

# ARE AMERICANS SAVING ENOUGH FOR RETIREMENT?

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## Executive Summary

Popular financial advice often suggests that households should aim to replace between 65 and 85 percent of pre-retirement income in retirement in order to maintain their pre-retirement living standards. Some households can achieve replacement rates that are in the recommended range through Social Security and pension income alone. Others can reach these replacement rates with the addition of income from part-time work during retirement, housing equity and inheritances. But most households will need to rely on their savings to supplement their other retirement income. Yet, reports in the popular press often warn that Americans are not saving enough for retirement. How accurate are these warnings? Are Americans jeopardizing their well-being in their later years through inadequate retirement preparations? This *issue in brief* provides an overview of the available evidence on whether Americans are saving enough for retirement.

## Do People Think That They Are Saving Enough?

Surveys that ask people about their retirement preparedness yield mixed results. For example, one recent survey found that nearly two-thirds of working Americans feel confident that they will live comfortably in retirement and almost three-quarters have started saving for retirement. However, the same survey also found that over half of workers feel they are behind schedule for planning and saving for retirement.

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### INSIDE

EXECUTIVE SUMMARY.....1

INTRODUCTION.....3

WHAT DOES POPULAR FINANCIAL ADVICE  
IMPLY FOR RETIREMENT SAVINGS NEEDS?...3

DO PEOPLE THINK THAT THEY ARE SAVING  
ENOUGH?.....4

WHAT HAVE ECONOMIC STUDIES  
FOUND?.....5

CONCLUSION.....10

REFERENCES.....11

TABLE 1: DO PEOPLE THINK THAT THEY ARE  
SAVING ENOUGH FOR RETIREMENT?.....4

TABLE 2: PERFORMANCE OF ALTERNATIVE  
MEASURES OF RETIREMENT SAVINGS  
ADEQUACY.....6

TABLE 3: DISTRIBUTION OF WEALTH-TO-  
EARNINGS RATIOS.....8

TABLE 4: HOUSEHOLDS WITH WEALTH-TO-  
EARNINGS RATIOS AT OR ABOVE THE  
SIMULATED MEDIAN RATIO.....9

Workers who have done a retirement needs calculation are more likely to be confident that they will live comfortably in retirement and are less likely to feel that they are behind schedule for planning and saving for retirement. However, more than one-half of workers have yet to determine how much retirement savings they will need.

### What Have Economic Studies Found?

Many studies suggest that Americans nearing retirement need additional savings to allow them to maintain their current living standards in retirement. However, these studies may exaggerate the extent to which households have inadequate retirement savings. In particular, these studies exhibit one or more of the following limitations: ignoring housing equity, ignoring other sources of income that can be used to finance consumption during retirement, and disregarding continued saving prior to retirement. In addition, when researchers estimate how much saving individuals will need — measured in terms of wealth as a share of earnings — these savings targets are often interpreted as minimum requirements, thereby ignoring that current earnings may not accurately reflect average lifetime earnings. This possibility requires that, rather than a single savings target, researchers consider an alternative measure of savings adequacy that incorporates a distribution of targets that

could allow households to maintain their pre-retirement living standards in retirement. When all of these considerations are taken into account, preliminary evidence suggests that saving may be adequate for a majority of households. Even so, there is some evidence of undersaving among the 5 to 25 percent of households with the lowest wealth-to-earnings ratios.

### Conclusion

Although many workers feel they are behind schedule for planning and saving for retirement, adopting a broader interpretation of savings targets suggests that a majority of households will have sufficient resources for retirement. However, with the potential of a decrease in future Social Security benefits and the shift in private pensions from defined benefit to defined contribution plans, future retirees may need to rely more heavily on household savings to fund their retirement years. Therefore, it will be important to continue monitoring savings behavior to assess whether it is adequate to meet future retirement needs.

## Introduction

Retirement income security relies not only on income received from Social Security and private pensions, but also on household savings. Yet, reports in the popular press often warn that Americans are not saving enough for retirement. How accurate are these warnings? Are Americans failing to fully prepare for their later years through inadequate saving today?

