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# Retirement Savings and Household Wealth in 2000: Analysis of Census Bureau Data

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## Summary

Pension analysts refer to Social Security, employer-sponsored retirement plans, and personal savings as the "three-legged stool" of retirement income, but for many workers at least one of the legs is missing. Coverage under Social Security is nearly universal, but access to employer-sponsored retirement plans is limited. Among wage and salary workers 25 to 64 years old, only 64% worked for an employer that sponsored a retirement plan in 2001. Almost 41 million people between the ages of 25 and 64 worked for an employer that did not offer a retirement plan, and another 12 million worked for employers that offered retirement plans, but were not included in those plans. Consequently, only 53% of wage and salary workers between the ages of 25 and 64 actually participated in an employer-sponsored retirement plan in 2001. Moreover, more workers participate in savings and thrift plans than in traditional pension plans that provide a guaranteed lifelong income. A key characteristic of these savings plans is that the worker must decide whether to contribute to the plan, how much to contribute, and how to invest the funds.

Data collected by the Census Bureau through its *Survey of Income and Program Participation* (SIPP) show that during an average month in 2000, approximately 113 million people between the ages of 25 and 64 worked for pay, including workers employed full-time and those who worked part-time, workers in the private sector and those in the public sector, workers who were self-employed and those who worked for others. An estimated 47.1 million of these workers (41.8%) owned one or more retirement accounts, including IRAs, Keogh accounts, 401(k) accounts and other employer-sponsored savings or thrift plans. Of these 113 million workers, 34.8 million (30.9%) owned a 401(k)-type plan, 21.4 million (19.0%) owned an IRA or Keogh plan (mostly IRAs), and 9.1 million (8.1%) owned both an IRA/Keogh and a 401(k) plan. An estimated 65.6 million workers between the ages of 25 and 64 (58.2%) did not own a retirement savings account of any kind.

Among the 47.1 million workers who owned a retirement savings account of any kind in 2000, the *mean* value of all such accounts owned by the workers themselves was $45,960. The *median* value of all the workers' accounts was $18,000. (Half of the workers owned accounts totaling more than $18,000 and half owned accounts with a total value of less than $18,000.) When all of the retirement accounts owned by the workers and other members of their households were combined, the mean value was $71,040 and the median value was $31,000. An estimated 7.0 million workers between the ages of 55 and 64 - 50% of all workers in this age category - owned at least one retirement account in 2000. The mean value of these workers' accounts was $71,910, and the median value was $33,000. The mean value of all retirement accounts owned by these workers and other members of their households was $107,040, and the median value was $56,000. The median value of these workers' household retirement assets - $56,000 - would purchase a level joint-and-survivor annuity worth just $332 per month at current rates of interest. When those who owned no retirement accounts are included, 75% of workers 55 to 64 years old lived in households with retirement savings of between zero and $56,000 in 2000.

## Contents


Background: America's Aging Population . . . . . 1
Saving, Wealth, and Retirement . . . . . 2
Recent Trends in Personal Saving . . . . . 3
Congress and Retirement Saving . . . . . 4
The "Economic Growth and Tax Relief Reconciliation Act" . . . . . 4
Pension Plans and Retirement Savings Plans . . . . . 5
Worker participation in voluntary plans . . . . . 8
Worker Ownership of Retirement Accounts in 2000 . . . . . 8
Estimating workers' retirement account balances . . . . . 9
The Survey of Income and Program Participation . . . . . 9
Retirement Wealth of Workers 25 to 64 Years Old . . . . . 10
Defining the terms of the analysis . . . . . 10
Summary of thrift plan ownership . . . . . 11
Retirement account balances by type of account . . . . . 12
Retirement account balances by age of worker . . . . . 15
Average household wealth in 2000 . . . . . 17
Policy Implications . . . . . 19
Appendix: Statistical Analysis of Account Balances . . . . . 20
Factors related to workers' retirement account balances . . . . . 20
Account balances for all members of the worker's household . . . . . 23
References . . . . . 27


## List of Tables


Table 1. Personal Income and Personal Saving, 1960-2001 . . . . . 3
Table 2. Employer-sponsored Retirement Plans in 2001 . . . . . 5
Table 3. Number of 401(k)-type Plans, Participants, and Assets, 1984-1998 . . . 7
Table 4. Worker Ownership of Retirement Accounts, 1999 and 2000 . . . . . 12
Table 5. Retirement Account Balances of Workers 25 to 64 Years old, 1999 and 2000 . . . . . 14
Table 6. Retirement Account Balances of Workers in 2000, by Age of Worker . . . . . 16
Table 7. Household Wealth and Household Debt of Workers in 2000, by Age of Worker . . . . . 18
Table A1. Results of OLS Regression on Cumulative Value of Retirement Accounts Owned by Individual Workers in 2000 . . . . . 22
Table A2. Results of OLS Regression on Value of All Retirement Accounts Owned by Persons in Workers' Households in 2000 . . . . . 24
Table A3. Worker Ownership of 401(k)-type Accounts in 2000 . . . . . 25
Table A4. Worker Ownership of Individual Retirement Accounts in 2000 . . . . 26

# Retirement Savings and Household Wealth in 2000: Analysis of Census Bureau Data

## Background: America's Aging Population

The aging of the American population and the impending retirement of the "baby boom" will place significant strains over the next several decades on both Social Security and on retirees' own financial resources. The decline in birth rates since the 1960s, coupled with longer life spans, will result in fewer workers relative to the number of retirees. Consequently, Social Security benefits will have to be financed by a working population that is shrinking relative to the number of retirees. With continued increases in average life expectancies, retirees in the 21st century will have to stretch their savings and other assets over longer periods of retirement than were experienced by their parents and grandparents.

***Americans are living longer then ever before.*** The average life expectancy of Americans born in 1960 was 69.7 years. It has been estimated that those who were born in 2000 will live for an average of 76.4 years.[1] A man who reached age 65 in 1960 could expect to live another 13 years, while a woman who turned 65 had a remaining life expectancy of 16 years. A man who reached age 65 in 2000 could expect to live another 15.6 years, while a woman who turned 65 in 2000 had a remaining life expectancy of 19.4 years. As more people live into old age, the age-profile of the population will shift. In 1960, 16.7 million people in the United States (9.2% of the population) were age 65 or older. In 2000, there were 35.0 million Americans age 65 or older, representing 12.4% of the population. By 2025, according to projections made by the Bureau of the Census, there will be 62 million people age 65 or older, comprising 18.5% of the U.S. population.

These demographic trends will strain the components of the traditional "three-legged stool" of retirement income: Social Security, pensions, and personal saving. The Social Security Board of Trustees has estimated that the Social Security trust fund will be exhausted by 2041 unless actions are taken to preserve it.[2] Pensions are the second largest source of income among the elderly, after Social Security, but only half of all workers in the United States have pension coverage through their jobs. Moreover, the traditional pension that provides a lifelong annuity is becoming less common. Today, more workers participate in savings and thrift plans than in traditional pension plans. A key characteristic of these savings plans is that the worker must actively participate, deciding whether to contribute to the plan, how much to contribute, and how to invest the funds. Workers who do not choose to save, or who save too little, may face straitened circumstances in retirement.

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[1]U.S. National Center for Health Statistics, *Vital Statistics of the United States.*

[2]Social Security and Medicare Boards of Trustees, *Status of the Social Security and Medicare Programs: A Summary of the 2002 Annual Reports*, Washington DC, March 2002.

## Saving, Wealth, and Retirement

According to a widely held theory of savings behavior, individuals plan their spending and saving over long periods, and the principal reason that they save is to provide for consumption during old age.[3] Of course, people also save for other reasons: to make a down payment on a car or home, to finance their children's education, or to have funds available in the event of job loss, for example. Nevertheless, providing for one's retirement is one of the strongest motivations for saving.

Social Security and employer-sponsored pension plans both are forms of retirement savings. Although Social Security payroll taxes are not set aside in individual accounts for the workers from whom they are collected, they entitle each participant to receive benefits when he or she reaches the age of eligibility or becomes disabled.[4] Traditional defined benefit pensions also are a form of retirement savings, even though these plans are usually financed entirely by the employer. Economic theory suggests that each dollar that the employer contributes to the company pension plan represents a dollar that otherwise would have been paid to workers as wages or other benefits. Today, many workers participate in defined contribution plans to which the employer and the employee both contribute funds. These contributions, too, represent retirement savings.

Personal saving not only helps individuals to provide for consumption during retirement, it also contributes to the pool of funds available for investment in physical plant, capital goods, research and development, worker training, and other activities that promote economic growth. By contributing to the growth of the economy, saving helps to raise the level of personal income, which in the long run makes the cost of financing retirement programs like Social Security relatively less burdensome on workers. Personal saving represents just one source of funds available to finance investment. Businesses, governments, and foreign investors also are sources of funds for investment. Businesses save when earnings are retained for future investment, rather than being distributed as dividends to shareholders. Governments save when they run budget surpluses. Foreign investors supply savings whenever they invest more in the United States than Americans invest abroad.

