americans on a path toward a secure retirement.

Specifically, the findings of this study have policy implications in three critical areas: 1) strengthening Social Security, 2) expanding access to low-cost, high quality retirement plans, and 3) helping low-income workers and families save for retirement.

Strengthening Social Security

In the absence of a major change in U.S. retirement savings levels, the majority of workers and families will continue to rely on Social Security for a significant share of their retirement income. Currently, Social Security and Supplement Security Income (SSI) together account for over 90 percent of income for the bottom 25 percent of retirees. For the middle 50 percent, Social Security accounts for approximately 70 percent of income.³⁴ According to Supplemental Poverty Measure data released by the U.S. Census Bureau, which takes into account senior medical expenses, senior poverty was 15 percent in 2011—significantly higher than the 8.7 percent reported under the standard poverty measure.³⁵ Cuts to future Social Security benefits will likely increase elder poverty.

The Social Security system faces challenges stemming from an aging population that, while significant, are manageable. Primarily a pay-as-you-go system, benefits are funded through payroll taxes as well as the Social Security (Old Age and Survivors Insurance, or OASI) Trust Fund. The trust fund is projected to become depleted by 2033, after which payroll taxes will cover approximately three-quarters of promised benefits through 2087. The actuarial deficit for the next 75 years is 2.72 percent of Social Security taxable payroll, which is capped at \$113,700 per worker in 2013.³⁶

Given highly deficient household-level retirement savings, strengthening Social Security—a system on which all Americans rely—is critical to the foundation of retirement security. While current political debate about the program is often focused on benefit cuts—e.g., increasing the full retirement age and reducing Cost of Living Adjustments (COLAs)—a study by the National Academy of Social Insurance found strong public support for maintaining and expanding Social Security benefits as well as for increasing system revenues in order to preserve the system.³⁷

The challenges faced by vulnerable populations have spurred calls to expand benefits. One proposal calls for increasing minimum benefits for lifetime low-wage earners,³⁸ while another addresses the special challenges women face in their

role as caregivers that result in fewer years in the labor force.³⁹ Several proposals to integrate the above elements, and more, into a broader package of reforms intended to strengthen and modernize Social Security have been advanced by U.S. Senator Tom Harkin, the Economic Policy Institute, the Center for American Progress, and others.⁴⁰ These broad proposals share a common focus on increasing revenues by eliminating the payroll tax cap; increasing benefits for low-wage workers, survivors, and caregivers; and adjusting the benefit formula in order to better keep pace with living costs faced by seniors and to prevent seniors from falling into poverty at advanced ages.

Improving Low- and Middle-Income Workers' Access to Low-Cost, High Quality Retirement Plans

After Social Security, employer sponsored plans are the most important vehicle for retirement security among workers and families. At the same time, the employer-sponsored system is purely voluntary, both on the part of the employer and the employee. This system seems to best serve workers and families with higher incomes, who enjoy high rates of access to workplace retirement plans. However, a large share of workers—mostly low- and middle-wage workers and small businesses employees—are being left out. Automatic enrollment, which is standard for DB pensions, is becoming increasingly common as a recommended practice for 401(k) plans,⁴¹ and is bridging a part of the participation gap within firms that offer a retirement plan. However, small employers have less incentive and/or capacity to offer a plan.

Theoretically, retail IRAs offer universal access, but the vast majority of IRA contributions are rollovers from employer plans like 401(k)s.⁴² Three-quarters of participants in IRAs and Keogh plans for self-employed workers are from the top half of the income distribution.⁴³ IRAs lack the critical payroll deduction feature that participants in employer plans enjoy. And while 401(k) plans typically entail higher fees and lower returns than DB pensions, IRAs generally carry even higher fees and lower returns.⁴⁴