This *issue in brief* provides an overview of the evidence on whether Americans are saving enough for retirement. It begins with a discussion of the implications of popular financial advice for how much workers need to save. The *brief* next explores whether Americans believe they are saving enough for retirement. It then describes what economic studies have found regarding household savings adequacy. The final section concludes with remarks about savings adequacy today and the outlook for the future.

## What Does Popular Financial Advice Imply for Retirement Savings Needs?

Popular financial advice often suggests that households should aim to replace between 65 and 85 percent of pre-retirement income in retirement. These recommended replacement rates are less than 100 percent because a household can maintain the same living standards during retirement with less income for several reasons. First, the need to save for retirement ceases, or at least diminishes substantially. Second, taxes decline because payroll taxes are no longer due, income is generally lower, Social Security benefits receive more favorable income tax treatment than wages, and those over 65 receive an extra personal income tax exemption. Third, work-related expenses, such as commuting and clothing, decline. Fourth, family size declines as the grown children leave the household. Fifth, households eventually pay off their

mortgages, which allows for continued consumption of housing services at less expense than before. And, finally, households can consume some of their assets, not just income, in retirement.

Even without saving a large share of income, some households can achieve replacement rates that are within the recommended range. For instance, the combination of Social Security and pensions can provide all or most of the income needed to finance an adequate retirement for some households.<sup>1</sup> However, most households will need to supplement their Social Security and pension income with income from other sources, especially since fewer than half of retired households receive pension income.<sup>2</sup> To do so, households have the option of working part-time in retirement. According to a recent survey by the AARP, 80 percent of baby boomers say they plan to work at least part-time during retirement (AARP, 1999). Currently, the share of older Americans who are working is much lower; recent data show that about one-third of men and approximately one-fifth of women are still in the labor force at age 65 (Burtless and Quinn, 2001). In 1998, earnings from work represented about one-third of the income of households with heads aged 65 to 69 (SSA, 2000). If, as the AARP survey suggests, a larger share of baby boomers do choose to remain in the work force as they reach traditional retirement ages, future retired households may acquire an even more significant portion of their income from working.

Housing equity constitutes a large portion of non-pension net worth for most households, and at least some of this equity can also be used to help finance retirement.<sup>3</sup> In addition, some households will receive inheritances that will help provide retirement income.<sup>4</sup> For all of these reasons, some households can piece together sufficient retirement income without necessarily saving much in the form of non-annuitized financial assets.<sup>5</sup> Nevertheless, many households will need savings to supplement their other retirement income.

<sup>1</sup> Susan Grad (1990) examines replacement rates for workers who first received Social Security benefits in the early 1980s. Including retirement income from pensions and Social Security, but not Social Security spousal benefits, 23 percent of men replaced at least two-thirds of their earnings, when earnings is defined as the average earnings in the last five years before Social Security receipt. When earnings is defined as the average of the five years of highest earnings, however, the proportion of men with replacement rates of two-thirds or higher drops to 6 percent.

<sup>2</sup> In 1998, 43 percent of households aged 65 and older received pension benefits other than Social Security (SSA, 2000).

<sup>3</sup> Although some surveys suggest that people do not like to move when they are old, households can use reverse mortgages to

extract housing equity without moving. Reverse mortgages allow seniors to borrow against the equity in their homes without repayment until sale of the home. However, to date, reverse mortgages have not proven to be a popular option — only an estimated 60,000 households in the United States currently have one (Munnell, 2001 forthcoming).

<sup>4</sup> About one in five households aged 51 to 61 have received an inheritance, with the median inheritance being \$20,000 (author's tabulation of the 1992 Health and Retirement Study). Presumably, additional households will receive inheritances as they age.

<sup>5</sup> Annuitized financial assets, like defined benefit private pensions, provide a guaranteed stream of lifelong income in retirement. Non-annuitized assets (e.g., a savings account or shares in a mutual fund) do not provide annuity income.

