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Retirement Savings and Household Wealth in 1998: Analysis of Census Bureau Data

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Summary

Providing for one's retirement is one of the strongest motivations for saving; however, in recent years, the personal savings rate – the percentage of personal disposable income not devoted to current consumption – has declined substantially. Congress has acted several times over the years to encourage workers to save for retirement. To promote such saving, Congress has allowed 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. These include Individual Retirement Accounts, Keogh accounts, and the retirement savings plans authorized under sections 401(k), 403(b), and 457 of the Internal Revenue Code.

Pension analysts often refer to Social Security, employer-sponsored pensions, and personal savings as the “three-legged stool” of retirement income, but among wage and salary workers 25 to 64 years old, only 55% participated in an employer-sponsored retirement plan in 1999. Moreover, during the past 25 years, there has been a shift in the distribution of pension plans and participants from *defined benefit* plans to *defined contribution* plans in which the employee decides whether or not to participate, how much to contribute, and how to invest the assets. Consequently, workers today bear much of the responsibility of providing for their own retirement.

The Congressional Research Service used data collected by the Bureau of the Census in 1998 through its *Survey of Income and Program Participation* (SIPP) to estimate the number of workers who participated in thrift plans and IRAs, the total value of their retirement accounts, and the total value of the assets owned by members of their households. During an average month in 1998, approximately 109 million people between the ages of 25 and 64 worked for pay. An estimated 42.5 million of these workers (39.0%) owned one or more retirement accounts, including IRAs, Keogh accounts, 401(k) accounts and other employer-sponsored savings or thrift plans. An estimated 30.4 million workers (27.9%) owned a 401(k)-type plan, 19.7 million (18.1%) owned an IRA or Keogh plan, and 7.7 million (7.1%) owned both an IRA/Keogh and a 401(k) plan. More than 66 million workers between the ages of 25 and 64 (61.0%) did not own a retirement savings account of any kind.

Among the 42.5 million workers who owned a retirement savings account of any kind in 1998, the mean value of all such accounts was \$34,700 and the median value was \$14,000. When all of the retirement accounts owned by the workers and other members of their households were combined, the mean value was \$52,900 and the median value was \$23,000. Workers 55 to 64 years old were more likely to own a retirement account than any other group; still, 53% of workers 55 to 64 years old owned no retirement accounts in 1998, and of those who owned an account, half had total balances of less than \$25,000. Although most workers own other forms of wealth – such as equity in their homes – on which they will be able to draw during retirement, if workers without retirement accounts could be persuaded to establish them, and if their contributions to these accounts were new savings, they would approach retirement with greater household wealth and greater resources to finance consumption during retirement.

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Retirement Savings and Household Wealth in 1998: 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 than ever before. The National Center for Health Statistics has estimated that Americans born in 2000 will live for an average of 77.1 years.¹ The average life expectancy of Americans born in 1960 was 69.7 years. A man who reached age 65 in 1960 could expect to live another 13 years, while a man who reached age 65 in 2000 could expect to live another 16 years. A woman who turned 65 in 1960 had a remaining life expectancy of 16 years, while a woman who turned 65 in 2000 had a remaining life expectancy of 19 years. As more people live into old age, the age-profile of the population is shifting. In 1960, 16.7 million people in the United States — 9.2% of the population — were age 65 or older. In 1999, there were 34.5 million Americans age 65 or older, comprising 12.7% of the population. According to the Bureau of the Census, by 2030 there will be 70 million people age 65 or older, comprising 20% 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 2038 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.

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 2000 Annual Reports*, Washington DC, March 2001.

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, to provide for one's retirement is considered by many to be 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 also 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 are also 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.

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 either by "carving out" part of the payroll tax to be diverted to each participant's account or by dedicating part of the projected federal budget surplus that is not attributable to Social Security taxes to funding these accounts. In either case, the long-term unfunded liability of Social Security would 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 2000.⁵ In recent years, the personal savings rate – the percentage of personal disposable income not devoted to current consumption – has declined substantially. The savings rate often declines slightly during economic expansions because people tend to consume a high percentage of income when they are optimistic about trends in income and employment. Nevertheless, the decline in the savings rate that has occurred since the mid-1990s is unprecedented in the post World War II era in the United States. In 2000, the personal savings rate was negative for the first time since 1933, during the Great Depression.⁶

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.

