United States General Accounting Office

GAO

Report to the Ranking Minority Member, Subcommittee on Employer-Employee Relations, Committee on Education and the Workforce, House of Representatives

April 2003

RETIREMENT INCOME

Intergenerational Comparisons of Wealth and Future Income

GAO-03-429

April 2003

GAO Accountability • Integrity • Reliability

Highlights

Highlights of GAO-03-429, a report to Ranking Minority Member, Subcommittee on Employer-Employee Relations, Committee on Education and the Workforce, House of Representatives

RETIREMENT INCOME

Intergenerational Comparisons of Wealth and Future Income

Why GAO Did This Study

Today's workers will rely to a large extent on Social Security, private pensions, and personal wealth for their retirement income. But some analysts question whether these sources will provide sufficient retirement income to maintain workers' standards of living once they leave the labor force. Indeed, the Social Security trust funds are projected to become exhausted in 2042, at which time, unless action is taken, Social Security will not be able to pay scheduled benefits in full.

To gain an understanding of what today's workers might expect to receive in terms of retirement income, GAO was asked to examine (1) how the personal wealth of Baby Boom (born between 1946 and 1964) and Generation X (born between 1965 and 1976) workers compare with what current retirees had at similar ages, (2) how workers from the Baby Boom and Generation X compare in terms of the pension and Social Security benefits they can expect to receive, and (3) the likely distribution of pension and Social Security benefits across workers within the Baby Boom and Generation X.

www.gao.gov/cgi-bin/getrpt?GAO-03-429.

To view the full report, including the scope and methodology, click on the link above. For more information, contact Barbara D. Bovbjerg at (202) 512-7215.

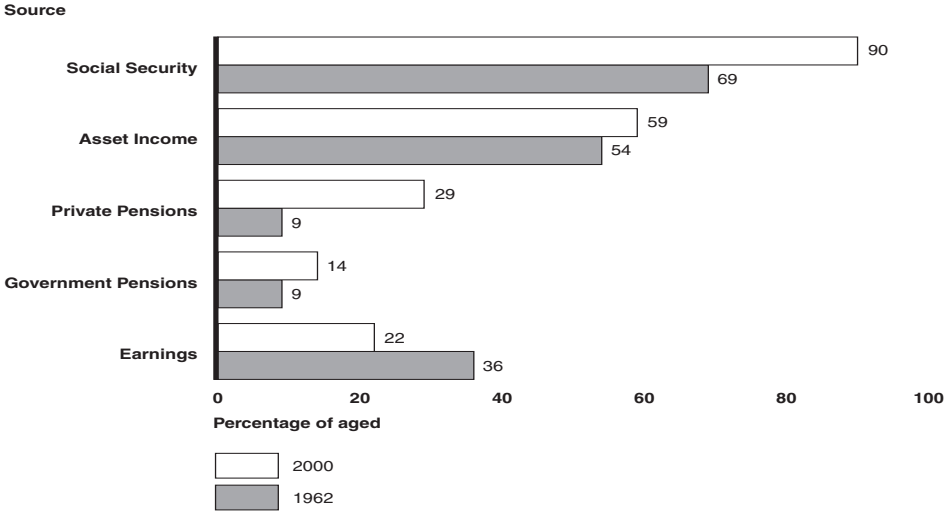
What GAO Found

Baby Boom and Generation X households headed by an individual aged 25 to 34 have greater accumulated assets, adjusted for inflation, than current retirees had when they were the same age, but also more debt. Most of the large increase in assets between current retirees and the Baby Boom is due to increased ownership and equity in housing. Contributions to defined contribution pension plans play a role in explaining the modest increase in assets between the Baby Boom and Generation X, in part, because GAO's data do not allow it to consider the value of benefits from defined benefit pension plans.

Workers from Generation X are estimated to have similar levels of retirement income in real terms (adjusted for inflation) at age 62 as their counterparts in the Baby Boom, but Generation X may be able to replace a smaller percentage of their preretirement income. Whether Social Security benefits for Generation X are higher or lower than those for the Baby Boom will depend on how the Social Security funding shortfall is resolved. With regard to pensions, Generation X and the Baby Boom are estimated to have similar levels of pension income even with a continued shift from defined benefit to defined contribution pension coverage.

Retirement income will vary within both Generation X and the Baby Boom households, and certain groups will be more likely to have lower retirement incomes. As one might expect, given significant variation in workers' earnings, if households were arrayed from lowest to highest in terms of estimated total retirement income, those in the top 20 percent would receive a substantially larger proportion of income compared with those in the bottom 20 percent. Retirement income is lower for the less educated and single women.

Percentage of the Aged Receiving Income, by Source



Source: Fast Facts and Figures About Social Security, Social Security Administration, 2002.