## Do People Think That They Are Saving Enough?

One way to gauge how well people are preparing for retirement is simply to ask them, as several surveys have done. The Retirement Confidence Survey (RCS), for instance, gauges the views and attitudes of workers regarding their preparations for retirement (Employee Benefits Research Institute et al., 2001). Table 1 presents some of the results of this survey, which at first glance appear encouraging. According to the 2001 RCS, 63 percent of working Americans feel very or somewhat confident that they will have enough money to live comfortably in retirement. In addition, 71 percent of workers report that they have started saving for retirement.

Further examination of the RCS findings, however, reveals some cause for concern. An important step in the retirement planning process is determining how much retirement saving is needed. In 2001, 46 percent of workers report they have at least tried, although not necessarily successfully, to determine how much money they will need to save for retirement, a decline from the previous year's finding but still up from 29 percent in 1996. Although this overall trend is encouraging, and possibly attributable to increased attention to financial education, over half of all workers have yet to determine how much they will need to save. Another discouraging sign is that 60

percent of the surveyed workers feel they are behind schedule for planning and saving for retirement. Only 5 percent feel they are ahead of schedule. Finally, while the percentages of individuals who say they are saving and planning for retirement have generally increased in recent years, they declined between 2000 and 2001, possibly reflecting recent economic uncertainty and the decline in the stock market.

Retirement confidence and planning are closely linked with doing a retirement needs calculation. Workers who have done a retirement needs calculation are more likely to feel confident that they will have enough money to live comfortably throughout retirement, and are less likely to feel behind schedule in retirement planning. It is not clear how to interpret this relationship, however. Perhaps people who already save are also more likely to perform a retirement needs calculation. Or maybe doing a retirement needs calculation prompts people to save more and get on schedule. Another possibility is that doing a retirement needs calculation assures some workers that their retirement preparations are adequate.

**Table 1:** Do People Think That They Are Saving Enough For Retirement? Evidence from the 2001 Retirement Confidence Survey

Percentage of workers who are very or somewhat confident that they will have enough money to live comfortably throughout retirement:	
All workers	63%
Workers who have tried to calculate their retirement needs	75%
Workers who have not tried to calculate their retirement needs	55%
Percentage of workers who have tried to calculate their retirement needs	
	46%
Percentage of workers who have saved for retirement	
	71%
Percentage of workers who feel behind schedule in planning and saving for retirement:	
All workers	60%
Workers who have tried to calculate their retirement needs	46%
Workers who have not tried to calculate their retirement needs	71%

Source: Employee Benefit Research Institute et al. (2001).

## What Have Economic Studies Found?

Although public opinion questions can help gauge retirement preparedness, accurately assessing retirement savings adequacy requires more objective information. To this end, numerous economic studies have examined data on household savings and other assets. These studies have arrived at different, yet not necessarily inconsistent, conclusions.

### Estimates of the Value of Annuitized Wealth

One way to assess retirement savings adequacy is to compare households' pre-retirement income with the income that could be generated by converting their wealth into a hypothetical annuity, which is a periodic stream of income that lasts for life. The 1992 Health and Retirement Study (HRS), which gathered detailed information on Americans aged 51 to 61, provides an ideal data source for this type of analysis. One study examining data from the HRS reveals that wealth accumulated through 1992 (including housing wealth) would finance, on average, a nominal annuity replacing 86 percent of a person's projected final earnings or a real annuity replacing 60 percent of projected final earnings (Gustman and Steinmeier, 1998).<sup>6</sup> The study's authors conclude that these results provide little or no evidence of undersaving.

Another study uses the HRS to determine how much respondents would need to save between 1992 and their time of retirement if they wished to preserve pre-retirement consumption levels after retirement. This study finds that, to reach this goal, the median household would need to save 16 percent of annual earnings between 1992 and retirement at age 62, in

addition to saving through mortgage repayment, interest on net financial assets, and increases in pension value (Moore and Mitchell, 1997).<sup>7</sup> If retirement were delayed from age 62 to age 65, the saving requirement for the median family would fall to 7 percent of annual earnings.<sup>8</sup> The prescribed saving rates vary greatly among those approaching retirement. More than 30 percent of households require no additional saving for retirement at age 62. But at least 40 percent of households have a prescribed saving rate of 20 percent or higher.