To begin, Congress could enact policies to make it easier for private employers to sponsor DB pensions, which have been under stress partly because of regulatory changes enacted

in 2006.⁴⁵ Changes to make funding requirements more predictable—such as the restoration of smoothed interest rates—would reduce funding volatility, thus making private sector DB pensions more sustainable.⁴⁶

Citing low coverage of low- and middle-income workers and families, some policy experts have advanced a number of proposals at the national level to move toward more universal retirement plan coverage.⁴⁷ These proposals aim to provide an additional layer of stable retirement income to supplement Social Security and private savings in the absence of traditional pensions. Most proposals feature automatic enrollment, payroll deduction, full portability, and low-cost professional investment management. The Auto IRA concept has support from the Obama administration, and one version has been introduced in Congress by U.S. Representative Richard Neal.⁴⁸ Basic provisions include requiring employers that do not offer their own plan to automatically enroll workers in an IRA and deduct a default contribution rate from paychecks, while allowing employees to individually opt out. While most Auto IRA proposals leave investment risk and funding responsibility to individuals, other proposals feature risk sharing and other pension-like benefits in order to provide an additional layer of secure income to supplement Social Security and private savings.⁴⁹ For instance, the USA Retirement Funds proposal by Senator Harkin features a hybrid style plan that combines key features of DB and DC plans through risk sharing, pooled investments, and lifetime income that would fill the gap left by the existing workplace retirement system.⁵⁰

Meanwhile, efforts to expand retirement plan coverage are gaining momentum at the state level, based on growing concern among legislators and stakeholders that generations of workers might retire into economic hardship. In September 2012, California passed SB 1234, a bill that takes the first steps in creating the California Secure Choice Retirement Savings Trust. It is an Auto-IRA program with pooled, professionally managed investment and a modest rate of return guarantee backed by private insurance—that will cover workers who lack access to a workplace plan. Several other states are considering similar proposals.⁵¹ However, state-level policy debates about broadly expanding coverage without subjecting employers to fiduciary liability are clouded by uncertainty.⁵² Greater regulatory clarity and flexibility would assist those states that want to address the pressing retirement savings crisis.

According to a NIRS public opinion survey, 75 percent of respondents support a new universal pension system that offers portability, professional investment management, and secure monthly income.⁵³

Helping Low-Income Households Save

Real wages have remained stagnant over the past several decades, lagging behind productivity growth, and this has made it difficult for low-income households to save. The primary way the federal government supports retirement savings is through the income tax deduction for retirement contributions. However, 70 percent of the tax subsidies for contributions to 401(k) type accounts and IRAs are claimed by the top one-fifth of households by income.⁵⁴ Because lower-income households have low marginal income tax rates, they have little incentive to save from the existing tax deduction. Low-wage workers are also less likely to receive an employer match, even if they do have access to an employer-sponsored DC plan.

In response to this situation, the federal government enacted the Saver's Credit in 2001 for lower-income households, which reduces income tax liability by 10-50 percent of the first \$2,000 in contributions to a qualified retirement account, depending on income and tax filing status. For single filers in the 2013 tax year, a credit of 50 percent is available for those with incomes up to \$17,750 AGI (Adjusted Gross Income), 20 percent for AGI between \$17,751 and \$19,250, and 10 percent for AGI between \$19,251 and \$29,500. The rapid phase-out at a low income level and lack of refundability limit the credit's effectiveness.⁵⁵ The average credit in 2006 was only \$172.⁵⁶

Expanding the Saver's Credit by increasing income limits and credit rates and making the credit refundable would increase incentives for lower-income families to save for retirement and increase their account balances. State-sponsored retirement savings programs, if implemented, could educate members about the Saver's Credit. In addition, creating a system for depositing the credit directly into retirement savings accounts would help bolster account accumulations.