Contents

Figures

Abbreviations

DB	defined benefit
DC	defined contribution
EGTRRA	Economic Growth and Tax Relief Reconciliation Act of 2001
ERISA	Employee Retirement Income Security Act of 1974
GEMINI	Genuine Microsimulation of Social Security and Accounts
IRA	individual retirement account
OASDI	Old Age, Survivor and Disability Insurance
PENSIM	Pension Simulator
PIA	primary insurance amount
PSG	Policy Simulation Group
PSID	Panel Study of Income Dynamics
SCF	Survey of Consumer Finances
SIPP	Survey of Income and Program Participation
SSASIM	Social Security and Accounts Simulator
SSI	Supplemental Security Income

This is a work of the U.S. Government and is not subject to copyright protection in the United States. It may be reproduced and distributed in its entirety without further permission from GAO. It may contain copyrighted graphics, images or other materials. Permission from the copyright holder may be necessary should you wish to reproduce copyrighted materials separately from GAO's product.

GAO
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, DC 20548

April 25, 2003

The Honorable Robert Andrews
Ranking Minority Member
Subcommittee on Employer-Employee Relations
Committee on Education and the Workforce
House of Representatives

Dear Mr. Andrews:

Today's workers will rely to a large extent on Social Security, private pensions, and personal wealth for their retirement income. But some analysts question whether these sources will provide sufficient retirement income to maintain workers' standards of living once they leave the labor force.[1] Indeed, the Social Security trust funds are projected to become exhausted in 2042, at which time, unless action is taken, Social Security will not be able to pay scheduled benefits in full.[2] Pension coverage has remained at about 50 percent of the workforce for decades while the composition of that coverage has shifted from defined benefit (DB) plans to defined contribution (DC) plans.[3] As a result of this shift, an increasing share of the responsibility for providing for one's retirement income has shifted from the employer to the employee. Finally, workers today are saving a smaller proportion of their incomes than earlier generations did. Yet, if current workers are to maintain their standards of living and meet increasing health care costs in retirement, they need to save more.

[1]An early assessment of the sufficiency of retirement income for the Baby Boom was presented in a 1993 Congressional Budget Office study, *Baby Boomers in Retirement: An Early Perspective*.

[2]The projection of trust fund exhaustion in 2042 is based on the intermediate assumptions of the Social Security Administration's Office of the Chief Actuary as presented in the 2003 Trustees Report. According to the same assumptions, annual costs will exceed tax income for the Social Security trust funds starting in 2018.

[3]In DB plans, the amount of the benefit received at retirement is defined in advance by the plan's benefit formula, which considers such factors as salary and service. In a DC plan, it is the amount of the contribution made by the employer, employee, or both, to the worker's individual account that is defined. Benefits in this type of plan are based largely on the amount contributed but are also affected by how this amount is invested.

These trends suggest that today's younger workers might reach retirement unable to maintain the standards of living they had achieved while working. Additionally, there may be a greater strain on retirement assets if younger workers spend more years in retirement due to greater life expectancy. To gain an understanding of what today's workers might expect to receive in terms of retirement income, you asked us to examine (1) how the wealth of Baby Boom and Generation X workers compares with what current retirees (pre-Baby Boom generation) had as young adults, (2) how workers from the Baby Boom and Generation X compare in terms of the pension and Social Security benefits they can expect to receive, and (3) the likely distribution of pension benefits and Social Security benefits for all workers within the Baby Boom and Generation X. The Baby Boom generation includes those born between 1946 and 1964, Generation X includes those born between 1965 and 1976, and we define the Pre-Baby Boom generation as those born between 1925 and 1945.

To compare wealth across all three generations, we used the Federal Reserve Board's Survey of Consumer Finances (SCF), a nationally representative database containing detailed information on assets and debt, and compared the ownership and median levels of different types of assets and debt for 25- to 34-year olds in each generation. We selected this age group because it is important to compare each of the generations at the same life-cycle stage and this is the only age group for which we have data on wealth for all three generations.[4] This comparison enabled us to assess the extent to which the Baby Boom and Generation X have been able to accumulate wealth, some or all of which can be used to finance consumption in retirement. However, our wealth measure does not include the future values of Social Security or pensions.[5] Therefore, to complement our analysis of the younger generations' wealth, we simulated future retirement income for the Baby Boom and Generation X. To illustrate the levels and distribution of retirement income that current workers can expect to receive at age 62, we used the Policy Simulation

[4]Under the standard life-cycle theory of personal saving, people save and accumulate wealth to smooth their standard of living over their lifetime. Young adults entering the workforce tend to save less than older workers in their peak earning years. The elderly draw on their wealth in retirement.

[5]For individuals covered by pension plans, the SCF includes amounts accumulated under DC plans but does not capture the expected value of future benefits under DB plans. The SCF also does not capture the expected value of future Social Security benefits.

Group's (PSG) models[6] to simulate some components of retirement income—Social Security benefits, pension income, and the earnings of spouses not yet retired. Under contract to us, the PSG used Pension Simulator (PENSIM) to estimate pension benefits and Genuine Microsimulation of Social Security and Accounts (GEMINI) to estimate Social Security benefits for two illustrative birth cohorts—Baby Boomers born in 1955 and Generation Xers born in 1970. These simulations are based on the Social Security Trustees' 2001 intermediate economic and actuarial assumptions. While our simulations provide estimates of future retirement income, there is a considerable amount of uncertainty involved with these estimates. Since these estimates could change significantly, depending on assumptions used and behavioral responses, they should not be considered predictions.