The findings from this latter study suggest that a majority of households nearing retirement would not be able to maintain current levels of consumption in retirement without continued or additional saving. However, this conclusion is not necessarily inconsistent with little or no undersaving in the population for several reasons.

First, most of the households in the HRS are still working and would not be expected to amass sufficient retirement wealth until just before retirement, which may not occur for several years. Second, the analysis assumes that a household's current earnings, used to calculate the replacement rate, accurately reflect its average lifetime earnings. But suppose a household that is saving adequately for retirement experiences a large, unexpected and perhaps temporary increase in wages in 1992. Using current earnings as the benchmark would overstate savings needs by implying that this household would need to save very large amounts to achieve an adequate replacement rate. Thus, some households with apparent savings shortfalls with respect to current earnings might in fact have been saving adequately.<sup>9</sup> Similarly, some of the households that appear not to require further saving before retirement could be households with temporarily low earnings.

<sup>6</sup> A real annuity is adjusted for inflation, while a nominal annuity is not. Since the two annuities would be expected to provide the same total value over a recipient's lifetime, the real annuity provides a smaller benefit initially but grows over time to offset the effects of inflation.

<sup>7</sup> The authors solve for saving and replacement rate targets for each household simultaneously so as not to generate an infeasible saving rate given a household's earnings and projected assets. The median prescribed saving rate of 16 percent corresponds to a replacement rate of 69 percent. In other words, if the median household saves at a rate of 16 percent from the time of the survey until age 62, it will have a replacement rate of 69 percent.

<sup>8</sup> The prescribed saving rate of 7 percent for retirement at age 65 corresponds to a replacement rate of 78 percent.

<sup>9</sup> Indeed, in subsequent work, Mitchell, Moore and Phillips (2000) find that households with high current earnings are much more likely to have saving shortfalls, precisely the pattern that would be expected if current earnings do not reflect a household's average lifetime earnings. More generally, households with high current earnings could be households that had two earners in 1992 but did not have two earners for most of their careers.

Third, even if the median household saved nothing between 1992 and retirement, rather than 16 percent of its income, its replacement rate would not fall very much. It would be able to achieve a replacement rate equal to over 90 percent of the level described as optimal.<sup>10</sup> Lastly, the study ignores other possible sources of retirement income, including part-time work and inheritances.<sup>11</sup>

### Simulation Models of Optimal Saving

Another way to assess retirement savings adequacy is to compare a savings target with actual household savings data.<sup>12</sup> An oft-cited measure in this regard is the Baby Boomer Retirement Index, which compares households' actual saving with target levels of saving based on family size, education, earnings, age, Social Security, pensions and other factors (Bernheim, 1992, 1995). According to this index, baby boomers' retirement savings average only about one-third of the level needed to maintain pre-retirement living standards in retirement.

The main issue in interpreting these results is

understanding what the baby boomer index measures. It does not measure the adequacy of saving by the ratio of total retirement resources (Social Security, pensions and other assets) to total retirement needs (the wealth necessary on the eve of retirement to maintain pre-retirement living standards). Instead, it examines the ratio of actual saving in financial assets to the total required amount of saving excluding Social Security and pensions.

Table 2 helps explain how the index is constructed. In case A, a hypothetical household needs to accumulate 100 units of wealth. It is on course to generate 61 units in Social Security, 30 in pensions, and 3 in other assets. Total retirement resources are therefore projected to be 94 percent of what is needed to maintain living standards. But, according to the baby boomer index, the household is saving only 33 percent of what it needs.