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.

⁶ The personal savings rate was negative in 1933 mainly because times were *so bad*. Between 1929 and 1933 the total economic output of the United States fell by nearly half, and the Dow Jones Industrial Average fell by 70%. Unemployment peaked at 25% of the labor force in 1933, and many people had incomes below the subsistence level. They borrowed money or sold assets just to meet their basic needs.

In contrast, between 1996 and 2000, the nation's total output of goods and services grew by 28%, the Dow Jones Industrial Average rose by 84%, and the unemployment rate averaged just 4.6% of the labor force. In other words, the personal savings rate may have fallen in the late 1990s because times were *so good*. Optimism about continued economic expansion, and increases in household wealth due to the appreciation of financial assets and real assets (such as housing), may have led some individuals to save less of their income than they would have saved in more uncertain times.

Table 1. Personal Income and Personal Saving, 1960-2000
(Amounts in billions)

Year	Disposable		Savings Rate
	Personal Income	Personal Saving	
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	6,320.0	265.4	4.2%
1999	6,637.7	147.6	2.2%
2000	6,989.8	-10.0	-0.1%

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

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 “Comprehensive Retirement Security and Pension Reform Act”. On March 14, 2001, Representatives **Portman** and **Cardin** introduced **H.R. 10**, the *Comprehensive Retirement Security and Pension Reform Act*. This bill is similar in many respects to H.R. 1102 of the 106th Congress, which the House of Representatives passed by a vote of 401-25 in July 2000. In April 2001, H.R. 10 was reported favorably by both the Committee on Ways and Means and the Committee on Education and the Workforce. On May 2, 2001, the House of Representatives passed H.R. 10 by a vote of 407-24.

H.R. 10 would increase the annual limit on IRA contributions from \$2,000 to \$3,000 in 2001, \$4,000 in 2002, and \$5,000 in 2003. In years after 2003, the limit would be indexed to inflation in \$500 increments. For individuals age 50 and older, the limit on annual contributions would be increased to \$5,000 in 2001. Currently the maximum annual salary deferral under 401(k) plans and 403(b) plans is \$10,500, which is indexed to inflation in \$500 increments. H.R. 10 would increase this limit in \$1,000 increments beginning in 2001 until it reaches \$15,000 in 2005. It would then be indexed to inflation. The maximum annual deferral under a Section 457 plan is currently \$8,500. H.R. 10 would increase the maximum deferral to \$11,000 in 2001, \$12,000 in 2002, \$13,000 in 2003, \$14,000 in 2004 and \$15,000 in 2005. The limit on deferrals would be indexed in \$500 increments thereafter.

On April 6, 2001, Senators **Grassley** and **Baucus** introduced **S. 742**, the *Retirement Security and Savings Act* in the 107th Congress. A similar bill had been ordered reported in September 2000 by the Senate Finance Committee, but did not reach the Senate floor before the 106th Congress adjourned. The Senate bill contains many provisions similar to those in H.R. 10. In addition, it would (1) allow individuals age 50 and older to contribute up to \$7,500 annually to an IRA, (2) provide a nonrefundable tax credit to low- and middle-income persons 18 to 60 years old who contribute to a qualified retirement plan or IRA, and (3) provide a tax credit to small employers to defray some of the start-up costs of establishing an employee pension or retirement savings plan. The bill would increase the limit on conversions of traditional IRAs to Roth IRAs from \$100,000 to \$200,000 for married couples filing jointly, and it would adjust the range of income over which the allowable contribution to a Roth IRA is phased out for joint filers such that it would be twice the income limit applicable to single filers.

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 65% worked for an employer that sponsored a retirement plan in 1999.⁷ (See **Table 2**). More than 38 million workers between the ages of 25 and 64 worked for an employer that did not offer a retirement plan in 1999, and another 11 million worked for employers that offered retirement plans, but were not participants in those plans. Consequently, only 55% of wage and salary workers between the ages of 25 and 64 actually participated in an employer-sponsored retirement plan in 1999.