In order to bound our estimates of retirement income, we considered different scenarios for Social Security and pensions. We used two scenarios for estimating Social Security benefits: (1) scheduled benefits are paid and (2) funded benefits are paid.[7] We also considered two scenarios for pension benefits, one assuming that both the Baby Boom and Generation X had the same DB and DC pension plan coverage and the other that Generation X workers with pensions had only DC pensions. We compared the two younger generations under these various scenarios because the retirement income of these younger generations will be affected by policy decisions on Social Security and pensions. Changes in Social Security and pension benefits, in turn, will affect the amount that the Baby Boom and Generation X need to save.

We conducted our work between April 2002 and April 2003 in accordance with generally accepted government auditing standards. A more detailed discussion of our scope and methodology appears in appendix I.

Results in Brief

Baby Boom and Generation X households headed by individuals aged 25 to 34 have greater accumulated assets, adjusted for inflation, than current

[6]The models—Social Security and Accounts Simulator, Genuine Microsimulation of Social Security and Accounts, and Pension Simulator—are described in appendix I.

[7]While there are many ways of achieving the same result, we chose to focus on the polar cases or bounds for change within the current system. For additional information on the benchmarks, see U.S. General Accounting Office, *Social Security: Program's Role in Helping Ensure Income Adequacy*, GAO-02-62 (Washington, D.C.: Nov. 30, 2001) and appendix I.

retirees had when they were the same age, but also more debt. Most of the large increase in assets between current retirees and the Baby Boom is due to increased ownership and equity in housing. Contributions to DC pension plans play a role in explaining the modest increase in assets between the Baby Boom and Generation X, in part because SCF data do not reflect the value of future benefits from DB pension plans. Of the three groups, members of Generation X carry the most debt. Yet, for Baby Boom and Generation X households with positive net worth (assets exceed debt) at age 25 to 34, net worth is 60 percent greater than that of current retirees when they were the same age. However, particularly for Generation X, greater life expectancy may require more assets to cover more years in retirement and greater assets may also be required to support higher standards of living. Additionally, within each generation, some people will not do as well as others. Specifically, those who do not own their home, are less educated, or are single, have less net worth.

Our simulations suggest that Generation X workers will have similar levels of retirement income in real terms (adjusted for inflation) at age 62 as their counterparts in the Baby Boom generation, but Generation X may be able to replace a smaller percentage of their preretirement income. Whether Social Security benefits for Generation X are higher or lower than those for the Baby Boom generation will depend on how the Social Security funding shortfall is resolved. If scheduled benefits were maintained by increasing program revenues, then Generation X could receive higher Social Security benefits in constant dollars than the Baby Boom generation, but at the possible cost of higher taxes and a reduced capacity to save during their working lives. If benefits were reduced to levels payable by current payroll tax rates, then Generation X could receive somewhat lower Social Security benefits than the Baby Boom generation. With regard to pensions, Generation X and the Baby Boomers are estimated to have similar levels of retirement income. A continued shift from DB to DC pension coverage does not appear to have much effect on the relative pension income of Generation X and the Baby Boom. With respect to replacement rates, however, Generation X is estimated to be able to replace a smaller percentage of preretirement income than the Baby Boom. The lower replacement rates for Generation X might translate into a decline in their standard of living at retirement, absent increases in retirement income related to behavioral changes (e.g., increases in savings, working longer), or external factors (e.g., increases in rates of return on assets).

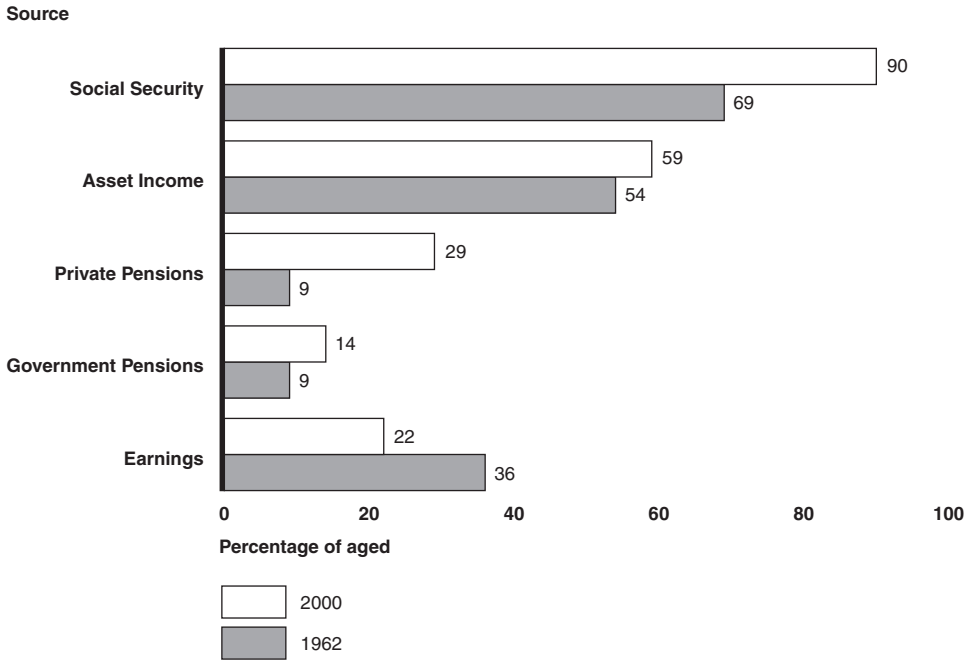
Retirement income will vary within both Generation X and the Baby Boom generation and certain groups will be more likely to have lower retirement