CONCLUSION

The hope of retirement security is out of reach for many Americans in the face of a crumbling retirement infrastructure. Secure pensions that last through retirement have been replaced with volatile individual accounts, which were intended to supplement DB pension plans. The average American family has virtually no retirement savings, with a median retirement account balance of \$3,000. Among working-age families with at least one earner, 4 out of 5 do not have retirement savings that at least equal their annual income. Ninety-two percent of working families have retirement account balances that do not meet recommended savings targets. Consequently, we now face an estimated retirement savings gap of \$6.8 to \$14.0 trillion, with lower- and middle-income Americans at the most risk.

The heart of the issue consists of two problems: lack of access to retirement plans in and out of the workplace—particularly among low-income workers and families—and low retirement savings. These twin challenges amount to a severe retirement crisis that, if unaddressed, will result in grave consequences for the U.S. In the coming decades, the continued decline in the share of older households receiving DB pension income—a factor linked to reduced reliance on public programs⁵⁷—combined with inadequate retirement savings, is likely to generate increasing demand for public assistance. An increasingly dependent elder population will likely place

increased strain on families and social service organizations. The “American Dream” of retiring after a lifetime of work will be long delayed, if not impossible, for many.

How can the U.S. begin to address this retirement crisis? Policy action is warranted in three key areas. The first is to strengthen Social Security, the primary edifice of retirement income security for low- and middle-income Americans. The second is to expand low- and middle-wage workers’ access to high-quality, low-cost retirement plans with professional investment management, risk pooling, and lifetime payout. In addition to making it easier for private employers to sponsor DB pensions, national and state level proposals to ensure universal retirement plan coverage could fill the wide gap in the employer-based system. Third, an expanded, refundable Saver’s Credit could help boost the retirement savings of families struggling with stagnant wages.

If the U.S. were to be given a grade for its retirement readiness today, it would be “Needs Improvement.” American workers, employers, and policymakers need to look closely at what we need to do individually and collectively, so that everyone can build sufficient assets to have adequate and secure income after a lifetime of work. Acting sooner rather than later will greatly improve our future retirement security.

About the Survey of Consumer Finances (SCF)

The SCF, sponsored by the U.S. Federal Reserve, is a triennial household survey that captures detailed data on family finances including debt, assets (including retirement account balances), and income. The sample is designed to be representative of the general population. In addition, families with high incomes and assets are over-sampled in light of the concentration of wealth. Approximately 6,500 families were questioned for the 2010 survey, but the public dataset contains five records for each family, or PEU (primary economic unit), with a total of 32,410 records. The SCF defines the PEU as “the economically dominant single person or couple (whether married or living together as partners)” and all other persons who share the same residence and who are financially interdependent upon them.⁵⁸ In this report, “families” and “households” both refer to PEUs in the SCF.

All estimates were calculated using the sample weight (WGT).

Household Level Employer-Sponsored Retirement Plan Coverage

There are three variables in the SCF summary file related to retirement plan coverage through a current job held by the respondent and/or their spouse:

- DBPLANCJ — “Either head or spouse/partner has a defined benefit pension on a current job”
- BPLANCJ – “Either head or spouse/partner has both types of pension plan on a current job”
- THRIFT – “Total value of account-type pension plans from R and spouse's current job”

Households were determined to have current job-based coverage if the DBPLANCJ or BPLANCJ values were “yes,” or if THRIFT value was greater than zero. Households that answered “yes” under DBPLANCJ but answered “no” to BPLANCJ were identified as having only a DB plan. Initially, we used THRIFT value greater than zero to define the universe of people who had a DC plan, then subtracted those who answered “yes” to BPLANCJ to estimate the number of households that had only a DC plan through a current job. However, some respondents who answered “yes” under BPLANCJ reported no balance under THRIFT. Because of this, we subtracted the households that answered “yes” to DBPLANCJ from the universe of households with job-based retirement plans identified through the rule above in order to estimate the number of households with only a DC plan.