Thus, one problem with the baby boomer index is that the *level* of the index understates the overall adequacy of retirement preparations, and this understatement can be vast. A second problem is that

**Table 2:** Performance of Alternative Measures of Retirement Savings Adequacy under Selected Scenarios

Case	Retirement needs <sup>a</sup>	Social Security	Pension	Other assets	Total retirement resources <sup>b</sup>	Total resources index <sup>c</sup> (%)	Boomer index <sup>d</sup> (%)
A	100	61	30	3	94	94%	33%
B	100	61	0	33	94	94%	85%
C	95	61	30	3	94	99%	75%

Source: Engen, Gale and Uccello (1999).

<sup>a</sup> Needs are defined such that 100 equals accumulated wealth on the eve of retirement sufficient to keep a constant living standard before and after retirement.

<sup>b</sup> Social Security plus pensions plus other assets.

<sup>c</sup> The total resources index is defined as total retirement resources divided by needs.

<sup>d</sup> The Baby Boomer Retirement Index (Bernheim 1992, 1995) is defined as other assets divided by needs (with needs defined as total needs minus Social Security and pensions).

<sup>10</sup> The median household has current wealth of \$325,000, which is projected to rise to \$382,000 at age 62, even if the household does no additional discretionary saving. To maintain consumption in retirement, the household needs to save 16 percent of its current income. If the adult household members are 56 years old (the HRS covers households aged 51 to 61) and earn a combined \$35,000 a year (the average of 1992 earnings in the fifth and sixth earnings deciles), the household needs to save \$5,600 per year for six years. Accumulating these funds at a real rate of 5 percent would generate \$40,000 in additional wealth by age 62. This result would raise the household's wealth at that age to \$422,000. Therefore, projected wealth at age 62 with no

additional saving is 90 percent of the amount that would be generated by saving 16 percent of earnings between ages 56 and 62 (\$382,000 divided by \$422,000).

<sup>11</sup> The median family would need to earn a cumulative total of just \$40,000 (after taxes and work expenses) during their remaining lifetime after retirement at age 62 to generate the optimal retirement consumption level calculated by Moore and Mitchell.

<sup>12</sup> Savings targets are typically based on an assessment of the amount needed to maintain a pre-retirement standard of living in retirement. The target varies based on the demographic characteristics of a particular household. Targets are often expressed as a ratio (e.g., accumulated saving, or wealth, as a share of income).

*changes* in the baby boomer index over time, or differences across groups, do not correspond to changes or differences in the adequacy of overall retirement saving. If, as in case B, the household in case A rolls over its pension into an Individual Retirement Account (IRA), the baby boomer index rises dramatically, even though total retirement resources are unchanged. This increase in the baby boomer index occurs because the IRA is counted as other assets, increasing this category from 3 to 33 units of wealth, while decreasing private pensions from 30 units of wealth to 0. The resulting baby boomer calculation is 33 units of wealth (the value of other assets) divided by 39 units of wealth (total retirement needs excluding Social Security and private pensions), or 85 percent — compared to Case A's 33 percent. A third problem is that the baby boomer index can be extremely sensitive to estimates of retirement needs. In case C, retirement needs are only 5 percent lower than in case A, but the boomer index rises from 33 percent to 75 percent. For all of these reasons, the boomer index is not useful as a guide to understanding the adequacy of retirement saving.

Rather than reporting a baby boomer index, another study compares savings targets with actual household data and concludes that many Americans, especially those without a college education, save too little (Bernheim and Scholz, 1993). In particular, the authors find that only about half of non-college-educated households up to age 49 and fewer than half of older non-college-educated households, have wealth accumulations at or above the target levels. They also find that only about half of college-educated households, regardless of age, meet the targets. The implications of these results for undersaving need to be interpreted carefully.

The authors interpret the simulation model's savings targets, expressed as ratios of wealth to current earnings, as minimum savings requirements. However, if current earnings are high (or low) relative to average lifetime earnings for a given household, these targets will overstate (or understate) the savings needed to equate living standards in retirement to those prior to retirement. Assuming that current earnings are just as likely to overstate as understate average lifetime earnings, then, if households are saving adequately, only half of them should be expected to exceed the optimal accumulation targets. Thus, the findings for all college-educated households and for non-college-educated households up to age 49 should

not be interpreted as showing that half of those households are saving too little. Only the group of non-college-educated households aged 50 and older shows signs of undersaving. And even among this group, savings are understated because the definition of wealth used in the study excludes housing equity. Including housing wealth would eliminate most or all of the estimated shortfall between median actual and median simulated wealth-to-earnings ratios.