incomes. As one might expect, given significant variation in workers' earnings, if households were arrayed from lowest to highest in terms of estimated retirement income, those in the top 20 percent would receive a substantially larger proportion of income compared with those in the bottom 20 percent. Retirement income is lower for the less educated and for single women.

Background

Retirement income in the United States includes Social Security benefits, asset income, pension benefits, and earnings. Over the last 40 years, receipt of Social Security has become almost universal while receipt of asset income has increased modestly, receipt of private pensions has tripled, and receipt of government pensions has increased by 50 percent. However, a smaller proportion of aged households received earnings in 2000 than in 1962. (See fig. 1.) All of these components of retirement income have been affected by the major regulatory, labor market, and demographic changes that have taken place in the last 40 years.

Figure 1: Percentage of the Aged Receiving Income, by Source



Source: Fast Facts and Figures About Social Security, Social Security Administration, 2002.

Note: The aged include couples and nonmarried persons age 65 or older.

Legislative changes have expanded the pension and personal saving options available to workers.[8] The Employee Retirement Income Security Act (ERISA) of 1974 provided certain minimum standards and broad new protections of employee benefits plans, including provisions for individual retirement accounts (IRA). Subsequent legislation revised some provisions of ERISA, further expanding the possibilities for workers to have access to pension income in retirement and established new types of employer-sponsored pension plans, such as 401(k) plans.

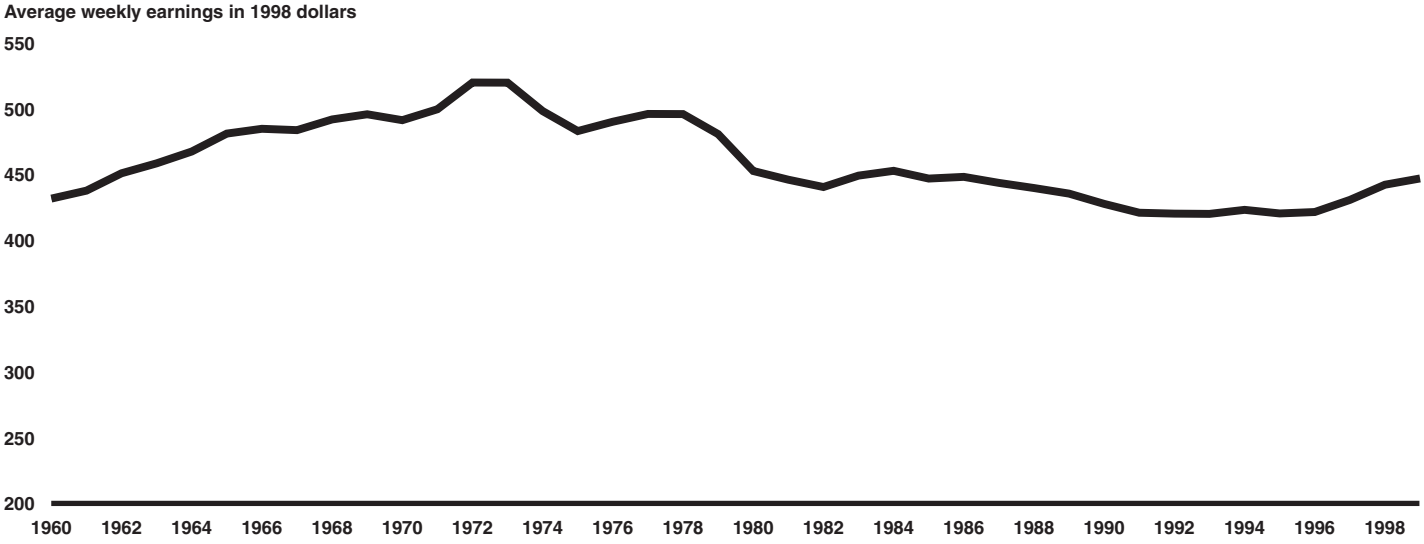
Legislative changes have also focused on the financing problems of Social Security. In the late 1970s and early 1980s, legislative action regarding

[8]We have issued several reports on pension coverage and participation: U.S. General Accounting Office, *Private Pensions: Improving Worker Coverage and Benefits*, GAO-02-225 (Washington, D.C.: Apr. 9, 2002); *Private Pensions: Issues of Coverage and Increasing Contribution Limits for Defined Contribution Plans*, GAO-01-846 (Washington, D.C.: Sept. 17, 2001); *Pension Plans: Characteristics of Persons in the Labor Force Without Pension Coverage*, GAO/HEHS-00-131 (Washington, D.C.: Aug. 22, 2000).