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[3] See Franco Modigliani's Nobel Prize lecture "Life Cycle, Individual Thrift, and the Wealth of Nations" in the *American Economic Review*, vol. 86 no. 3, (June 1986).

[4] Some Social Security reform proposals would establish individually-owned accounts to be funded by "carving out" part of the payroll tax to be diverted to each participant's account. In any case, the long-term unfunded liability of Social Security will need to be addressed by tax increases, benefit cuts, or by investing some of the trust fund in potentially higher-yielding (but more volatile) private-sector assets.

## Recent Trends in Personal Saving

**Table 1** shows disposable personal income, personal saving, and the savings rate for selected years from 1960 to 2001.[5] In recent years, the personal savings rate (the percentage of personal disposable income not devoted to current consumption) has declined substantially. Whether the recent decline in the personal savings rate will eventually reduce the rate of growth of the economy is a matter of debate among economists. Some believe that the personal savings rate is a flawed measure of saving because it focuses only on saving from current income - ignoring increases in wealth that result from capital gains - and because it reflects only the savings behavior of households and thus does not take into account the savings behavior of businesses and government. Other economists consider the problem to be serious, in part because the low rate of saving by households in the U.S. increases our reliance on foreign investment, which represents a claim by other nations on the productive output of the economy. To the extent that the profits generated by foreign capital are repatriated to the countries that were the sources of the funds, this form of investment contributes less to long-run economic growth in the U.S. than would result from an equal amount of investment financed by domestic saving.

**Table 1. Personal Income and Personal Saving, 1960-2001**
(Amounts in billions)

| Year | Disposable Personal Income | Personal Saving | Savings Rate |
|---|---|---|---|
| 1960 | $366.2 | $26.4 | 7.2% |
| 1965 | 498.9 | 42.7 | 8.6% |
| 1970 | 736.5 | 69.5 | 9.4% |
| 1975 | 1,181.4 | 125.2 | 10.6% |
| 1980 | 2,019.8 | 205.6 | 10.2% |
| 1985 | 3,086.5 | 282.6 | 9.2% |
| 1990 | 4,293.6 | 334.3 | 7.8% |
| 1995 | 5,422.6 | 302.4 | 5.6% |
| 1996 | 5,677.7 | 272.1 | 4.8% |
| 1997 | 5,968.2 | 252.9 | 4.2% |
| 1998 | 6,355.6 | 301.5 | 4.7% |
| 1999 | 6,618.0 | 160.9 | 2.4% |
| 2000 | 7,120.2 | 201.5 | 2.8% |
| 2001 | 7,393.2 | 169.7 | 2.3% |

**Source**: U.S. Department of Commerce, Bureau of Economic Analysis

[5] Disposable personal income is personal income minus taxes and non-tax payments. Personal saving is disposable personal income minus personal consumption expenditures, interest payments, and personal transfers to persons outside the United States.

## Congress and Retirement Saving

Congress has acted several times over the years to encourage workers to save for retirement, mainly by allowing income taxes to be deferred on amounts that workers and/or their employers contribute to certain types of savings plans established to prepare for retirement. For example:

- The *Technical Amendments Act of 1958* (P.L. 85-866) added **section 403(b)** to the Internal Revenue Code, which authorized deferral of taxes on employer and employee contributions to retirement plans for employees of religious, charitable, educational, research, and cultural organizations.

- The *Self-Employed Individuals Tax Retirement Act of 1962* (P.L. 87-792) authorized **Keogh Plans** (after Rep. Eugene J. Keogh of New York), tax-deferred retirement savings plans for people who are self-employed.

- The *Employee Retirement Income Security Act of 1974* (P.L. 93-406) authorized **Individual Retirement Accounts** (IRAs) in which eligible contributions and investment earnings are tax-deferred.

- The *Taxpayer Relief Act of 1997* (P.L. 105-34) authorized the **Roth IRA**, which accepts only after-tax contributions but provides for tax-free distributions.

- *The Revenue Act of 1978* (P. L. 95-600) added **section 401(k)** to the Internal Revenue Code. Both the employer and employee can make pre-tax contributions to these retirement plans, and earnings are tax-deferred.

- *The Revenue Act of 1978* also added **section 457** to the Internal Revenue Code to permit state and local government employees to defer income taxes on a portion of salary that is deposited into a retirement plan.

**The "Economic Growth and Tax Relief Reconciliation Act".** On June 7, 2001, the President signed the *Economic Growth and Tax Relief Reconciliation Act of 2001* ("EGTRRA"). This law increased the maximum annual contribution to an IRA to $3,000 in 2002, 2003, and 2004; to $4,000 in 2005, 2006, and 2007, and to $5,000 in 2008, after which it will be indexed to inflation in $500 increments. For individuals age 50 and older, the maximum allowable contribution to an IRA is higher by an additional $500 in 2002 through 2005 and by $1,000 in each year thereafter. EGTRRA also increased the maximum employee salary deferral under Internal Revenue Code section 401(k) to $11,000 in 2002 and by an additional $1,000 each year through 2006, when it will reach $15,000. After 2006, the maximum deferral will be indexed to inflation. The maximum contribution to retirement plans under I.R.C. sections 403(b) and 457 also have been increased to the amount permissible under section 401(k). EGTRRA also allows individuals who are age 50 or older to make additional contributions to retirement plans authorized under sections 401(k), 403(b), or 457 of the tax code. The maximum permissible additional contribution is $1,000 in 2002, $2,000 in 2003, $3,000 in 2004, $4,000 in 2005, and $5,000 in 2006. This amount is indexed to inflation in years after 2006.

## Pension Plans and Retirement Savings Plans

Pension analysts often refer to Social Security, employer-sponsored retirement plans, and personal savings as the "three-legged stool" of retirement income, but for many workers at least one of the legs is missing. Coverage under Social Security is nearly universal, but access to employer-sponsored retirement plans is limited. Data from the Census Bureau's *Current Population Survey* indicate that, among wage and salary workers 25 to 64 years old, only 64% worked for an employer that sponsored a retirement plan in 2001.[6] (See **Table 2**). Almost 41 million people between the ages of 25 and 64 worked for an employer that did not offer a retirement plan in 2001, and another 12 million worked for employers that offered retirement plans, but were not included in those plans. Consequently, only 53% of wage and salary workers between the ages of 25 and 64 actually participated in an employer-sponsored retirement plan in 2001.

**Table 2. Employer-sponsored Retirement Plans in 2001**
*Wage and salary workers, 25 to 64 years old*

(Numbers in thousands)

| *Does worker's employer sponsor a retirement plan?* | | | | |
|---|---|---|---|---|
| **Yes** | | **No** | | |
| Number | *Percent* | Number | *Percent* | Total |
| **72,321** | *63.9%* | **40,931** | *36.1%* | **113,252** |

| *Is this worker included in the retirement plan?* | | | | |
|---|---|---|---|---|
| **Yes** | | **No** | | |
| Number | *Percent* | Number | *Percent* | Total |
| **60,151** | *53.1%* | **53,101** | *46.9%* | **113,252** |

**Source**: CRS analysis of data from the March 2002 *Current Population Survey*.

***Trends in retirement plan design.*** Over the past 25 years, there has been a shift in the distribution of pension plans and of pension plan participants from *defined benefit* plans to *defined contribution* plans. In a defined benefit or "DB" plan, the retirement benefit is usually paid as a lifelong annuity based on the employee's length of service and average salary in the years immediately preceding retirement. DB plans are funded by employer contributions to a pension trust. These contributions must be sufficient to pay the pension benefits that workers accrue each year. In a defined benefit plan, the investment risk is borne by the employer. If the value of the pension trust is not equal to the present value of the accrued pension

[6] A "retirement plan" could be a traditional defined benefit pension or a defined contribution plan. Some employees participate in both types of plan simultaneously.

obligations, the plan's sponsor is required to make up this shortfall - called an *unfunded liability* - through additional contributions over a period of years.[7]

A defined contribution or "DC" plan is much like a savings account maintained by the employer on behalf of each participating employee. The employer contributes a specific dollar amount or percentage of pay, which is invested in stocks, bonds, or other assets. The employee usually contributes to the plan, too. In a defined contribution plan, it is the employee who bears the investment risk: at retirement, the balance in the account is the sum of all contributions plus interest, dividends, and capital gains (or losses). The account balance can be converted to a lifelong annuity or taken as a series of fixed payments over a period of years, but is most often distributed as a single lump sum. Many large employers recently have converted their traditional DB pensions to hybrid plans that have characteristics of both DB and DC plans, the most popular of which has been the *cash balance plan*. In a cash balance plan, the accrued benefit is defined in terms of an account balance. The employer makes contributions to the plan and pays interest on the accumulated balance. However, these account balances are merely bookkeeping devices. They are not individual accounts owned by the participants. Legally, therefore, a cash balance plan is a defined benefit plan.