In summary, although many studies suggest that Americans nearing retirement need additional savings to allow them to maintain their current living standards in retirement, these studies may exaggerate the extent to which households have inadequate retirement savings. In particular, they suffer from one or more of the following shortcomings:

- Interpreting wealth-to-earnings savings targets as minimums, rather than as part of a distribution of possible targets that vary because current earnings do not necessarily reflect average lifetime earnings.
- Ignoring housing equity.
- Ignoring other sources of income that can be used to finance consumption during retirement, such as part-time work and inheritances.
- Disregarding continued saving prior to retirement.

## A New Model For Assessing Savings Adequacy

A new simulation model avoids many of the shortcomings of previous models (Engen, Gale and Uccello, 1999). The model generates savings targets that can be used as benchmarks to measure savings adequacy. These targets are expressed as the ratio of a household's wealth (i.e., accumulated savings) to its earnings.

The key innovation in this model is the recognition that earnings fluctuate on a year-to-year basis and that these fluctuations have crucial implications for measuring the adequacy of retirement saving and interpreting the data.<sup>13</sup> Consider a group of households that share the following characteristics: they earn the same amount in the *current* year, are the same age and have the same marital and pension status. If earnings never fluctuated or never deviated from a pre-determined age-earnings profile, all of these

<sup>13</sup> In the model, age-earnings profiles were developed using panel data from the Panel Survey of Income Dynamics and additional earnings variations were developed using data from the Internal Revenue Service-Michigan tax panel. For a detailed description of the model, see Engen, Gale and Uccello (1999).

households would have the same lifetime earnings and, thus, would need to reach the same wealth-to-earnings target in order to be saving adequately. However, the fact that earnings do fluctuate around age-earnings profiles means that this seemingly identical group really consists of three distinctly different types of households: those who are earning more than they normally would, those earning less than they normally would, and those earning approximately what they normally would.

Even if every household in this group had been saving adequately at the end of the previous year, the ones that were earning more than they normally would in the sample year would have unusually low wealth-to-earnings ratios. Likewise, those whose earnings were temporarily low would have unusually high wealth-to-earnings ratios. Thus, even among these households, there will be a distribution of optimal savings targets (because the households differ in their previous earnings or in their expected future earnings).

It seems reasonable to assume that, for any large group of households, about half are experiencing positive earnings shocks and half are experiencing negative shocks. If, instead, an analysis assumes that the current earnings level for a household is the same as the lifetime earnings level, a calculated wealth-to-earnings target is really only the *median* wealth-to-earnings target for all households with that set of characteristics.

Taking into account the potential for unexpected variability in household earnings fundamentally changes the interpretation of observed savings patterns. In particular, it implies that some households should be expected to have low wealth-to-earnings ratios, even if they are saving adequately.<sup>14</sup> Moreover, it implies that if households are saving adequately, one should observe that 50 percent of households with a given set of characteristics exceed their median savings target, not 100 percent.

Engen, Gale and Uccello (1999) use the results generated by their simulation model to assess the savings adequacy of married couples nearing retirement in the 1992 HRS.<sup>15</sup> Because the model generates a range of wealth-to-earnings ratios for a given set of household characteristics, it is not possible to determine any household's precise target level of

wealth. Instead, the authors determine the share of households whose actual wealth-to-earnings ratios exceed the median target generated by the model, for households with similar characteristics. If household earnings never varied unexpectedly, all households would need to meet or exceed this target to demonstrate adequate saving. However, given unexpected variations in earnings, half of households could fall below the median target and still be classified as adequate savers.