Retirement Account Ownership and Balances

The SCF contains a key summary variable, RETQLIQ, which is the sum of quasi-liquid retirement assets in account-based pensions and retirement plans held by the head and/or spouse. These consist of:

- Employer-sponsored plans including 401(k)s, SEP-IRAs, Simple IRAs, and other account based retirement plans
 - » from previous jobs, and from which income is currently being drawn (CURRPEN)
 - » from previous jobs, from which income is not yet being drawn (FUTPEN)
 - » from a current job (THRIFT)
- IRAs (including traditional and Roth), and Keogh plans for small businesses (IRAKH)

A household was determined to have a retirement account if their RETQLIQ value was greater than zero and not to have an account if the value was zero. In determining retirement ownership rates by income group, we adjusted household income by marital status with the goal of accounting for differences in the cost of living between couples and singles. This is because a couple needs somewhat less than twice the income of a single person in order to reach the same standard of living. If the household head's marital status was single—not living with a spouse or partner—the income value remained the same. If the household head was married or living with a partner, then the household's income was divided by the square root of two. The resulting values were ranked in order to group households into income quartiles.

Target Retirement Savings

Table A1 below details the multipliers applied to each household, based on the age of the head, in order to calculate the amount that it would need to have saved in order to meet Fidelity's recommended retirement savings benchmarks. Each household's reported annual income for 2009 was multiplied by the factors from Table A1 to arrive at dollar values for target retirement savings. We chose to use income rather than earnings for this calculation because there is a steep drop-off in median earnings between the 45-54 and 55-64 age cohorts. At the same time, the latter's median income is slightly higher than the former's median income. Using only earnings to calculate retirement savings targets would unduly lower retirement consumption standards for near-retirement workers relative to the mid-career cohort, while using total income keeps retirement consumption standards similar.

The resulting target retirement savings level for each household was compared to that household's actual assets using four different financial measures: retirement account balance (RETQLIQ), retirement account balance plus imputed DB assets (see below), total financial assets (FIN), and net worth (NETWORTH). Then aggregate savings shortfall estimates were generated for the households that fell short under each asset measure; households that met or exceeded benchmark savings under each measure were excluded from these calculations.

In order to impute DB assets, households with heads age 25-64 and earnings greater than \$5,000 that reported having a DB pension from a current job or from a former job held by the head or spouse/partner were identified using the DBPLANCJ and DBPLANT variables, respectively. In 2010, state and local DB pension assets totaled \$2.7 trillion⁵⁹ and private DB pension assets totaled \$2.3 trillion,⁶⁰ totaling approximately \$5 trillion. These assets were assumed to be distributed to retirees and workers in a roughly 40:60 ratio; thus we allocated \$3 trillion in DB pension assets across households in the sample described above. DB assets were imputed for each household according to its age and wage income assuming consistent level pay contribution rates between age cohorts, age 24 commencement of contributions, 4 percent historical annual growth in wage income, and 7 percent investment return. Note that these assumptions were used solely for the allocation of gross DB assets.

Table A1.

Target Retirement Savings Multipliers

Age of Head of Household	Multiplier (Ratio to Income)	Age of Head of Household	Multiplier (Ratio to Income)
25	0.00	53-57	5.00
26	0.06	58-62	6.00
27	0.15	63	6.75
28-32	0.50	64	7.00
33-37	1.00	65	7.40
38-42	2.00	66	7.70
43-47	3.00	67	8.00
48-52	4.00		

Source: Author's adaption of target retirement savings benchmarks from Fidelity 2012.