In 1975, there were 103,346 defined benefit plans in the United States with 27.2 million participants. That same year, there were 207,748 defined contribution plans with 11.2 million participants. By 1998, the number of defined benefit plans had fallen to 56,405 and the number of active participants in these plans had declined to 23.0 million. Also by 1998, the number of defined contribution plans had risen to 673,626 and the number of participants had increased to 50.3 million.[8] Some analysts attribute at least part of the decline in the number of defined benefit plans to the *Employee Retirement Income Security Act of 1974* (ERISA). Likewise, the growth in the number of defined contribution plans has been attributed in part to changes in tax law made by the *Revenue Act of 1978*.

***ERISA and defined benefit pensions.*** ERISA was passed by Congress to protect the interests of participants and beneficiaries of pension plans in the private sector. The law was a response to instances in which pension funds had been mishandled or plans had become insolvent. It also addressed certain obstacles to receipt of pension benefits such as onerous age or length-of-service requirements. ERISA established statutory requirements on private pension plans that made it more likely that pension participants would receive the pension benefits that they had earned. However, it has been observed that another effect of ERISA was to make it "much more costly and troublesome for employers, especially small employers" to offer a traditional defined benefit pension plan.[9]

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[7] Defined benefit plans are insured up to certain limits by the Pension Benefit Guaranty Corporation (PBGC). Defined contribution plans are not insured by the PBGC.

[8] Some workers participate in both types of plan. Figures are from the annual *Private Pension Plan Bulletin*, published by the U.S. Department of Labor.

[9] John G. Kilgour, "Restructuring Retirement Income Plans," *Compensation and Benefits Review*, vol. 32 no. 6, (November/December 2000).

Although the increased regulation of pension plans required by ERISA may have contributed to the decline in the number of defined benefit pensions, the effect was not immediate. Between 1975 and 1983, the number of defined benefit plans *increased* from 103,346 to 172,642. Only then did the number of DB plans begin to decline. The decline in the number of DB plans began at nearly the same time the number of defined contribution plans - particularly the "401(k) plan" - began to rise rapidly. (See **Table 3**). Section 401(k) was added to the Internal Revenue Code by the *Revenue Act of 1978*, but it was not until 1981 - after regulations had been published by the IRS - that the first 401(k) plan was established.

***Defined contribution plans and the Revenue Act of 1978.*** Defined contribution plans existed before the *Revenue Act of 1978*, but it was only after the advent of the 401(k) that DC plans overtook traditional defined benefit pensions in number of plans, participants, and total assets. Earlier defined contribution plans had been funded exclusively by employer contributions. In a 401(k) plan, however, both the employer and the employee can make contributions. The ability of *both* the employer and the employee to contribute on a pretax basis and the *voluntary* nature of employee participation are defining characteristics of the 401(k) plan. These characteristics "shift a substantial portion of the burden for providing for retirement to the employee. The employee decides whether or not to participate, how much to contribute, and how to invest the assets." (Munnell, Sundén, and Taylor, 2000).

**Table 3. Number of 401(k)-type Plans, Participants, and Assets, 1984-1998**

| Year | Plans | Participants (thousands) | Assets (millions) |
|---|---|---|---|
| 1984 | 17,303 | 7,540 | $91,754 |
| 1985 | 29,869 | 10,339 | 143,939 |
| 1986 | 37,420 | 11,559 | 182,784 |
| 1987 | 45,054 | 13,131 | 215,477 |
| 1988 | 68,121 | 15,203 | 276,995 |
| 1989 | 83,301 | 17,337 | 357,015 |
| 1990 | 97,614 | 19,548 | 384,854 |
| 1991 | 111,394 | 19,126 | 440,256 |
| 1992 | 139,704 | 22,404 | 552,959 |
| 1993 | 154,527 | 23,138 | 616,316 |
| 1994 | 174,945 | 25,206 | 674,681 |
| 1995 | 200,813 | 28,061 | 863,918 |
| 1996 | 230,808 | 30,843 | 1,061,493 |
| 1997 | 265,251 | 33,865 | 1,264,168 |
| 1998 | 300,593 | 37,114 | 1,540,975 |

**Source**: U.S. Department of Labor, Pension & Welfare Benefits Administration.

**Worker participation in voluntary plans.** A number of factors influence a worker's decision to participate in a voluntary retirement plan, how much to contribute, and how to invest the contributions. A study that analyzed data from the pension supplement to the Census Bureau's April 1993 *Current Population Survey* found that participation is higher when the employer offers matching contributions, and that participation increases with an employee's age, income, and length of service with the firm.[10]

A more recent study used the Federal Reserve Board's 1998 *Survey of Consumer Finances* to study the factors that influence an employee's decision to participate in a 401(k) and how much to contribute to the plan. The authors found that in addition to being positively associated with a worker's age, income, education, and length of service, participation was greater among employees whose "planning horizon" was four years or more. They interpreted this result as indicating that educating employees on the importance of planning for retirement could raise savings rates. Their results showed that the plan characteristics with the greatest effect on employee participation were the presence of an employer match on employee contributions and the ability of participants to borrow from their account balances before retirement. Their research indicated that the *amounts* employees contributed were positively related to employee income and wealth, long planning horizons, employer matching contributions, and the ability to borrow from the plan.[11]

***Automatic enrollment.*** In 1998 and 2000, the IRS issued regulations that permit employers to enroll employees automatically in a 401(k), 403(b), or 457 retirement plan. Benefits consultants estimate that since the IRS issued its first regulation on the practice, some 7% to 10% of 401(k) plan sponsors have instituted automatic enrollment in their plans. (Jacobius, 2000) Employees who are enrolled automatically must be given an option to drop out of the plan; however, a study by Hewitt Associates found that only 4% of employees who were automatically enrolled in a 401(k) plan opted not to participate. According to a survey of 10 companies conducted by the *Profit Sharing/401(k) Council of America*, average participation rates rose from 76% to 93% after automatic enrollment was adopted.

## Worker Ownership of Retirement Accounts in 2000

Both Social Security and traditional defined benefit pensions that guarantee payment of a lifelong annuity are important elements in providing a secure income during retirement. However, with the growth of 401(k) plans in which the worker must decide how much to contribute and where to invest the funds, much of the responsibility for preparing for retirement has been shifted to workers themselves. Thus, the extent to which workers are preparing for retirement depends in part on the value of the assets they are accumulating in these plans and in individual retirement accounts.

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[10] William Even and David MacPherson, *Factors Influencing Participation and Contribution Levels in 401(k) Plans*, report to the U.S. Department of Labor, 1997.

[11] Alicia Munnell, Annika Sundén, and Catherine Taylor, *What Determines 401(k) Participation and Contributions?*, Center for Retirement Research, Boston College, 2000.

Workers whose employers offer savings or "thrift" plans such as those authorized under sections 401(k), 403(b), and 457 of the Internal Revenue Code can accumulate assets on a tax-deferred basis while they are working. In addition, most people with earned income can contribute to an Individual Retirement Account (IRA). In both cases, taxes are paid when the funds are withdrawn, and a penalty may apply if the withdrawals occur before retirement.[12] For many people, the marginal income tax rate that they will face in retirement will be lower than the rate that was applied to their earnings prior to retirement.

**Estimating workers' retirement account balances.** The Bureau of the Census collects data on household income and assets through its *Survey of Income and Program Participation* (SIPP). The data collected in this survey can be used to estimate the number of workers who participate in thrift plans and IRAs, the proportion of these individuals who invest some of their retirement savings in stocks and stock mutual funds, the total value of their retirement accounts, and the total value of the assets owned by all members of their households. The most recent data from the SIPP on individuals' retirement assets were collected in 2000. Data on household assets also are collected by the Federal Reserve Board through its *Survey of Consumer Finances* (SCF). However, the SIPP data can be analyzed at a finer level of detail than the SCF data because the SIPP is conducted among a much larger sample of households. For the 1998 *Survey of Consumer Finances*, members of 4,309 households were interviewed. (Kennickell, Starr-McLuer, and Surette, 2000). In contrast, the first wave of the 1996 panel of the SIPP included more than 36,000 households. The twelfth wave of the 1996 panel of the SIPP - conducted in late 1999 and early 2000 - included more than 27,000 households.

**The Survey of Income and Program Participation.** The data analyzed for this report were collected by the Bureau of the Census in early 2000 as part of the *Survey of Income and Program Participation* (SIPP). The individuals asked to participate in the survey are a nationally representative sample of the civilian, noninstitutionalized population of the United States. The SIPP is a *longitudinal* survey, meaning that it measures changes in the economic and demographic characteristics of individuals and households over time. People who participate in the survey are interviewed once every 4 months over a 2½-year or 4-year period. At each interview, respondents are asked to provide information covering the 4 months since the previous interview. This 4-month span is called the "reference period" for the interview. While it was designed as a longitudinal survey, the SIPP also can be used to study characteristics of the population at a point in time (*cross-sectional analysis*) by looking at the data from a particular 4-month reference period or a specific month within the reference period.[13]

The SIPP is an important source of information about the demographic and economic status of United States residents. By collecting data on labor force

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[12] In a traditional IRA, pre-tax contributions can be made only if the worker is not covered by an employer-sponsored retirement plan or has income below amounts specified in law. All investment earnings accrue on a tax-deferred basis. Roth IRAs accept *only* after-tax contributions; however, withdrawals from a Roth IRA during retirement are *tax-free*.