When defining household wealth to include one-half of housing equity, 52 percent of HRS households have wealth-to-earnings ratios that exceed the median savings target.<sup>16</sup> As noted above, this result should not be interpreted as indicating that the other 48 percent of households are failing to save enough, because the median is only one point in a distribution of savings targets that reflect the unexpected variation in a household's current earnings. In short, this result, by itself, offers no evidence of inadequate savings.

Comparing actual savings data with the whole distribution of simulated targets provides additional information regarding whether households are saving adequately. Presumably, if all households were saving optimally, then not only would at least half of them have wealth-to-earnings ratios that exceed the median target, but their wealth-to-earnings ratios should equal or exceed the targets at each point in the distribution. Table 3 compares the distribution of actual wealth-to-earnings ratios to those generated by the model. It shows that actual wealth-to-earnings ratios exceed the targets at the high ends of the distribution of potential

**Table 3:** Distribution of Target and Actual Wealth-to-Earnings Ratios for Households in the 1992 Health and Retirement Study

Wealth Measure	Percentile				
	5th	25th	Median	75th	95th
Target	0.96	2.28	3.49	5.03	7.78
Actual	0.17	1.65	3.59	7.29	19.50

Source: Engen, Gale and Uccello (1999).

<sup>14</sup> The simulation model also reveals that optimal consumption rises with age during the working years, holding interest rates and family size constant. In addition, owing to increases in mortality risk, optimal consumption generally declines as households reach and pass through retirement. As a result, optimal wealth decumulation involves the eventual exhaustion of non-annuitized assets well before the longest possible life span.

<sup>15</sup> More specifically, Engen, Gale and Uccello (1999) limit their analysis to married couples in which the husband is aged 51 to 61 and works at least 20 hours per week.

<sup>16</sup> Specifically, wealth is the sum of half the equity in the primary residence, other real estate equity, equity in businesses, defined benefit pension wealth and net financial assets. Financial assets include balances in defined contribution pension plans (e.g., 401(k) plans), IRAs and Keoghs, as well as non-tax-advantaged financial assets, less consumer debt.



outcomes as well as at the median. This result would be consistent with adequate saving for those with high wealth-to-earnings ratios.

However, the actual wealth-to-earnings ratio at the 25th percentile is 1.7, lower than the simulated target at the 25th percentile, 2.3. In other words, although we would expect 25 percent of households to have wealth-to-earnings ratios below 2.3, more than 25 percent of households are below this figure. This suggests some undersaving among the bottom 25 percent of the distribution.<sup>17</sup> In addition, the actual wealth-to-earnings ratio at the 5th percentile (0.2) is much lower than the simulated target ratio (1.0), suggesting systematic undersaving in this portion of the sample. It is not necessarily the case that all households with low wealth-to-earnings ratios have low incomes. Some could have high earnings, yet very low wealth.

Table 4 presents the share of households who exceed the median wealth-to-earnings ratio under different scenarios. Recall that in the baseline scenario, when wealth includes half of housing equity, 52 percent of households exceed the median simulated wealth-to-earnings ratio. The first panel of Table 4 explores the impact of changing the definition of the amount of wealth. Most notably, the results are sensitive to whether wealth is defined to include housing equity. The share of households exceeding the median simulated wealth-to-earnings ratio ranges from 43 percent, when wealth is defined narrowly to exclude housing equity altogether, to 61 percent, when wealth is defined broadly to include all of housing equity. Excluding all business wealth from the estimates, however, does not change the results much. Neither does reducing all wealth in stocks by 40 percent, presumably because stock holdings are concentrated among the wealthiest families.

Reducing Social Security benefits by 30 percent, which would restore long-term balance to the Social Security system,<sup>18</sup> would reduce the share of households whose intermediate wealth exceeds the median target by 5 percentage points, a relatively small effect given the prominence of Social Security in the retirement income of many elderly households. However, the effects would be larger for households

**Table 4:** Sensitivity Analysis: Percent of Households with Wealth-to-Earnings Ratios at or Above the Simulated Median Wealth-to-Earnings Ratio

Scenarios	Percentage of Households
Base Case	51.9
Changes to wealth measures	
Exclude all housing equity	43.4
Include all housing equity	60.5
Exclude business wealth	48.3
40 percent decline in stock market	49.6
30 percent cut in Social Security benefits	46.9
Retire at age 65	57.0
Changes to consumption needs	
20 percent increase in simulated needs	45.1
10 percent increase in survival rate	42.3

Source: Engen, Gale and Uccello (1999).

with lower earnings. The baseline analysis assumes that workers retire at age 62. Delaying retirement to age 65 would raise the share of households who exceed the median wealth-to-earnings ratio by about 5 percentage points. Taken together, these results suggest that a decrease in Social Security benefits can be offset by retiring later.