Table 2. Participation in Employer Sponsored Retirement Plans in 1999

(Numbers in thousands)

<i>Does worker's employer sponsor a retirement plan?</i>					
	Yes		No		Total
	Number	Percent	Number	Percent	
All workers, ages 25 to 64	71,155	64.9%	38,434	35.1%	109,589

<i>Does worker participate in an employer-sponsored retirement plan?</i>					
	Yes		No		Total
	Number	Percent	Number	Percent	
All workers, ages 25 to 64	59,936	54.7%	49,653	45.3%	109,589

Source: CRS analysis of data from the March 2000 *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 obligations, the plan’s sponsor is required to make up this shortfall – called an *unfunded liability* – through additional contributions over a period of years.⁸

⁷ A “retirement plan” could be a traditional defined benefit pension or a defined contribution plan. Some employees participate in both types of plan simultaneously.

⁸ 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.

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 1996, the number of defined benefit plans had fallen to 63,657 and the number of active participants in these plans had declined to 23.3 million. Also by 1996, the number of defined contribution plans had risen to 632,566 and the number of participants had increased to 44.6 million.⁹ 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.¹⁰

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

⁹ 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.

¹⁰ John G. Kilgour, “Restructuring Retirement Income Plans,” *Compensation and Benefits Review*, vol. 32 no. 6, (November/December 2000).

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 many 401(k) plans, however, both the employer and the employee make contributions. The ability of *both* the employer and the employee to contribute on a pretax basis and the *voluntary basis* 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, 1984-1996

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

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.¹¹

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.¹²

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. (Jacobious, 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 1998

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.

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

¹¹ William Even and David MacPherson, *Factors Influencing Participation and Contribution Levels in 401(k) Plans*, report to the U.S. Department of Labor, 1997.

¹² Alicia Munnell, Annika Sundén, and Catherine Taylor, *What Determines 401(k) Participation and Contributions?*, Center for Retirement Research, Boston College, 2000.

if the withdrawals occur before retirement.¹³ 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 1998. 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 SIPP data that are the basis of this report were collected from more than 30,500 households.

The Survey of Income and Program Participation. The data analyzed for this report were collected by the Bureau of the Census in 1998 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.¹⁴

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

¹³ 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*.

¹⁴ More information on the SIPP is available at <http://www.sipp.census.gov/sipp>.

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.¹⁵

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 1998, 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 1998.

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.¹⁶ 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.

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

¹⁵ 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.

¹⁶ 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.

predetermined portion of earnings (usually pretax) to an individual account, all or part of which the employer matches.”¹⁷

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.¹⁸ 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 1998, an estimated 109 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 42.5 million of these workers (39.0%) owned one or more retirement accounts, including IRAs, Keogh accounts, 401(k) accounts and other employer-sponsored savings or thrift plans. An estimated 30.4 million workers (27.9%) owned a 401(k)-type plan, 19.7 million (18.1%) owned an IRA or Keogh plan (mostly IRAs), and 7.7 million (7.1%) owned both an IRA/Keogh and a 401(k) plan. An estimated 66.5 million workers between the ages of 25 and 64 (61.0%) did not own a retirement savings account of any kind.¹⁹

¹⁷ U.S. Department of Labor, Bureau of Labor Statistics, *Employee Benefits in Medium and Large Private Establishments*, 1997, Bulletin 2517, September 1999.

¹⁸ 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.

¹⁹ These figures also indicate that 22.7 million workers had only a 401(k)-type plan: (30.4-7.7=22.7). An estimated 12 million workers had only an IRA: (19.7-7.7=12).

Table 4. Worker Ownership of Retirement Accounts, 1997 and 1998

(Number of workers, in thousands)

	1997		1998	
	Workers	Percent	Workers	Percent
All workers, 25 to 64 years old	107,871	100%	108,979	100%
Owned either an IRA/Keogh or a 401(k)-type thrift plan	40,318	37.4%	42,458	39.0%
Owned a 401(k)-type plan thrift plan	28,373	26.3%	30,449	27.9%
Owned an IRA or Keogh plan	19,138	17.7%	19,740	18.1%
Owned both an IRA/Keogh and a thrift plan	7,193	6.7%	7,731	7.1%
Owned neither an IRA/Keogh nor a thrift plan	67,553	62.6%	66,521	61.0%
Full-time workers, 25 to 64 years old	74,772	100%	77,597	100%
Owned a 401(k)-type thrift plan	21,685	29.0%	23,665	30.5%
Owned an IRA or Keogh plan	12,933	17.3%	13,612	17.5%
Owned neither an IRA/Keogh nor a thrift plan	45,506	60.9%	46,097	59.4%
Part-time workers, 25 to 64 years old	33,100	100%	31,382	100%
Owned a 401(k)-type thrift plan	6,689	20.2%	6,784	21.6%
Owned an IRA or Keogh plan	6,206	18.8%	6,127	19.5%
Owned neither an IRA/Keogh nor a thrift plan	22,047	66.6%	20,424	65.1%