[13] More information on the SIPP is available at http://www.sipp.census.gov/sipp.

participation, sources of income, and participation in federal and state programs, the SIPP provides a wealth of data about government transfer and service programs and their effects on the economic situations of families and individuals. For example, the SIPP can be used to examine receipt of income from means-tested transfers (such as Temporary Aid to Needy Families and Food Stamps) and transfers that are not means-tested (such as Social Security). In addition to asking about amounts and sources of income, the SIPP collects information on asset ownership to provide a more complete picture of the total economic resources available to families and individuals. The SIPP data on household wealth and asset ownership presented in this report are the most recent available from the Bureau of the Census.[14]

## Retirement Wealth of Workers 25 to 64 Years Old

The following tables show the number of workers who owned one or more retirement savings plans in 2000, as well as the average balances held in those accounts at the end of the reference month for the survey. Following these, there are tables that show the average household wealth and average household debt of all workers who were 25 to 64 years old in 2000.

**Defining the terms of the analysis.** The tables present information on the *retirement savings* and *household wealth* of workers 25 to 64 years old. For purposes of this report, this population includes anyone who worked for pay at any time during the four-month reference period of the survey. We restricted the analysis to workers between the ages of 25 and 64 because younger workers have low rates of participation in retirement plans and are generally more concerned with establishing themselves in their careers than in accumulating assets for retirement. Workers age 65 or older are more likely than those under 65 to have retired from their career jobs and to be working part-time or part-year.

For purposes of accumulating and consuming assets, the *household* may be a more relevant unit of analysis than the *individual*. In a household comprising a single individual, that person has only his or her own assets on which to draw.[15] In a household comprising more than one individual, the worker and other household members may be able to draw upon each other's assets during retirement. Therefore, the tables show both the average value of retirement accounts owned by individual workers 25 to 64 and the average value of all retirement accounts owned by members of these workers' households, regardless of age.

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[14] Another recent study (Anderson, 1999) examined the wealth of families in 1995, based on data collected as part of the 1993 panel of the SIPP. The results presented in this report are not directly comparable with those published by Anderson because that study followed the Census Bureau's convention of excluding the value of employer-sponsored thrift plans from individual and household wealth. This CRS Report, however, follows the Federal Reserve Board's convention of including the value of employer-sponsored thrift plans in individual and household wealth.

[15] Due to limitations of the data, we cannot estimate the extent to which individuals might be able to draw upon the assets of relatives living in other households.

The SIPP questionnaire asked respondents to report the value of account balances in Individual Retirement Accounts (IRAs), Keogh plans for the self-employed, and 401(k) plans and other employer-sponsored thrift plans. The SIPP questionnaire, however, does not define "401(k) plans and other employer-sponsored thrift plans." According to the Department of Labor, the retirement plans authorized under sections 401(k), 403(b), and 457 of the Internal Revenue Code all are savings and thrift plans, which it defines as those in which "employees may contribute a predetermined portion of earnings (usually pretax) to an individual account, all or part of which the employer matches."[16]

The tables do not include the portion of retirement wealth that is represented by the present value of benefits accrued under Social Security and employer-sponsored defined-benefit pension plans. These are important sources of retirement wealth, but the data collected in the assets and liabilities module of the SIPP do not include the information necessary to estimate the value of these assets. If a worker's earnings history is known, a rough estimate of expected Social Security benefits can be derived, based on estimates of future earnings and the expected date of retirement. The Social Security Administration now sends such an estimate to each covered worker once a year. The present value of the projected stream of Social Security benefits over time can be estimated by applying an appropriate discount rate.[17] Estimating the present value of benefits earned under defined benefit pensions would be more difficult because the specific provisions of each plan must be known in order to estimate the value of the benefit that has been earned.

**Summary of thrift plan ownership.** During an average month in 2000, an estimated 113 million people between the ages of 25 and 64 worked for pay, including workers employed full-time and those who worked part-time, workers in the private sector and those in the public sector, workers who were self-employed and those who worked for others. (See **Table 4**). An estimated 47.1 million of these workers (41.8%) owned one or more retirement accounts, including IRAs, Keogh accounts, 401(k) accounts and other employer-sponsored savings or thrift plans. An estimated 34.8 million workers (30.9%) owned a 401(k)-type plan, 21.4 million (19.0%) owned an IRA or Keogh plan (mostly IRAs), and 9.1 million (8.1%) owned both an IRA/Keogh and a 401(k) plan. An estimated 65.6 million workers between the ages of 25 and 64 (58.2%) did not own a retirement savings account of any kind.[18]

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[16] U.S. Department of Labor, Bureau of Labor Statistics, *Employee Benefits in Medium and Large Private Establishments, 1997*, Bulletin 2517, September 1999.

[17] One might also wish to make some assumptions about the effect on benefits of reforms needed to preserve the solvency of the Social Security program.

[18] These figures also indicate that 25.7 million workers had only a 401(k)-type plan: (34.8-9.1=25.7). An estimated 12.3 million workers had only an IRA: (21.4-9.1=12.3).

**Table 4. Worker Ownership of Retirement Accounts, 1999 and 2000**
(Number of workers, in thousands)

| | 1999 | | 2000 | |
|---|---|---|---|---|
| | **Workers** | ***Percent*** | **Workers** | ***Percent*** |
| **All workers, 25 to 64 years old** | **111,389** | ***100%*** | **112,663** | ***100%*** |
| Owned either an IRA/Keogh or a 401(k)-type thrift plan | 44,522 | *40.0%* | 47,072 | *41.8%* |
| Owned a 401(k)-type plan thrift plan | 32,472 | *29.2%* | 34,771 | *30.9%* |
| Owned an IRA or Keogh plan | 20,478 | *18.4%* | 21,422 | *19.0%* |
| Owned both an IRA/Keogh and a thrift plan | 8,428 | *7.6%* | 9,121 | *8.1%* |
| **Owned neither an IRA/Keogh nor a thrift plan** | **66,867** | ***60.0%*** | **65,591** | ***58.2%*** |
| **Full-time workers, 25 to 64 years old** | **80,320** | ***100%*** | **82,260** | ***100%*** |
| Owned a 401(k)-type thrift plan | 25,174 | *31.3%* | 26,938 | *32.8%* |
| Owned an IRA or Keogh plan | 14,074 | *17.5%* | 14,755 | *17.9%* |
| **Owned neither an IRA/Keogh nor a thrift plan** | **47,327** | ***58.9%*** | **47,208** | ***57.4%*** |
| **Part-time workers, 25 to 64 years old** | **31,069** | ***100%*** | **30,403** | ***100%*** |
| Owned a 401(k)-type thrift plan | 7,298 | *23.5%* | 7,833 | *25.8%* |
| Owned an IRA or Keogh plan | 6,404 | *20.6%* | 6,667 | *21.9%* |
| **Owned neither an IRA/Keogh nor a thrift plan** | **19,539** | ***62.9%*** | **18,382** | ***60.5%*** |

**Source**: CRS analysis of the Census Bureau's *Survey of Income and Program Participation*.

**Retirement account balances by type of account.** The data displayed in **Table 5** summarize the average values of retirement accounts owned by workers and their households in 2000. Among the 47.1 million workers who owned a retirement savings account of any kind in 2000, the *mean* value of all such accounts owned by the workers themselves was $45,960. For workers with more than one account, this is the mean value of all accounts summed together. The *median* value of all the workers' accounts was $18,000. (Half of the workers owned accounts totaling more than $18,000 and half owned accounts with a total value of less than $18,000.) When all of the retirement accounts owned by the workers and other members of their households were combined, the mean value was $71,040 and the median value was $31,000.

Both the mean and median values of 401(k) accounts owned by workers with such accounts in 2000 were greater than the mean and median value of IRAs owned by workers with that kind of account. The 401(k) accounts owned by workers had a mean value of $40,050 and a median value of $16,000, while the IRAs owned by workers had a mean value of $35,980 and had a median value of $13,000. By most other measures, however, workers who owned IRAs had higher total retirement account balances than those who owned 401(k) accounts. This is attributable in part to the fact that workers who owned an IRA were more likely to have a 401(k) than workers who had a 401(k) were to own an IRA. In 2000, an estimated 9.1 million

workers owned both an IRA or Keogh and a 401(k)-type plan. Thus, 42.2% of all workers who owned an IRA or Keogh also owned a 401(k), while just 26.2% of workers who owned a 401(k)-type account also owned an IRA or Keogh plan.[19]

Workers who owned an IRA or Keogh lived in households with substantially greater retirement account balances than workers who owned a 401(k), again in part because those who owned an IRA or Keogh were more likely to be owners of multiple accounts. The mean value of all retirement accounts in the households of workers who owned a 401(k)-type plan in 2000 was $73,040, and the median value was $32,450. The mean value of all retirement accounts in the households of workers who owned an IRA or Keogh plan in 2000 was $97,630, and the median value was $48,000.