ENDNOTES

- 1 D. Oakley and K. Kenneally, 2013 (Feb.), "Pensions and Retirement Security 2013: A Roadmap for Policymakers," National Institute on Retirement Security, Washington, DC.
- 2 Oakley and Kenneally, op cit.
- 3 Income replacement estimates vary by source, and by income level. HR consulting firm Aon Hewitt and financial services firm Fidelity Investments both estimate that a typical worker will need to replace 85 percent of income to maintain their standard of living in retirement. Aon Hewitt, 2012, "The Real Deal: 2012 Retirement Income Adequacy at Large Companies"; Fidelity, 2012 (Feb. 27), "How much do you need to retire?," <https://www.fidelity.com/viewpoints/personal-finance/8X-retirement-savings>.
- 4 The Center for Retirement Research at Boston College estimates that a middle-income two-earner couple born between 1960-1962 will need to replace 76 percent of their income excluding health care and long term care costs, and 98 percent including these costs. A. H. Munnell, A. Webb, F. Golub-Sass, and D. Muldoon, 2009 (Mar.), "Long-Term Care Costs and the National Retirement Risk Index," Issue Brief No. 9-7, Center for Retirement Research at Boston College, Chestnut Hill, MA.
- 5 The limit for tax-deductible contributions to traditional IRAs in 2013 is \$5,500, with additional catch-up contributions up to \$1,000 allowed for individuals age 50 and older. The same limits apply to Roth IRAs, which are funded on an after-tax basis. 401(k) contributions in 2013 are capped at \$17,500, with additional catch-up contributions of up to \$5,500. SEP-IRAs and Simple IRAs for small businesses and sole proprietors have much larger contribution limits.
- 6 Aon Hewitt, op cit.; Fidelity 2012, op cit.
- 7 Weller found that in fact, households have not saved adequately to offset increased risk. C. Weller, 2010, "Did Retirees Save Enough to Compensate for the Increase in Individual Risk Exposure?," *Journal of Aging & Social Policy* v22n2, pp. 152-171. Similarly, Watson Wyatt found "no evidence" that households that had only a DC plan accumulate more retirement account assets than households with a DB plan. Watson Wyatt Worldwide, 2009 (Aug.), "Retirement Prospects Dim for Many Retirees," *Insider*, Watson Wyatt Worldwide, <http://www.watsonwyatt.com/us/pubs/insider/showarticle.asp?ArticleID=21895>.
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- 12 S. Allegretto, N. Rhee, J. Saad-Lessler, and L. Schmitz, 2011 (Oct.), "California Worker's Retirement Prospects," pp. 22-41 in N. Rhee, Ed., *Meeting California's Retirement Security Challenge*, UC Berkeley Center for Labor Research and Education, Berkeley, CA.
- 13 U.S. Bureau of Labor Statistics (BLS), 2012, "National Compensation Survey: Employee Benefits in the United States, 2012," U.S. BLS, Washington, DC. See also Towers Watson, 2011 (Nov.), "Pension Freezes Among the Fortune 1000 in 2011," *Insider*, Towers Watson; Pension Benefit Guaranty Corporation (PBGC), "Data Tables 2011," Table S-30, Schmitz PBGC, Washington, DC.
- 14 P. Brady, K. Burham, and S. Holden, 2012 (Dec.), "The Success of the U.S. Retirement System," Investment Company Institute, Washington, DC.
- 15 Aon Hewitt, op cit.; Fidelity 2012, op cit.
- 16 See A.H. Munnell, A. Webb, and L. Delorme, 2006 (Jun.), "A New National Retirement Risk Index," Issue Brief No. 48, Center for Retirement Research at Boston College, Chestnut Hill, MA; Aon Consulting, 2008, "2008 Replacement Ratio Study," Aon Consulting, <http://www.aon.com/about-aon/intellectual-capital/attachments/human-capital-consulting/RRStudy070308.pdf>.
- 17 For instance, low-income individuals' tax burden tends to be more heavily weighted toward state and local sales taxes which do not decline after retirement, and less toward income taxes which do tend to decline; they also spend less on work related expenses.
- 18 Purcell and Topoleski, op cit.