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 1998. Among the 42.5 million workers who owned a retirement savings account of any kind in 1998, the *mean* value of all such accounts owned by the workers themselves was \$34,722. 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 \$14,000. (Half of the workers owned accounts totaling more than \$14,000 and half owned accounts with a total value of less than \$14,000.) When all of the retirement accounts owned by the workers and other members of their households were combined, the mean value was \$52,893 and the median value was \$23,000.

The mean value of 401(k) accounts owned by workers with such accounts in 1998 was greater than the mean value of IRAs owned by workers with that kind of account, but the median values were the same. The 401(k) accounts owned by workers had a mean value of \$30,441 and a median value of \$12,000, while the IRAs owned by workers had a mean value of \$27,726 and also had a median value of \$12,000. By most other measures, however, workers who owned IRAs had higher 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 1998, an

estimated 7.7 million workers owned both an IRA or Keogh and a 401(k)-type plan. Thus, 39.2% of all workers who owned an IRA or Keogh also owned a 401(k), while just 25.4% of workers who owned a 401(k)-type account also owned an IRA or Keogh plan.²⁰

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 1998 was \$53,983, and the median value was \$23,000. The mean value of all retirement accounts in the households of workers who owned an IRA or Keogh plan in 1998 was \$71,959, and the median value was \$36,500.

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.²¹ 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.

²⁰ Derived as follows: $7.731/19.748=.392$ and $7.731/30.449=.254$. See Table 4 for data.

²¹ 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, 1997 and 1998

(Numbers of workers in thousands)

	1997		1998	
	Workers	Account value	Workers	Account value
Owned either an IRA/Keogh or a 401(k)-type	40,318		42,458	
<i>Value of worker's retirement accounts</i>				
Mean value		\$29,261		\$34,722
Median value		\$11,000		\$14,000
<i>Value of all retirement accounts in household</i>				
Mean value		\$45,443		\$52,893
Median value		\$20,000		\$23,000
Owned a 401(k) or other type of thrift plan*	28,373		30,449	
<i>Value of worker's 401(k)-type accounts</i>				
Mean value		\$25,069		\$30,441
Median value		\$10,000		\$12,000
<i>Value of worker's retirement accounts, all types</i>				
Mean value		\$31,407		\$37,768
Median value		\$12,000		\$15,000
<i>Value of all 401(k)-type accounts in household</i>				
Mean value		\$34,365		\$41,005
Median value		\$15,000		\$18,000
<i>Value of all retirement accounts in household</i>				
Mean value		\$45,893		\$53,983
Median value		\$20,000		\$23,000
Owned an IRA or Keogh plan*	19,138		19,740	
<i>Value of worker's IRAs and Keogh accounts</i>				
Mean value		\$24,477		\$27,726
Median value		\$10,000		\$12,000
<i>Value of worker's retirement accounts, all types</i>				
Mean value		\$38,767		\$45,530
Median value		\$16,000		\$20,000
<i>Value of all IRA/Keogh accounts in household</i>				
Mean value		\$38,079		\$41,975
Median value		\$17,000		\$19,600
<i>Value of all retirement accounts in household</i>				
Mean value		\$62,682		\$71,959
Median value		\$30,500		\$36,500

* An estimated 7.7 million workers 25 to 64 years old owned both a 401(k)-type thrift plan and an IRA or Keogh plan in 1998. Approximately 66.5 million 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 1998, with the averages calculated for each of four age categories.

An estimated 9.5 million workers 25 to 34 years old owned a retirement account of some kind in 1998. This was 30% of all workers of that age. Seventy percent of workers in this age group owned no retirement accounts. The mean value of all retirement accounts owned by these workers was \$12,076 and the median value was \$5,000. The mean value of all retirement accounts owned by all members of these workers' households was \$21,748, and the median value was \$8,850.