**Means and Medians**

The average values of retirement accounts, household wealth, and household debt are shown in terms of both the *mean* and the *median* values. The *mean* is a simple arithmetic average.[20] It is calculated by adding up the reported values of all accounts and then dividing this total by the number of account-holders. As a measure of central tendency – what an "average" represents – the mean is flawed because it can be biased by a relatively small number of unusually high or low values. The median is another kind of average that is more representative of the population because it is not biased by unusually high or low values. The median is calculated by ordering all of the observed values from highest to lowest and finding the value that lies exactly at the midpoint of the distribution. One half of all observed values are greater than the median and the other half are less than the median.

[19] Derived as follows: 9.121/21.422=.426 and 9.121/34.771=.262. See Table 4 for data.

[20] The Census Bureau has assigned a *survey weight* to each respondent to the SIPP. The sum of the weights is equal to the estimated population of civilian, noninstitutional residents of the U.S. The means shown in each table are the *weighted* means for each observation.

## Table 5. Retirement Account Balances of Workers 25 to 64 Years old, 1999 and 2000

(Numbers of workers in thousands)

| | 1999 | | 2000 | |
|---|---|---|---|---|
| | **Workers** | **Account value** | **Workers** | **Account value** |
| **Owned either an IRA/Keogh or a 401(k)-type plan*** | **44,522** | | **47,072** | |
| *Value of worker's retirement accounts* | | | | |
| Mean value | | $41,150 | | $45,960 |
| Median value | | $16,000 | | $18,000 |
| *Value of all retirement accounts in household* | | | | |
| Mean value | | $62,730 | | $71,040 |
| Median value | | $27,000 | | $31,000 |
| **Owned a 401(k) or other type of thrift plan*** | **32,472** | | **34,771** | |
| *Value of worker's 401(k)-type accounts* | | | | |
| Mean value | | $35,620 | | $40,050 |
| Median value | | $15,000 | | $16,000 |
| *Value of worker's retirement accounts, all types* | | | | |
| Mean value | | $44,430 | | $50,100 |
| Median value | | $18,800 | | $20,000 |
| *Value of all 401(k)-type accounts in household* | | | | |
| Mean value | | $48,320 | | $54,780 |
| Median value | | $21,000 | | $24,000 |
| *Value of all retirement accounts in household* | | | | |
| Mean value | | $63,660 | | $73,040 |
| Median value | | $27,400 | | $32,450 |
| **Owned an IRA or Keogh plan*** | **20,478** | | **21,422** | |
| *Value of worker's IRAs and Keogh accounts* | | | | |
| Mean value | | $33,000 | | $35,980 |
| Median value | | $12,000 | | $13,000 |
| *Value of worker's retirement accounts, all types* | | | | |
| Mean value | | $54,930 | | $60,990 |
| Median value | | $23,000 | | $25,000 |
| *Value of all IRA/Keogh accounts in household* | | | | |
| Mean value | | $49,370 | | $54,890 |
| Median value | | $20,700 | | $23,000 |
| *Value of all retirement accounts in household* | | | | |
| Mean value | | $86,200 | | $97,630 |
| Median value | | $41,630 | | $48,000 |

* An estimated 9.1 million workers 25 to 64 years old owned both a 401(k)-type thrift plan and an IRA or Keogh plan in 2000. Approximately 65.6 million workers aged 25 to 64 owned neither type of plan.

**Source**: CRS analysis of the Census Bureau's *Survey of Income and Program Participation.*

**Retirement account balances by age of worker.** A worker's age is an important consideration when evaluating the adequacy of his or her retirement wealth. The more time that a worker has until reaching retirement age, the greater will be the opportunity for additional contributions and investment earnings to build up the account balances. **Table 6** presents worker's average retirement account balances in 2000, with the averages calculated for each of four age categories.

An estimated 10.1 million workers 25 to 34 years old owned a retirement account of some kind in 2000. This was 32% of all workers of that age. Sixty-eight percent of workers in this age group owned no retirement accounts. The mean value of all retirement accounts owned by these workers was $14,780 and the median value was $6,000. The mean value of all retirement accounts owned by all members of these workers' households was $27,600, and the median value was $10,200.

An estimated 15.8 million workers between the ages of 35 and 44 (42% of all workers in this age category) owned at least one retirement account in 2000. Fifty-eight percent owned no retirement accounts. The mean and median values of these workers' retirement accounts were roughly three times as large as the corresponding values for workers aged 25 to 34. Workers between the ages of 35 and 44 had a mean balance of $41,050 in their accounts and a median balance of $19,500. The mean value of all retirement accounts owned by members of these workers' households was $63,030, and the median value was $31,000.

Among workers who were 45 to 54 years old in 2000, approximately 14.2 million, or 48%, had at least one retirement account. Fifty-two percent owned no retirement accounts. The mean value of these workers' accounts was $60,740, and the median value was $28,000. The mean value of all retirement accounts owned by all members of their households was $92,990, and the median value of all retirement accounts in these households was $48,000.

Workers 55 to 64 years old were more likely to own a retirement account than any other group. An estimated 7.0 million workers between the ages of 55 and 64 (50% of all workers in this age category) owned at least one retirement account in 2000. Still, half of workers in this age category owned no retirement accounts in 2000. The mean value of these workers' accounts was $71,910, and the median value was $33,000. The mean value of all retirement accounts owned by these workers and other members of their households was $107,040, and the median value was $56,000. When those who owned no retirement accounts are included, 75% of workers 55 to 64 years old lived in households with retirement savings of between zero and $56,000 in 2000.

Even among workers 55 to 64 years old, average retirement account balances in 2000 were not very large. The mean value of the accounts held by individual workers was $71,910. For a 65-year-old retiring in December 2002, this amount would be sufficient to purchase a level, single-life annuity that would pay $515 per month, based on the federal Thrift Savings Plan's current annuity interest rate of 4.0%. The mean value of these workers' total household retirement accounts - $107,000 - would purchase a level joint-and-survivor annuity worth $634 per month, based on 4.0% interest and retirement at age 65. The median value - $56,000 - would be sufficient to purchase a joint-and-survivor annuity of just $332 per month.

## Table 6. Retirement Account Balances of Workers in 2000, by Age of Worker

*Workers 25 to 64 years old who owned an IRA, Keogh Plan or a 401(k)-type plan**

(Numbers of workers in thousands)

| | Workers | Account owners | Account value |
|---|---|---|---|
| **Workers 25 to 34 years old** | **31,433** | **10,067** | |
| *Value of worker's retirement accounts* | | | |
| Mean | | | $14,780 |
| Median | | | $6,000 |
| *Value of all retirement accounts in household* | | | |
| Mean | | | $27,600 |
| Median | | | $10,200 |
| **Workers 35 to 44 years old** | **37,365** | **15,790** | |
| *Value of worker's retirement accounts* | | | |
| Mean | | | $41,050 |
| Median | | | $19,500 |
| *Value of all retirement accounts in household* | | | |
| Mean | | | $63,030 |
| Median | | | $31,000 |
| **Workers 45 to 54 years old** | **29,811** | **14,246** | |
| *Value of worker's retirement accounts* | | | |
| Mean | | | $60,740 |
| Median | | | $28,000 |
| *Value of all retirement accounts in household* | | | |
| Mean | | | $92,990 |
| Median | | | $48,000 |
| **Workers 55 to 64 years old** | **14,054** | **6,969** | |
| *Value of worker's retirement accounts* | | | |
| Mean | | | $71,910 |
| Median | | | $33,000 |
| *Value of all retirement accounts in household* | | | |
| Mean | | | $107,040 |
| Median | | | $56,000 |
| **Total: workers 25 to 64 years old** | **112,663** | **47,072** | |
| *Value of worker's retirement accounts* | | | |
| Mean | | | $45,960 |
| Median | | | $18,000 |
| *Value of all retirement accounts in household* | | | |
| Mean | | | $71,040 |
| Median | | | $31,000 |

* An estimated 9.1 million workers 25 to 64 years old owned both a 401(k)-type thrift plan and an IRA or Keogh plan in 2000. Approximately 65.6 million owned neither type of plan.

**Source**: CRS analysis of the Census Bureau's *Survey of Income and Program Participation*.

**Average household wealth in 2000.** Most workers have forms of wealth other than retirement accounts on which they will be able to draw during retirement. More than 95% of workers in the United States are covered by Social Security, and roughly 30% of all workers participated in a defined-benefit pension plan in 2000.[21] In addition, many workers have assets that might ultimately be used to pay expenses during retirement. For example, the most valuable asset owned by most people is their home, and some may find when they are older that they prefer to live in a smaller house or apartment, or they may choose to move to an area where property taxes and other living expenses are lower than where they lived during their working years. In addition to equity in their homes, many individuals have financial assets, equity in businesses, real estate, or other valuables that can either provide a stream of income through interest, dividends, or rents, or that can be fully or partially liquidated to finance their consumption needs during retirement.