Social Security attempted to solve this financing problem by raising taxes, curtailing future benefits, raising the retirement age, and trying to increase work incentives. However, the financing of future Social Security benefits is still an issue, and further action will need to be taken to either increase the program's revenues, decrease its expenditures, or both.

The labor market conditions facing young workers today differ significantly from those facing earlier generations of workers. Changes in earnings, women's labor force participation, and pension coverage over the last 40 years have altered the context within which workers save for retirement. Real earnings increased throughout the 1960s, slowed considerably in the 1970s, remained relatively stagnant during the 1980s and much of the 1990s, and may have started to rise in the late 1990s. For some groups of workers, such as production or nonsupervisory workers, average weekly earnings adjusted for inflation declined over most of the time period following the early 1970s. (See fig. 2.) For young workers facing stagnant or declining real earnings, saving for retirement might have become more difficult than it was for those who entered the labor market when real earnings were growing.

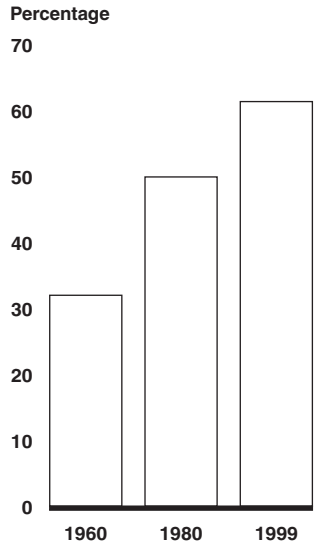
Figure 2: Average Weekly Earnings for Production or Nonsupervisory Workers, Adjusted for Inflation



Source: Department of Labor, Bureau of Labor Statistics.

In addition, over the last 40 years, more women have entered the labor force. They entered regardless of their marital status—the labor force participation rates of married women, for example, increased from 32 percent in 1960 to 61 percent in 1999. (See fig. 3.) This means a larger share of women in younger cohorts is working and likely to qualify for Social Security and pensions based on their own earnings. This also means an increase in the share of married couple households that have two earners, which could increase the potential for household retirement saving.

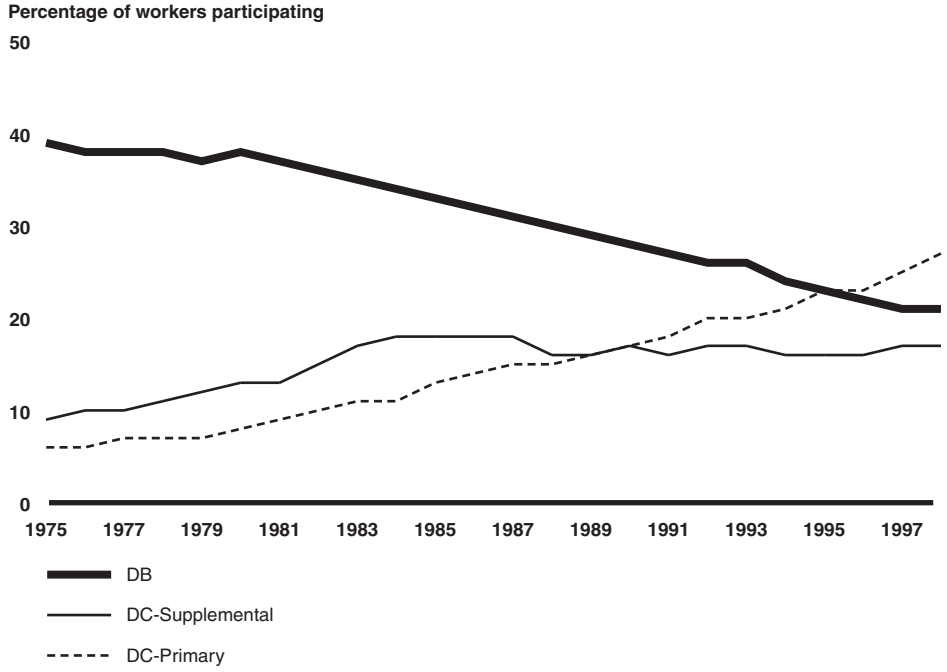
Figure 3: Labor Force Participation Rates of Married Women



Source: Bureau of the Census.

The composition of pension coverage also changed during this period. The estimated share of private wage and salary workers participating in a DB plan as their primary pension plan declined from 39 percent in 1975 to 21 percent in 1997, while the share participating in a DC plan as their primary pension plan increased from 6 percent to 25 percent. (See fig. 4.) The decline in DB pension plan coverage and the increase in DC pension plan coverage over the past 3 decades means that more of the responsibility for retirement saving has shifted to individual workers from employers.