An estimated 14.4 million workers between the ages of 35 and 44 – 39% of all workers in this age category – owned at least one retirement account in 1998. Sixty-one percent owned no retirement accounts. The mean and median values of these workers' retirement accounts were almost 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 \$31,466 in their accounts and a median balance of \$14,700. The mean value of all retirement accounts owned by members of these workers' households was \$47,039, and the median value was \$23,685.

Among workers who were 45 to 54 years old in 1998, approximately 12.4 million – or 45% – had at least one retirement account. Fifty-five percent owned no retirement accounts. The mean value of these workers' accounts was \$44,607, and the median value was \$20,000. The mean value of all retirement accounts owned by all members of their households was \$68,181, and the median value of all retirement accounts in these households was \$34,250.

Workers 55 to 64 years old were more likely to own a retirement account than any other group. An estimated 6.2 million workers between the ages of 55 and 64 – 47% of all workers in this age category – owned at least one retirement account in 1998. Still, more than half of workers in this age category – 53% – owned no retirement accounts. The mean value of these workers' accounts was \$57,331, and the median value was \$25,000. The mean value of all retirement accounts owned by these workers and other members of their households was \$83,793, and the median value was \$43,000. When those who owned no retirement accounts are considered, almost 77% of workers 55 to 64 years old lived in households with retirement savings of between zero and \$43,000 in 1998.

Even among workers 55 to 64 years old, average retirement account balances in 1998 were not very large. The mean value of the accounts held by individual workers was \$57,331. For a 65-year-old retiring in May 2001, this amount would be sufficient to purchase a level, single-life annuity that would pay the retiree \$450 per month, based on the federal Thrift Savings Plan's current annuity interest rate of 5.0%. The mean value of all retirement accounts held by members of the workers' households, \$83,793, would purchase a level, single life annuity worth \$658 per month. Alternatively, this amount would purchase a joint and survivor annuity of \$537 per month, based on a 100% survivor benefit.

**Table 6. Retirement Account Balances of Workers in 1998,
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	31,944	9,525	
<i>Value of worker's retirement accounts</i>			
Mean			\$12,076
Median			\$5,000
<i>Value of all retirement accounts in household</i>			
Mean			\$21,748
Median			\$8,850
Workers 35 to 44 years old	36,560	14,354	
<i>Value of worker's retirement accounts</i>			
Mean			\$31,466
Median			\$14,700
<i>Value of all retirement accounts in household</i>			
Mean			\$47,039
Median			\$23,685
Workers 45 to 54 years old	27,324	12,388	
<i>Value of worker's retirement accounts</i>			
Mean			\$44,607
Median			\$20,000
<i>Value of all retirement accounts in household</i>			
Mean			\$68,181
Median			\$34,250
Workers 55 to 64 years old	13,150	6,190	
<i>Value of worker's retirement accounts</i>			
Mean			\$57,331
Median			\$25,000
<i>Value of all retirement accounts in household</i>			
Mean			\$83,793
Median			\$43,000
Total: workers 25 to 64 years old	108,979	42,458	
<i>Value of worker's retirement accounts</i>			
Mean			\$34,722
Median			\$14,000
<i>Value of all retirement accounts in household</i>			
Mean			\$52,893
Median			\$23,000

* An estimated 7.7 million workers 25 to 64 years old owned both a 401(k)-type thrift plan and an IRA or Keogh plan in 1998. Approximately 66.5 million owned neither type of plan.

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

Average household wealth in 1998. 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 40% of all workers participated in a defined-benefit pension plan in the mid-to late 1990s.²² 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**.²³ 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 1998. 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.

²² Estimated by CRS from data reported by the Bureau of Labor Statistics and the Bureau of the Census. The data indicate that the likely percentage was between 37% and 41%.