On the public use file of the SIPP, total household wealth is defined as the sum value for all adults in the household of home equity, net equity in vehicles, business equity, interest-earning assets held in banking institutions, interest earning assets held in other institutions, equity in stocks and mutual fund shares, equity in real estate other than the home, equity in other assets, and equity in IRA and Keogh accounts. To this total, CRS has added the sum value for all adults in the household of all 401(k) plans and other thrift plans. This is consistent with the method used by the Federal Reserve Board, which includes the value of such accounts in the estimates of household wealth that it derives from the *Survey of Consumer Finances*. Household debt is the sum of debts owed by all adults in the household, including home mortgages, home equity loans, other real estate debts, automobile loans, installment loans, credit card debt, and other household debt.

Mean and median values of the household wealth and household debt of workers, classified by age and ownership of retirement accounts, are displayed in **Table 7**.[22] Note that the mean and median values of household wealth rise through the highest age category, comprising workers who were 55 to 64 years old in 2000. In each age category, the mean and median values of household wealth are higher for owners of retirement accounts, although it is important to remember that one cannot necessarily assume that these individuals are wealthier *because* they own retirement accounts. Ownership of any particular kind of asset also can be interpreted as a *consequence* of wealth. Nevertheless, if workers without retirement accounts could be persuaded to establish them, and if their contributions represented net new saving, they would approach retirement with greater household wealth and greater resources to finance consumption during retirement.

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[21] The Bureau of Labor Statistics reports that in 2000 only one-fifth of workers in the private sector had a defined benefit plan, compared to 90% of workers in the public sector.

[22] Note that the unit of analysis is the *worker* and not the *household*. Each worker's household wealth is equal to the combined wealth of all members of that worker's household. The mean household wealth of workers is the sum of the household wealth of all workers divided by the number of workers.

## Table 7. Household Wealth and Household Debt of Workers in 2000, by Age of Worker

(Numbers of workers in thousands)

| | Workers who do not own an IRA, Keogh or 401(k)-type plan | | Workers who own an IRA/Keogh or 401(k)-type plan | |
|---|---|---|---|---|
| | **Workers** | **Amount** | **Workers** | **Amount** |
| **Workers 25 to 34 years old** | **21,366** | | **10,067** | |
| *Household wealth* | | | | |
| Mean | | $65,480 | | $117,590 |
| Median | | $16,500 | | $52,330 |
| *Household debt* | | | | |
| Mean | | $52,390 | | $85,260 |
| Median | | $22,000 | | $68,620 |
| **Workers 35 to 44 years old** | **21,574** | | **15,790** | |
| *Household wealth* | | | | |
| Mean | | $96,610 | | $228,260 |
| Median | | $36,320 | | $123,225 |
| *Household debt* | | | | |
| Mean | | $62,330 | | $99,000 |
| Median | | $34,000 | | $84,000 |
| **Workers 45 to 54 years old** | **15,565** | | **14,246** | |
| *Household wealth* | | | | |
| Mean | | $124,400 | | $327,160 |
| Median | | $61,050 | | $201,690 |
| *Household debt* | | | | |
| Mean | | $57,780 | | $90,020 |
| Median | | $28,000 | | $63,200 |
| **Workers 55 to 64 years old** | **7,084** | | **6,969** | |
| *Household wealth* | | | | |
| Mean | | $160,930 | | $458,140 |
| Median | | $85,900 | | $273,760 |
| *Household debt* | | | | |
| Mean | | $50,240 | | $68,170 |
| Median | | $19,900 | | $36,400 |
| **Total: workers 25 to 64 years old** | **65,590** | | **47,072** | |
| *Household wealth* | | | | |
| Mean | | $100,010 | | $268,560 |
| Median | | $36,170 | | $142,800 |
| *Household debt* | | | | |
| Mean | | $56,710 | | $88,780 |
| Median | | $26,200 | | $67,500 |

**Source**: CRS analysis of the Census Bureau's *Survey of Income and Program Participation.*

## Policy Implications

Are Americans saving adequately for retirement? The answer to that question depends in part on how broadly one defines the term "saving." Certainly, the average retirement account balances reported by respondents to the survey analyzed in this report would not by themselves provide an income in retirement that most people in the United States would find to be adequate. The median retirement account balance in 2000 among workers 55 to 64 years old who owned one or more retirement accounts was just $33,000. This amount would provide a monthly annuity of $236 per month to a person retiring at age 65. Moreover, as the data in Table 6 show, only half of all workers between the ages of 55 and 64 owned *any* retirement accounts in 2000.

Although most workers in the United States - about 96% - are covered by Social Security, only about 30% participate in defined-benefit pension plans where they work. For workers who do not have coverage through a defined-benefit pension, personal saving is an essential element of preparing for retirement. Whether workers save by putting money aside in an account that is earmarked specifically for retirement or by accumulating other assets on which they can draw after they have retired is not necessarily important. The act of saving is of greater consequence to retirement security than the manner in which it is accomplished. Nevertheless, the fact that 58% of workers between the ages of 25 and 64 - almost 66 million individuals - reported that they had *no* retirement savings accounts in 2000 indicates that many people may not be using the most tax-efficient means of setting aside funds for retirement.

On the other hand, the rapid growth of IRAs and 401(k)-type plans over a relatively short period of time indicates that a substantial proportion of workers are responding to the tax incentives that Congress has provided for retirement savings accounts. In 2000, more than 47 million workers between the ages of 25 and 64 had at least on IRA or 401(k)-type of retirement account. If a survey of retirement account participation had been conducted in, say, 1975, it would have found that almost no one owned, or had even heard of such things. Twenty-five years ago, Keogh plans and section 403(b) annuities were practically the only savings plans in existence that were designed specifically as retirement savings vehicles. Considering that IRAs were first authorized by Congress in 1974, and that the first 401(k) plan was established just 21 years ago in 1981, some might find it quite astonishing that by 2000 more than 47 million Americans owned one or more of these retirement savings accounts.

While the rapid adoption of tax-favored retirement savings plans can be viewed as a substantial public policy success, greater personal saving will be needed for the current generation of workers to maintain their desired standard of living in retirement. The uncertain future of Social Security and the declining prevalence of traditional defined-benefit pensions that provide a guaranteed lifelong annuity have put much of the responsibility for preparing for retirement on the shoulders of the worker. The low rate of personal saving in the United States, and the lack of any retirement savings accounts among a majority of American workers, indicate that there is a need for greater awareness among the public about the importance of setting aside funds to prepare for life after they have stopped working.

## Appendix: Statistical Analysis of Account Balances

The data in **Table 5** and **Table 6** show the mean and median retirement account balances that workers reported on the *Survey of Income and Program Participation* in 2000. For a variety of reasons, actual account balances vary a great deal from one worker to another. The variation in account balances from person to person can be explained by a number of factors, some of which are particular to the *worker*, and others of which are particular to the *retirement plan* in which he or she participates.

The data on retirement account ownership and account balances collected in the SIPP do not include the characteristics of the employer-sponsored retirement plans in which workers participated.[23] However, the SIPP contains information on several economic and demographic characteristics of workers that economic theory suggests might have a statistically significant relationship to workers' retirement account balances. Both the *direction* and the *magnitude* of these statistical relationships can be estimated through *regression analysis*, a statistical procedure that measures the extent to which changes in one or more *independent variables* are associated with changes in a *dependent variable* (also called the *response* variable).

**Factors related to workers' retirement account balances.** CRS modeled the sum of each worker's retirement account balances in IRAs, Keoghs, and 401(k)-type plans as a linear regression with the independent variables representing a set of economic and demographic characteristics of each worker. The results indicate that the model explains about 35% of the variation in account balances, a comparatively large coefficient of determination for a model that includes only variables describing the characteristics of the worker and none describing the retirement plans in which they participate.[24]

***Income and retirement account balances.*** The mean **monthly income** of the workers in the sample was $4,041, equivalent to about $48,500 on an annual basis. Other things being equal, monthly income that was higher by $1,000 was associated with worker retirement account balances that were higher by $3,610.

***Demographics and retirement account balances.*** All of the individuals analyzed for this study were between the ages of 25 and 64 during the 4-month reference period of the survey. The mean age of the workers who owned retirement accounts was 43.5 years, and the worker's age was positively and significantly related to the worker's cumulative retirement account balances. Holding all other variables constant, a one-year increase in worker age was associated with an increase in retirement account balances of $858. A male worker had a retirement account

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[23] Detailed information about employer-sponsored retirement plans were collected in a later topical module of the SIPP. These data were released to the public earlier this year.

[24] The model is an ordinary least squares (OLS) regression in which the dependent variable is the sum of an individual worker's account balances in all retirement accounts that he or she owns. The adjusted $R^2$ of the model is .35. Complete results are shown in Table A1. An alternative model included the square of income to account, in part, for the non-linear relationship between income and wealth. The squared income term was negative and significant, as theory would suggest. Otherwise, the results were substantially similar to those presented here.

balance that was $10,448 higher than that of a female worker, all else being equal. Relative to other races, those who identified themselves as being white had retirement account balances that were higher by an average of $11,252.[25] The coefficient for marital status (modeled as 1 if the worker was married and 0 if the worker was separated, divorced, widowed, or never married) was positive, but it was not statistically significant. Having one or more children under age 18 in the family was negatively related to retirement account balances, but was not statistically significant. The coefficient indicating home ownership was positive, but it too was statistically insignificant.