Figure 4: Estimated Private Wage and Salary Worker Participation Rates Under DB and DC Pension Plans

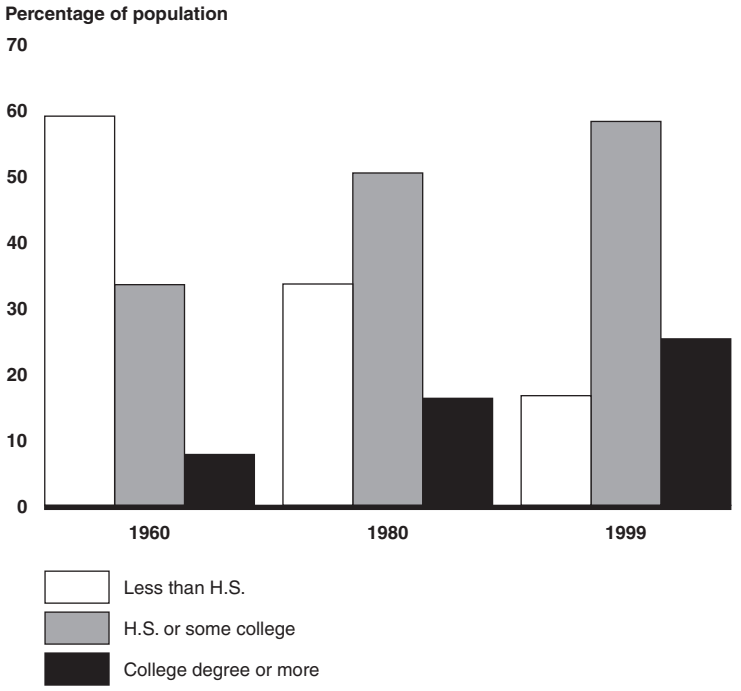


Source: Department of Labor, Employee Benefits Security Administration (formerly the Pension and Welfare Benefits Administration).

Demographic changes over the last 40 years have also altered the circumstances of workers as they save for retirement. Educational attainment, for example, has increased over time. In 1960, only about 8 percent of the population 25 years of age and older had a college degree. By 1999, 25 percent of the population 25 years or older were college graduates. (See fig. 5.) The increase in educational attainment over time could facilitate increased saving among those younger workers who attain higher education. The composition of households has also changed over this period with the share of households headed by a married couple decreasing. In 1960, 74 percent of all households were comprised of married couple families. By 1999 this had fallen to 53 percent. At the same time, the percentage of one-person households increased from 13 percent to 26 percent of all households. (See fig. 6.) Median incomes are typically lower for families headed by a single female or for single person households. In addition, life expectancy has increased across the

generations.[9] The greater life expectancy of the younger generations could mean that the retirement income of the Baby Boom and Generation X would need to support a larger number of years.

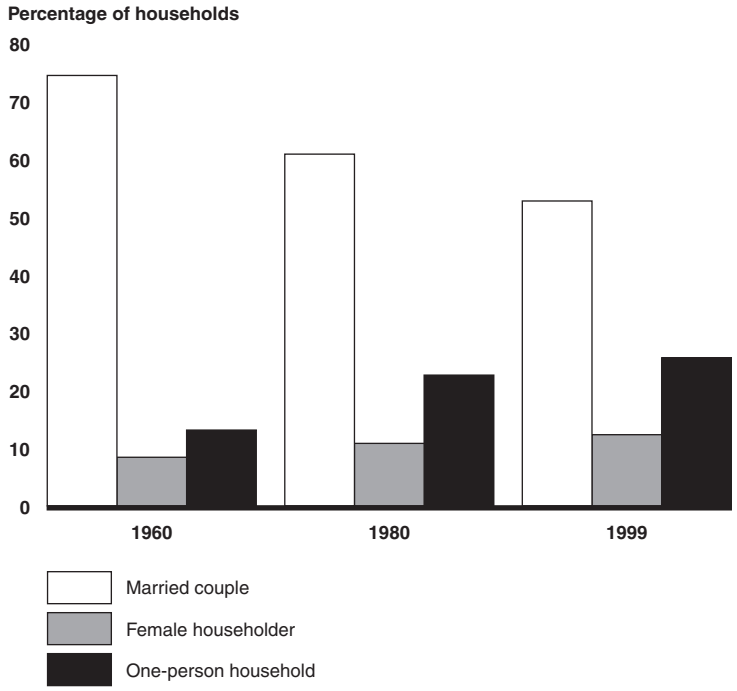
Figure 5: Levels of Education Completed by Individuals Age 25 and Over



Source: Bureau of the Census.

[9]The life expectancy for a person born in 1940 (Pre-Baby Boom) is 61.4 years for a male and 65.7 years for a female. However, a person born in 1955 (Baby Boom) has a life expectancy of 66.7 years if male and 72.8 years if female. And someone born in 1970, and therefore a member of Generation X, has a life expectancy of 67.2 years if male and 74.9 years if female.

Figure 6: Percentage of Households by Household Composition



Source: Bureau of the Census.