²³ 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 1998, 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	22,419		9,525	
<i>Household wealth</i>				
Mean		\$59,849		\$104,515
Median		\$15,922		\$48,294
<i>Household debt</i>				
Mean		\$44,559		\$74,643
Median		\$16,700		\$59,000
Workers 35 to 44 years old	22,206		14,354	
<i>Household wealth</i>				
Mean		\$85,478		\$206,666
Median		\$31,866		\$110,794
<i>Household debt</i>				
Mean		\$57,494		\$91,669
Median		\$27,500		\$73,247
Workers 45 to 54 years old	14,936		12,388	
<i>Household wealth</i>				
Mean		\$120,716		\$304,156
Median		\$56,299		\$177,775
<i>Household debt</i>				
Mean		\$56,583		\$92,095
Median		\$26,400		\$59,527
Workers 55 to 64 years old	6,960		6,190	
<i>Household wealth</i>				
Mean		\$162,350		\$466,008
Median		\$75,205		\$245,688
<i>Household debt</i>				
Mean		\$46,363		\$78,940
Median		\$16,400		\$32,200
Total: workers 25 to 64 years old	66,521		42,458	
<i>Household wealth</i>				
Mean		\$92,795		\$250,006
Median		\$32,875		\$123,756
<i>Household debt</i>				
Mean		\$51,765		\$86,118
Median		\$22,000		\$60,300

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 mean retirement account balance reported by workers 55 to 64 years old who owned one or more retirement accounts was just \$57,331 in 1998. This amount would provide a monthly annuity of \$450 per month to a 65-year-old retiring in 2001. As the data in Table 6 show, however, fewer than half of all workers between the ages of 55 and 64 had *any* retirement accounts in 1998, and of those who did own one or more accounts, half had total account balances of less than \$25,000.

Although most workers in the United States – about 96% – are covered by Social Security, only about 40% participate in defined-benefit pension plans where they work. For workers who do not have coverage through a traditional 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 than the manner in which it is accomplished. Nevertheless, the fact that 61% of workers between the ages of 25 and 64 – almost 67 million individuals – reported that they had no retirement savings accounts in 1998 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 1998, more than 42 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 20 years ago in 1981, some might find it quite astonishing that by 1998 more than 42 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 nearly two-thirds 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 1998. 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.²⁴ 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* (sometimes 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.²⁵

Income and retirement account balances. The mean **monthly income** of the workers in the sample was \$3,677, equivalent to about \$44,000 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 \$3,220.

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 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

²⁴ Detailed information about employer-sponsored retirement plans were collected in a later topical module of the SIPP. These data will be released to the public sometime in 2001.

²⁵ 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.

retirement account balances of \$667. A male worker had a retirement account balance that was \$8,730 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 \$8,330.²⁶ 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 associated with a retirement account balance that was lower by \$2,100 compared to the account balances of workers with no children under 18. The coefficient indicating home ownership was positive, and home ownership was associated with retirement account balances that were higher by \$2,300, other things being equal.

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 \$12,700. Having completed high school but not attended college was associated with a retirement account balance that was \$2,150 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 \$10,400 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 \$7,300 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 seven 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 \$3,800. Almost 75% 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 \$8,600 higher than those who had no such investments. About 46% 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 \$3,300 greater than workers whose only account was a 401(k) or other thrift plan.

²⁶ 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 1998

Dependent (response) variable = Balances held in retirement accounts by
workers 25 to 64 years old in 1998

Mean (unweighted) = \$34,415

Mean (weighted) = \$34,722

Number of observations = 12,178

F Value = 438.7

R-squared = .3511

Prob>F = .0001

Adjusted R-squared = .3503

Independent Variable	Mean	Parameter estimate	Standard error	T statistic	
Intercept	—	-57,044	2,659.61	-21.45	***
Worker's total monthly income	\$3,676.65	3.22	0.11	29.94	***
Age of worker	43.1	677.36	48.42	13.99	***
Gender (1 = male)	.537	8,731.80	813.11	10.74	***
Race (1 = white)	.936	8,332.05	1,609.60	5.18	***
Marital status (1 = married)	.722	622.25	974.56	0.64	
Has children under age 18	.427	-2,119.62	889.96	-2.38	**
Owens home	.828	2,332.70	1,111.85	2.10	**
Less than 12 years of school	.028	-12,722	2,435.39	-5.22	***
High school graduate	.239	-2,155.73	1,051.41	-2.05	**
College graduate	.415	10,444	948.13	11.02	***
Works in public sector	.167	-7,299.27	1,062.65	-6.87	***
Works part-time	.261	466.33	899.90	0.52	
Greatest number of years worker has contributed to IRA, Keogh, or 401(k) plan	6.923	3,770.40	84.73	44.50	***
Invests some of plan in stocks or mutual funds	.746	8,626.32	895.36	9.63	***
Worker owns an IRA or Keogh	.459	3,331.77	841.50	3.96	***