The worker's level of education was modeled with a set of four categorical variables that identified each worker as having (1) completed less than 12 years of schooling, (2) graduated from high school, (3) attended college without earning a B.A. or B.S. degree, or (4) graduated from college, including those with graduate degrees. Relative to a worker with some college but no degree, having completed less than 12 years of school was associated with a retirement account balance that was lower by $10,900. Having completed high school but not attended college was associated with a retirement account balance that was $3,335 lower than that of a worker with some college education. Having earned a 4-year college degree was associated with a retirement account balance that was higher by $14,460 than that of a worker who had some college education, but did not earn a bachelor's degree.

***Employment and retirement account balances.*** All of the individuals analyzed for this study were employed for at least one month during the 4-month reference period of the survey. Other things being equal, working in the public sector for an agency of the federal, state, or local government was associated with a retirement account balance that was $9,263 lower than the balance of a worker employed in the private sector. The variable indicating part-time employment was positive, but the coefficient was not statistically significant.

***Years of contributions, investment in stocks, and ownership of IRAs.*** The mean length of time over which workers had been contributing to a retirement account was 7.6 years. (For workers with more than one retirement account this represents the longest period over which they had contributed to any of them). Other things being equal, workers who had been contributing for longer than the mean length of time had higher account balances. Each additional year since the first contribution was associated with an increase in retirement account balances of $4,650. Almost 84% of the workers in the sample had invested at least part of their retirement account in common stocks or mutual funds that owned common stocks. Other things held constant, these workers had account balances that were $10,700 higher than those who had no investments in equities. About 45% of the workers in the sample owned an IRA or Keogh plan, either as their only retirement account or in addition to an employer-sponsored plan such as a 401(k). Other things being equal, workers who owned an IRA had retirement account balances that were $5,394 greater than workers whose only account was a 401(k) or other thrift plan.

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[25] Nonwhite workers are those whose race was defined as Black, Asian, or Native American. Hispanic workers were in whichever category they chose to identify their race.

## Table A1. Results of OLS Regression on Cumulative Value of Retirement Accounts Owned by Individual Workers in 2000

Dependent (response) variable = Balances held in retirement accounts by workers 25 to 64 years old in 2000

Mean (unweighted) = $46,212

Mean (weighted) = $45,959

Number of observations = 12,314

F Value = 438.2 R-squared = .3483

Prob>F = .0001 Adjusted R-squared = .3475

| Independent Variable | Mean | Parameter estimate | Standard error | T statistic | |
|---|---|---|---|---|---|
| Intercept | — | -75,216 | 3,527.35 | -21.32 | *** |
| Worker's total monthly income | $4,041.44 | 3.61 | 0.13 | 27.36 | *** |
| Age of worker | 43.5 | 858.20 | 62.46 | 13.74 | *** |
| Sex (1 = male) | .545 | 10,448 | 1,057.74 | 9.88 | *** |
| Race (1= white) | .934 | 11,252 | 2,060.56 | 5.46 | *** |
| Marital status (1 = married) | .717 | 2,240.18 | 1,259.75 | 1.78 | |
| Has children under age 18 | .419 | -1,535.03 | 1,159.29 | -1.32 | |
| Owns home | .830 | 2,442.80 | 1,453.64 | 1.68 | |
| Less than 12 years of school | .026 | -10,913 | 3,283.22 | -3.32 | *** |
| High school graduate | .228 | -3,335.69 | 1,375.36 | -2.43 | ** |
| College graduate | .418 | 14,460 | 1,217.75 | 12.04 | *** |
| Works in public sector | .171 | -9,262.79 | 1,366.51 | -6.78 | *** |
| Works part-time | .257 | 294.24 | 1,174.66 | 0.25 | |
| Greatest number of years worker has contributed to IRA, Keogh, or 401(k) plan | 7.597 | 4,650.21 | 100.33 | 46.35 | *** |
| Invests some of plan in stocks or mutual funds | .835 | 10,701 | 1,362.61 | 7.85 | *** |
| Worker owns an IRA or Keogh | .454 | 5,394.32 | 1,077.27 | 5.01 | *** |

*** = significant at .01 level

** = significant at .05 level

**Notes**: Regression results were estimated using unweighted values for each observation. The $R^2$ indicates that the model accounts for about 35% of the variation in account balances. The mean is the average value of each independent variable for all observations in the sample. The parameter is the estimated change in the dependent variable associated with a one unit change in the independent variable. The standard error is an estimate of the likely deviation of the true regression coefficient from the estimated value. The t-statistic is the ratio of the parameter estimate to the standard error. It indicates whether the estimated coefficient is statistically significant.

**Source**: CRS analysis of the Census Bureau's *Survey of Income and Program Participation.*

**Account balances for all members of the worker's household.** In a second regression model, the dependent variable was defined as the sum of the worker's own retirement accounts and those owned by all other members of the worker's household. In general, the results of this regression were similar to those of the first model, but there were a few striking differences. (Complete results are displayed in Table A2). Total household monthly income showed the same positive and statistically significant relationship to household retirement account balances that the worker's monthly income showed to his or her own account balances. Likewise, the worker's age, race, and level of education showed relationships to household retirement account balances that were similar to the relationships that these variables showed to the worker's individual account balances.

There were four demographic traits of workers - sex, marital status, presence of children, and home ownership - that each showed a different relationship to *household* retirement account balances than it had shown to *individual workers'* retirement account balances:

- Working men had significantly higher *individual* retirement account balances than working women, but the worker's sex was not statistically significant in the regression model of *household* retirement balances.
- Marital status was not statistically significant in the regression on *individual* retirement account balances; but a married worker had *household* retirement account balances that were almost $14,500 greater than those of an unmarried worker, other things being equal.
- The presence of children under 18 in the family, which was not statistically significant in the regression on *individual* retirement account balances, had a negative and statistically significant relationship to total *household* retirement account balances.
- Home ownership, which was not statistically significant in the regression on *individual* retirement account balances, had a positive and statistically significant relationship to total *household* retirement account balances.

As in the model of individual retirement account balances, employment in the public sector had a significantly negative relationship to household retirement account balances. The coefficient for part-time employment, which was positive but not significant in the regression on individual retirement account balances, was both positive and statistically significant in the regression on household retirement account balances. The number of years over which the worker had contributed to a retirement plan, investment in stocks or mutual funds, and ownership of an IRA or Keogh account all had significant, positive statistical relationships to household retirement account balances, as they had in the regression on the individual worker's retirement account balances.

## Table A2. Results of OLS Regression on Value of All Retirement Accounts Owned by Persons in Workers' Households in 2000

Dependent (response) variable = Balances held in retirement accounts by all members of workers' households in 2000

Mean (weighted) = $71,036

Mean (unweighted) = $71,405

Number of observations = 12,314

F Value = 412.3 R-squared = .3346

Prob>F = .0001 Adjusted R-squared = .3338

| Independent Variable | Mean | Parameter estimate | Standard error | T statistic | |
|---|---|---|---|---|---|
| Intercept | — | -107,246 | 5,120.44 | -20.94 | *** |
| Household's total monthly income | $6,765.11 | 4.65 | 0.15 | 32.03 | *** |
| Age of worker | 43.5 | 1,107.76 | 90.26 | 12.27 | *** |
| Sex (1 = male) | .545 | -2,266.01 | 1,506.82 | -1.50 | |
| Race (1= white) | .934 | 17,085 | 2,995.58 | 5.70 | *** |
| Marital status (1 = married) | .717 | 14,473 | 1,851.27 | 7.82 | *** |
| Has children under age 18 | .419 | -6,265.18 | 1,683.07 | -3.72 | *** |
| Owns home | .830 | 5,946.95 | 2,116.69 | 2.81 | ** |
| Less than 12 years of school | .026 | -12,812 | 4,768.91 | -2.69 | ** |
| High school graduate | .228 | -2,947.50 | 1,998.17 | -1.48 | |
| College graduate | .418 | 17,996 | 1,761.66 | 10.22 | *** |
| Works in public sector | .171 | -10,124 | 1,983.18 | -5.10 | *** |
| Works part-time | .257 | 3,505.59 | 1,703.19 | 2.06 | ** |
| Greatest number of years worker has contributed to IRA, Keogh, or 401(k) plan | 7.597 | 5,488.99 | 145.28 | 37.78 | *** |
| Invests some of plan in stocks or mutual funds | .835 | 15,053 | 1,978.86 | 7.61 | *** |
| Household owns an IRA or Keogh | .511 | 22,688 | 1,566.29 | 14.49 | *** |

*** = significant at .01 level

** = significant at .05 level

**Notes**: Regression results were estimated using unweighted values for each observation. The $R^2$ indicates that the model accounts for about 33% of the variation in account balances. The mean is the average value of each independent variable for all observations in the sample. The parameter is the estimated change in the dependent variable associated with a one unit change in the independent variable. The standard error is an estimate of the likely deviation of the true regression coefficient from the estimated value. The t-statistic is the ratio of the parameter estimate to the standard error. It indicates whether each estimated coefficient is statistically significant.