- 19 The key SCF variable, total quasi-liquid retirement assets, includes only “account-type” pensions in which benefits are paid as a lump sum rather than as an annuity. It is unclear the extent to which assets from cash balance plans—a type of DB pension in which the benefit is expressed as a nominal account balance and which can be paid as an annuity and/or as a lump sum, depending on the plan—were coded as account-type pensions.
- 20 Author’s method is consistent with Federal Reserve tabulations of the shares of households “with retirement accounts” in J. Bricker, A.B. Kennickell, K.B. Moore, and J. Sabelhaus, 2012 (Jun.), “Changes in U.S. Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances,” *Federal Reserve Bulletin* v98n2, pp. 1–80.
- 21 Author’s findings for age groups 35–44, 45–54, and 55–64 are identical to tabulations previously published by the Federal Reserve in Bricker et al., op cit. The Federal Reserve has not published data specifically for age groups 25–34 or 25–64.
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- 23 J. J. Topoleski, 2013 (Apr. 30), “U.S. Household Savings for Retirement in 2010,” Pub #7-5700, Congressional Research Service, Washington, DC.
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- 27 Fidelity Investments, 2012 (Sep. 12), “Fidelity Outlines Age-Based Savings Guidelines to Help Workers Stay on Track for Retirement,” <http://www.fidelity.com/inside-fidelity/employer-services/age-based-savings-guidelines>; Ann Carns, 2012 (Sep. 12), “Suggested Retirement Savings Goals, by Age,” New York Times Blogs, <http://bucks.blogs.nytimes.com/2012/09/12/suggested-retirement-savings-goals-by-age/>. Fidelity assumes 5.5 percent lifetime rate of return on retirement resources, 2.3 percent inflation, and 1.5 percent real (after-inflation) income growth.
- 28 Aon Hewitt 2012, op cit., p. 10. Assumptions include career start at age 25; 50th percentile life expectancy; 7.0 percent rate of return on assets before retirement and 5.5 percent after retirement; 3 percent inflation; and 4 percent wage growth.
- 29 While normative expectations about retiring later are generally based on observations about increased life expectancy, workers in the bottom half of the income distribution account for only a small share of this gain. See D. Baker and D. Rosnick, 2010 (Oct.), “The Impact of Income Distribution on the Length of Retirement,” Issue Brief, Center for Economic and Policy Research, Washington, DC.
- 30 A. Munnell, A. Webb, and F. Golub-Sass, 2012 (Oct.), “The National Retirement Risk Index: An Update,” Issue Brief No. 12-20, Center for Retirement Research at Boston College, Chestnut Hill, MA.
- 31 A.H. Munnell, A. Webb, F. Golub-Sass, and D. Muldoon, 2009 (Mar.), “Long-Term Care Costs and the National Retirement Risk Index,” Issue Brief No. 9-7, Center for Retirement Research at Boston College, Chestnut Hill, MA.
- 32 J. VanDerhei, 2012 (May), “Retirement Income Adequacy for Boomers and GenXers: Evidence from the 2012 EBRI Retirement Security Projection Model,” *EBRI Notes* v33n5, pp. 2–14.
- 33 AonHewitt, op cit, p.5.
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The National Institute on Retirement Security is a non-profit research and education organization established to contribute to informed policymaking by fostering a deep understanding of the value of retirement security to employees, employers, and the economy as a whole.

Vision

Through our activities, NIRS seeks to encourage the development of public policies that enhance retirement security in America. Our vision is one of a retirement system that simultaneously meets the needs of employers, employees, and the public interest. That is, one where:

- employers can offer affordable, high quality retirement benefits that help them achieve their human resources goals;
- employees can count on a secure source of retirement income that enables them to maintain a decent living standard after a lifetime of work; and
- the public interest is well-served by retirement systems that are managed in ways that promote fiscal responsibility, economic growth, and responsible stewardship of retirement assets.

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The **National Institute on Retirement Security** is a non-profit research institute established to contribute to informed policy making by fostering a deep understanding of the value of retirement security to employees, employers, and the economy as a whole. NIRS works to fulfill this mission through research, education, and outreach programs that are national in scope.



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