*** = 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. (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. The presence of children under 18 in the family showed an even stronger negative relationship to household retirement wealth than it showed in relation to the worker's individual retirement wealth. The coefficient for home ownership, too, which was positive and statistically significant in the regression on *individual* retirement account balances, was even more strongly significant in the regression model on household retirement account balances.

There were, however, two demographic traits of workers – gender and marital status – that each showed a different relationship to household retirement account balances than it had shown to the individual workers' retirement account balances. When other factors were held constant, men had significantly higher *individual* retirement balances than women, but the coefficient for worker gender 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; however, a married worker had *household* retirement account balances that were \$9,600 greater than those of an unmarried worker, other things being equal.

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 1998

Dependent (response) variable = Balances held in retirement accounts by
all members of workers' households in 1998

Mean (weighted) = \$52,893

Mean (unweighted) = \$52,222

Number of observations = 12,178

F Value = 400.5

R-squared = .3306

Prob>F = .0001

Adjusted R-squared = .3298

Independent Variable	Mean	Parameter estimate	Standard error	T statistic
Intercept	—	-81,016	3,805.02	-21.29 ***
Household's total monthly income	\$6,208.15	3.88	0.11	34.62 ***
Age of worker	43.1	878.03	69.10	12.71 ***
Gender (1 = male)	.537	893.61	1,142.80	0.78
Race (1 = white)	.936	14,914	2,301.48	6.48 ***
Marital status (1 = married)	.722	9,607.95	1,409.45	6.82 ***
Has children under age 18	.427	-6,419.33	1,270.77	-5.05 ***
Owens home	.828	6,223.52	1,591.91	3.91 ***
Less than 12 years of school	.028	-16,648	3,482.17	-4.78 ***
High school graduate	.239	-3,454.35	1,502.92	-2.30 **
College graduate	.415	14,070	1,351.91	10.41 ***
Works in public sector	.167	-7,906.57	1,518.87	-5.21 ***
Works part-time	.261	3,383.07	1,285.23	2.63 **
Greatest number of years worker has contributed to IRA, Keogh, or 401(k) plan	6.923	4,339.78	120.90	35.90 ***
Invests some of plan in stocks or mutual funds	.746	11,462	1,279.45	8.96 ***
Household owns an IRA or Keogh	.509	10,477	1,203.89	8.70 ***

*** = 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 1998
(Number of workers in thousands)

<i>Do you have any 401(k) or thrift plan accounts in your own name?</i>					
<i>Worker characteristics:</i>	Yes		No		Total
	Number	Percent	Number	Percent	Number
Age					
25 to 34	7,914	24.8%	24,030	75.2%	31,944
35 to 44	10,820	29.6%	25,740	70.4%	36,560
45 to 54	8,477	31.0%	18,847	69.0%	27,324
55 to 64	3,238	24.6%	9,912	75.4%	13,150
Race					
White	27,191	29.4%	65,175	70.6%	92,365
Black	2,176	18.5%	9,605	81.5%	11,781
Asian or Native American	1,083	22.4%	3,750	77.6%	4,833
Gender					
Male	17,334	29.9%	40,683	70.1%	58,017
Female	13,115	25.7%	37,846	74.3%	50,961
Education					
Did not graduate High School	946	8.7%	9,877	91.3%	10,823
High School graduate	7,297	21.9%	26,064	78.1%	33,360
Some college	9,991	29.9%	23,467	70.1%	33,458
College graduate	12,215	39.0%	19,123	61.0%	31,338
Marital status					
Married	21,624	30.0%	50,420	70.0%	72,044
Not married	8,825	23.9%	28,109	76.1%	36,935
Annual household income					
Under \$20,000	1,264	9.5%	12,046	90.5%	13,310
\$20,000 to \$39,999	5,712	19.9%	22,975	80.1%	28,687
\$40,000 to \$59,999	7,430	28.3%	18,793	71.7%	26,222
\$60,000 or more	16,043	39.4%	24,716	60.6%	40,759
Own or rent home					
Own	24,661	31.6%	53,388	68.4%	78,049
Rent	5,788	18.7%	25,142	81.3%	30,930
Urban or rural location					
Urban	25,790	29.2%	62,399	70.8%	88,189
Rural	4,659	22.4%	16,131	77.6%	20,790
Full time or part time worker					
Full time (35+ hours per week)	23,665	30.5%	53,932	69.5%	77,597
Part time	6,784	21.6%	24,597	78.4%	31,382
Establishment size and sector					
Private: temp/contingent worker	1,085	8.8%	11,190	91.2%	12,275
Private: under 25 employees	4,973	17.3%	23,853	82.7%	28,827
Private: 25 to 99 employees	5,570	29.1%	13,595	70.9%	19,166
Private: 100 or more employees	13,797	44.0%	17,588	56.0%	31,385
Public Sector	5,024	29.0%	12,303	71.0%	17,326
Have an IRA or Keogh plan?					
Yes	7,731	39.2%	12,009	60.8%	19,740
No	22,718	25.5%	66,521	74.5%	89,239
Total	30,449	27.9%	78,529	72.7%	108,979