Changing assumptions regarding retirement consumption needs would also impact whether households appear to be saving adequately, as shown in the second panel of Table 4. Increasing simulated retirement needs by 20 percent, to account for increased health expenditures or other consumption needs, would reduce the share of households who exceed the median simulated wealth-to-earnings ratio by about 7 percentage points. Increasing survival rates by 10 percent would reduce this proportion by about 10 percentage points.<sup>19</sup>

<sup>17</sup> This result does not indicate that 25 percent of households are saving inadequately, only that there is evidence of undersaving among the 25 percent of households with the lowest wealth-to-earnings ratios.

<sup>18</sup> See U.S. Board of Trustees of the Federal OASDI Trust Funds (2000).

<sup>19</sup> In addition to their analysis using the HRS, Engen, Gale and Uccello (1999) also use their simulation model to examine savings adequacy in the Survey of Consumer Finances (SCF). The SCF analysis covers a wider range of households (aged 25-62) and a longer period of time (1983 to 1995). The aggregate

SCF results are somewhat more favorable than the HRS results. For instance, using the intermediate wealth measure, 59.7 percent of SCF households exceeded the simulated median wealth-to-earnings ratio in 1992, compared with 51.9 percent of HRS households. However, the difference is largely due to a higher proportion of younger SCF households than older SCF households exceeding the simulated median ratios. For 50-62 year olds, the SCF data generate about the same results as do the HRS data. See Engen, Gale and Uccello (1999) for more detail on the analysis of the SCF data.

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## Conclusion

Well-being in retirement depends, in part, on accumulating sufficient household savings. Although many studies suggest that Americans nearing retirement need additional savings to allow them to maintain their current living standards in retirement, these studies may exaggerate the extent of the savings shortfall. In particular, these studies exhibit one or more of the following limitations: ignoring housing equity, ignoring other sources of income that can be used to finance consumption during retirement, and disregarding continued saving prior to retirement. In addition, when wealth-to-earnings targets are used to assess savings adequacy, they are often interpreted as minimum requirements, thereby ignoring that current earnings may not accurately reflect average lifetime earnings. This possibility requires the adoption of an alternative measure of savings adequacy in which wealth-to-earnings ratios are interpreted as part of a distribution of savings targets. When all of these considerations are taken into account, preliminary evidence suggests that savings may be adequate for a majority of households. Even so, there is some evidence of undersaving for households with low wealth-to-earnings ratios.

The question of whether Americans are saving enough will become even more important over time. Social Security's long-term financial imbalance may lead to a decrease in future Social Security benefits. And the shift in private pensions from defined benefit plans, which provide annual income during retirement, to defined contribution plans, which leave more discretion to the worker, may result in a reduction in pension income. As a result, future retirees may need to rely more heavily on household savings to fund their retirement years. Therefore, it will be important to continue monitoring household savings behavior to assess whether it is adequate to meet future retirement needs.

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CENTER FOR  
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### About the Center

The Center for Retirement Research at Boston College, part of a consortium that includes a parallel center at the University of Michigan, was established in 1998 through a 5-year \$5.25 million grant from the Social Security Administration. The goals of the Center are to promote research on retirement issues, to transmit new findings to the policy community and the public, to help train new scholars, and to broaden access to valuable data sources. Through these initiatives, the Center hopes to forge a strong link between the academic and policy communities around an issue of critical importance to the nation's future.

### Affiliated Institutions

Massachusetts Institute of Technology  
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