The retirement security of today's workers will also be affected by changes in the cost and provision of health care. Over the last 40 years, the provision of health benefits has become more expensive for employers as generous benefits have combined with higher utilization rates, a growing elderly population, and a rapidly increasing cost of service. In response to these increased costs, many employers have begun to limit the health benefits provided, either by terminating their plans, restricting benefits, or reducing their share of the premium. As a result, future retirees are likely to pay more of the costs of their health care. Consequently, today's workers might have to work longer, save more, or both, to ensure sufficient access to health benefits. In addition to paying more for privately sponsored health benefits, today's current workers might also pay more in retirement for Medicare. Medicare costs are continuing to rise with the result that either benefits will have to be reduced or monthly premiums will have to be increased.

Given all these demographic changes, as well as regulatory and economic changes, analysis of retirement income is increasingly dependent on good estimates, which in turn require adequate data. In a recent report on

needed improvements in retirement income data, we identified data improvements that experts say are a priority for the study of retirement income.[10] In particular, experts cited data from employers on employee benefits, as well as linkages between individual and household surveys and administrative data, as being helpful for estimating future retirement income.

Baby Boom and Generation X Workers Have More Assets and More Debt Than Current Retirees Had at Similar Ages

Baby Boom and Generation X households headed by individuals aged 25 to 34 have greater accumulated assets, adjusted for inflation, than current retirees had when they were the same age but they also have more debt. The large increase in assets between current retirees—the Pre-Baby Boom generation—and the Baby Boom is due mainly to increases in home equity and increases in the rate of home ownership. The modest increase in assets between the Baby Boom and Generation X can be accounted for in large part by the increase in the ownership and value of DC retirement accounts, because SCF data do not reflect the value of benefits from DB pension plans.[11] While the percentage of households with debt has changed very little across the generations, the real total debt levels have more than doubled between current retirees and Generation X workers. Yet, for most young Baby Boom and Generation X households, assets exceed debts and the net worth of these households with positive net worth is 60 percent greater than that of current retirees at similar ages. However, particularly for Generation X, greater life expectancy may require more assets to cover more years in retirement and greater assets may also be required to support higher standards of living. Within each generation, the distribution of net worth across households is affected by economic and demographic characteristics. Specifically, those who do not own their own home, are less educated, or are single, have less in net worth.

[10]U.S. General Accounting Office, *Retirement Income Data: Improvements Could Better Support Analysis of Future Retirees' Prospects*, GAO-03-337 (Washington, D.C.: Mar. 21, 2003).

[11]Coverage by DB pension plans is greater for current retirees than for the Baby Boom or Generation X. Therefore, our measure of wealth underestimates their wealth relative to the wealth of the younger generations. To the extent that a larger percentage of the Baby Boom than Generation X is covered by DB plans, our measure of wealth also underestimates wealth for the Baby Boom relative to Generation X.

Increases in Home Equity and Ownership are Responsible for Most of the Increase in Assets Across the Generations

For households headed by a 25- to 34-year old, both the median value of total assets (in 1998 dollars) and the percentage of households with assets increased across the generations.[12] (See fig. 7.) The median value of total assets for the Baby Boom and Generation X is more than 50 percent greater than that for the Pre-Baby Boom generation.[13] While our analysis indicates that asset levels increase across the generations, it does not take into account the expectation of rising standards of living.[14] Generation X, for example, could have greater assets than those of previous generations and still feel that these assets are insufficient for the lifestyle they want or expect.

For households headed by a 25- to 34-year old, the increase in assets across the generations can be attributed mainly to housing and DC retirement accounts. (See fig. 7.) As we have noted, our measure of assets does not include the value of benefits from DB pension plans and, to the extent that a larger percentage of the Pre-Baby Boom and the Baby Boom than Generation X is covered by DB plans, will underestimate the true value of assets for the Pre-Baby Boom and the Baby Boom relative to Generation X. The large increase in total asset accumulation between the Pre-Baby Boom and the Baby Boom is largely due to increases in home equity and increases in the rate of home ownership. The median value of housing assets increased from $72,890 for the Pre-Baby Boom to $78,583 for the Baby Boom, while the percentage of households owning their own home increased from 39 to 45 percent. The modest increase in total asset accumulation between the Baby Boom and Generation X can be accounted for in large part by the increase in the ownership and value of retirement accounts. The median value of DC retirement accounts increased from $2,947 for the Baby Boom to $8,003 for Generation X, while the percentage of households with retirement accounts increased from