Note: All workers, ages 25 to 64 in 1998

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

Table A4. Worker Ownership of Individual Retirement Accounts in 1998

(Number of workers in thousands)

<i>Do you have an individual retirement account (IRA) or a Keogh plan?</i>					
<i>Worker characteristics:</i>	Yes		No		Total
	Number	Percent	Number	Percent	Number
Age					
25 to 34	2,556	8.0%	29,389	92.0%	31,944
35 to 44	6,032	16.5%	30,528	83.5%	36,560
45 to 54	6,781	24.8%	20,543	75.2%	27,324
55 to 64	4,371	33.2%	8,780	66.8%	13,150
Race					
White	18,420	19.9%	73,946	80.1%	92,365
Black	660	5.6%	11,121	94.4%	11,781
Asian or Native American	660	13.7%	4,173	86.3%	4,833
Gender					
Male	10,547	18.2%	47,470	81.8%	58,017
Female	9,193	18.0%	41,769	82.0%	50,961
Education					
Did not graduate High School	433	4.0%	10,390	96.0%	10,823
High School graduate	3,737	11.2%	29,623	88.8%	33,360
Some college	5,592	16.7%	27,866	83.3%	33,458
College graduate	9,978	31.8%	21,360	68.2%	31,338
Marital status					
Married	14,751	20.5%	57,293	79.5%	72,044
Not married	4,989	13.5%	31,946	86.5%	36,935
Annual household income					
Under \$20,000	1,180	8.9%	12,130	91.1%	13,310
\$20,000 to \$39,999	3,338	11.6%	25,349	88.4%	28,687
\$40,000 to \$59,999	4,109	15.7%	22,113	84.3%	26,222
\$60,000 or more	11,113	27.3%	29,646	72.7%	40,759
Own or rent home					
Own	17,525	22.5%	60,524	77.5%	78,049
Rent	2,215	7.2%	28,715	92.8%	30,930
Urban or rural location					
Urban	16,407	18.6%	71,781	81.4%	88,189
Rural	3,332	16.0%	17,457	84.0%	20,790
Full time or part time worker					
Full time (35+ hours per week)	13,612	17.5%	63,984	82.5%	77,597
Part time	6,127	19.5%	25,255	80.5%	31,382
Establishment size and sector					
Private: temp/contingent worker	3,466	28.2%	8,809	71.8%	12,275
Private: under 25 employees	4,849	16.8%	23,978	83.2%	28,827
Private: 25 to 99 employees	2,932	15.3%	16,234	84.7%	19,166
Private: 100 or more employees	5,275	16.8%	26,110	83.2%	31,385
Public Sector	3,218	18.6%	14,108	81.4%	17,326
Participate in a 401(k) plan?					
Yes	7,731	25.4%	22,718	74.6%	30,449
No	12,009	15.3%	66,521	84.7%	78,530
Total	19,740	18.1%	89,239	81.9%	108,979

Note: All workers, ages 25 to 64 in 1998.**Source:** CRS analysis of the Census Bureau's Survey of Income and Program Participation.

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