**Source**: CRS analysis of the Census Bureau's *Survey of Income and Program Participation*.

## Table A3. Worker Ownership of 401(k)-type Accounts in 2000

(Number of workers in thousands)

| *Do you have any 401(k) or thrift plan accounts in your own name?* | Yes | | No | | Total |
|---|---|---|---|---|---|
| *Worker characteristics:* | Number | *Percent* | Number | *Percent* | Number |
| **Age** | | | | | |
| 25 to 34 | 8,149 | *25.9%* | 23,284 | *74.1%* | 31,433 |
| 35 to 44 | 12,393 | *33.2%* | 24,972 | *66.8%* | 37,365 |
| 45 to 54 | 10,192 | *34.2%* | 19,619 | *65.8%* | 29,811 |
| 55 to 64 | 4,037 | *28.7%* | 10,016 | *71.3%* | 14,054 |
| **Race** | | | | | |
| White | 30,660 | *32.4%* | 64,110 | *67.6%* | 94,770 |
| Black | 2,759 | *21.5%* | 10,079 | *78.5%* | 12,837 |
| Asian or Native American | 1,353 | *26.8%* | 3,703 | *73.2%* | 5,056 |
| **Sex** | | | | | |
| Male | 19,852 | *33.1%* | 40,087 | *66.9%* | 59,939 |
| Female | 14,919 | *28.3%* | 37,804 | *71.7%* | 52,723 |
| **Education** | | | | | |
| Did not graduate High School | 1,521 | *11.5%* | 11,682 | *88.5%* | 13,203 |
| High School graduate | 7,933 | *24.2%* | 24,906 | *75.8%* | 32,839 |
| Some college | 11,307 | *33.0%* | 22,951 | *67.0%* | 34,258 |
| College graduate | 14,011 | *43.3%* | 18,353 | *56.7%* | 32,364 |
| **Marital status** | | | | | |
| Married | 24,402 | *32.6%* | 50,547 | *67.4%* | 74,948 |
| Not married | 10,369 | *27.5%* | 27,345 | *72.5%* | 37,714 |
| **Annual household income** | | | | | |
| Under $20,000 | 1,284 | *11.2%* | 10,225 | *88.8%* | 11,509 |
| $20,000 to $39,999 | 5,483 | *20.9%* | 20,702 | *79.1%* | 26,185 |
| $40,000 to $59,999 | 8,190 | *30.8%* | 18,391 | *69.2%* | 26,581 |
| $60,000 or more | 19,814 | *41.0%* | 28,573 | *59.0%* | 48,388 |
| **Own or rent home** | | | | | |
| Own | 28,128 | *34.4%* | 53,589 | *65.6%* | 81,713 |
| Rent | 6,648 | *21.5%* | 24,303 | *78.5%* | 30,950 |
| **Urban or rural location** | | | | | |
| Urban | 29,690 | *31.9%* | 63,302 | *68.1%* | 92,992 |
| Rural | 5,081 | *25.8%* | 14,590 | *74.2%* | 19,671 |
| **Full time or part time worker** | | | | | |
| Full time (35+ hours per week) | 26,938 | *32.8%* | 55,321 | *67.2%* | 82,260 |
| Part time | 7,833 | *25.8%* | 22,570 | *74.2%* | 30,403 |
| **Establishment size and sector** | | | | | |
| Private: temp/contingent worker | 1,311 | *10.9%* | 10,731 | *89.1%* | 12,042 |
| Private: under 25 employees | 5,572 | *19.1%* | 23,545 | *80.9%* | 29,117 |
| Private: 25 to 99 employees | 6,365 | *33.0%* | 12,899 | *67.0%* | 19,263 |
| Private: 100 or more employees | 15,562 | *46.1%* | 18,208 | *53.9%* | 33,770 |
| Public Sector | 5,962 | *32.3%* | 12,508 | *67.7%* | 18,471 |
| **Have an IRA or Keogh plan?** | | | | | |
| Yes | 9,121 | *42.6%* | 12,301 | *57.4%* | 21,422 |
| No | 25,651 | *28.1%* | 65,590 | *71.9%* | 91,241 |
| **Total** | **34,772** | ***30.9%*** | **77,891** | ***69.1%*** | **112,663** |

**Note**: All workers, ages 25 to 64 in 2000.
**Source**: CRS analysis of the Census Bureau's *Survey of Income and Program Participation*.

## Table A4. Worker Ownership of Individual Retirement Accounts in 2000

(Number of workers in thousands)

| *Do you have an individual retirement account (IRA) or a Keogh plan?* | | | | | |
|---|---|---|---|---|---|
| | **Yes** | | **No** | | Total |
| *Worker characteristics:* | Number | *Percent* | Number | *Percent* | Number |
| **Age** | | | | | |
| 25 to 34 | 3,064 | *9.8%* | 28,369 | *90.2%* | 31,433 |
| 35 to 44 | 6,238 | *16.7%* | 31,126 | *83.3%* | 37,365 |
| 45 to 54 | 7,515 | *25.2%* | 22,296 | *74.8%* | 29,811 |
| 55 to 64 | 4,605 | *32.8%* | 9,449 | *67.2%* | 14,054 |
| **Race** | | | | | |
| White | 19,843 | *20.9%* | 74,927 | *79.1%* | 94,770 |
| Black | 771 | *6.0%* | 12,066 | *94.0%* | 12,837 |
| Asian or Native American | 808 | *16.0%* | 4,247 | *84.0%* | 5,056 |
| **Sex** | | | | | |
| Male | 11,741 | *19.6%* | 48,198 | *80.4%* | 59,939 |
| Female | 9,681 | *18.4%* | 43,043 | *81.6%* | 52,723 |
| **Education** | | | | | |
| Did not graduate High School | 530 | *4.0%* | 12,673 | *96.0%* | 13,203 |
| High School graduate | 3,817 | *11.6%* | 29,022 | *88.4%* | 32,839 |
| Some college | 6,015 | *17.6%* | 28,243 | *82.4%* | 34,258 |
| College graduate | 11,060 | *34.2%* | 21,303 | *65.8%* | 32,363 |
| **Marital status** | | | | | |
| Married | 16,010 | *21.4%* | 58,939 | *78.6%* | 74,948 |
| Not married | 5,412 | *14.4%* | 32,302 | *85.6%* | 37,714 |
| **Annual household income** | | | | | |
| Under $20,000 | 1,101 | *9.6%* | 10,408 | *90.4%* | 11,509 |
| $20,000 to $39,999 | 2,953 | *11.3%* | 23,233 | *88.7%* | 26,186 |
| $40,000 to $59,999 | 4,345 | *16.4%* | 22,236 | *83.6%* | 26,581 |
| $60,000 or more | 13,024 | *26.9%* | 35,364 | *73.1%* | 48,388 |
| **Own or rent home** | | | | | |
| Own | 18,764 | *23.0%* | 62,948 | *77.0%* | 81,713 |
| Rent | 2,658 | *8.6%* | 28,293 | *91.4%* | 30,950 |
| **Urban or rural location** | | | | | |
| Urban | 18,072 | *19.4%* | 74,920 | *80.6%* | 92,992 |
| Rural | 3,350 | *17.0%* | 16,321 | *83.0%* | 19,671 |
| **Full time or part time worker** | | | | | |
| Full time (35+ hours per week) | 14,755 | *17.9%* | 67,505 | *82.1%* | 82,260 |
| Part time | 6,667 | *21.9%* | 23,736 | *78.1%* | 30,403 |
| **Establishment size and sector** | | | | | |
| Private: temp/contingent worker | 3,502 | *29.1%* | 8,540 | *70.1%* | 12,042 |
| Private: under 25 employees | 5,381 | *18.5%* | 23,736 | *81.5%* | 29,117 |
| Private: 25 to 99 employees | 3,076 | *16.0%* | 16,188 | *84.0%* | 19,263 |
| Private: 100 or more employees | 5,860 | *17.4%* | 27,910 | *82.6%* | 33,770 |
| Public Sector | 3,604 | *19.5%* | 14,867 | *80.5%* | 18,471 |
| **Participate in a 401(k) plan?** | | | | | |
| Yes | 9,121 | *26.2%* | 25,651 | *73.8%* | 34,772 |
| No | 12,301 | *15.8%* | 65,590 | *84.2%* | 77,891 |
| **Total** | **21,422** | ***19.0%*** | **91,241** | ***81.0%*** | **112,663** |

**Note**: All workers, ages 25 to 64 in 2000.
**Source**: CRS analysis of the Census Bureau's *Survey of Income and Program Participation*.

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