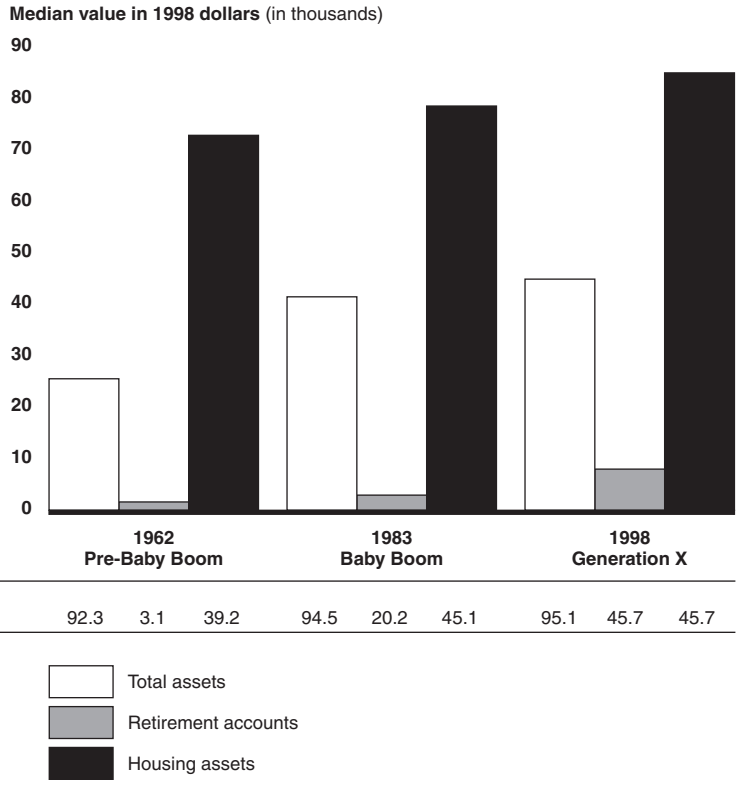
[12]We define total assets to include assets that are specifically dedicated to retirement, such as IRAs, 401(k)s, 403(b)s, and other thrift-type plans, as well as assets that are not specifically dedicated to retirement but may ultimately provide retirement income, such as housing, financial assets (including savings accounts, mutual funds, stocks, and bonds), and nonfinancial assets (including vehicles, business interests, and nonresidential real estate).

[13]Median values of assets are calculated only for those households that have assets.

[14]Comparisons across the 3 years selected, 1962, 1983, and 1998, need to be qualified because these years do not represent similar points in the business cycle. 1962 and 1998 were at the early and late stages, respectively, of an economic expansion, while 1983 was at the very end of a recession. To the extent that the position in the business cycle affects the real value of assets and debts, the comparison across generations may be misleading.

20 percent to 46 percent. The increased percentage of households with retirement accounts reflects changes in the types of pension plans offered by employers. Between 1983 and 1997, the percentage of workers covered by primary DC pension plans, under which the worker has a retirement account, increased from 11 percent to 25 percent while the percentage of workers covered by DB pension plans declined from 35 percent to 21 percent.

Figure 7: Median Value of Total Assets, Retirement Accounts, and Housing Assets, and the Percentage of Households with these Assets for Households Headed by a 25- to 34-Year-Old

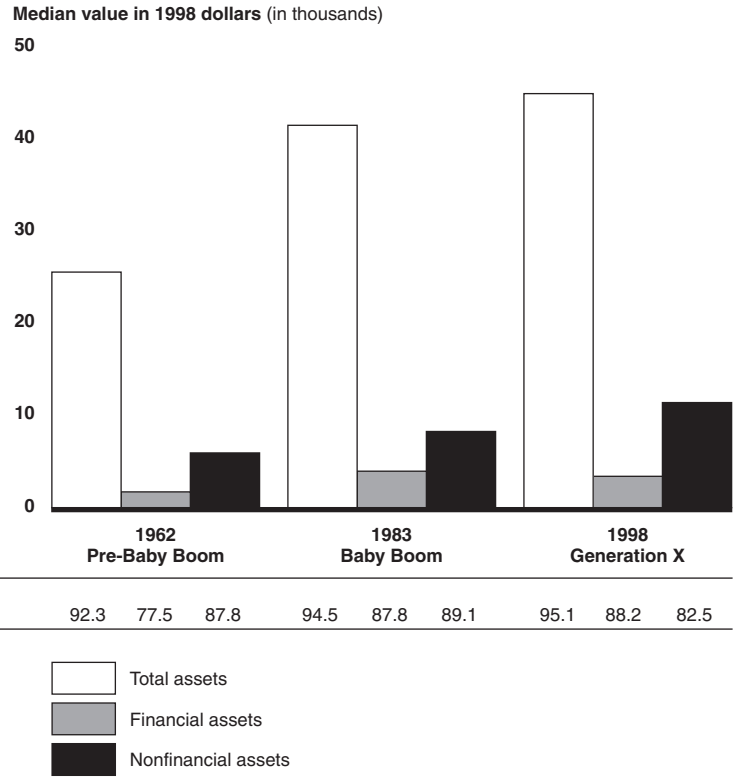


Source: Federal Reserve Board.

Note: GAO analysis based on data from the Survey of Consumer Finances. The median for housing assets is larger than the median for total assets because these medians come from two different distributions. Total assets include bank accounts and automobiles as well as housing, so the distribution of the value of total assets ranges from assets with relatively low values, such as bank accounts and other financial assets, to assets with relatively high values, such as houses. The distribution for housing assets includes only those households owning a home, whereas the distribution for total assets includes all households with any type of asset, including those who do not own homes.

Financial and nonfinancial assets contribute only modestly to the increase in total assets across the generations. (See fig. 8.) Financial assets include savings accounts, mutual funds, and stocks and bonds while nonfinancial assets include vehicles, business interests, and nonresidential real estate. The median value of financial assets varies between less than $2,000 for the Pre-Baby Boom generation and $4,000 for the Baby Boom. A greater percentage of households in the younger cohorts have financial assets than was the case for current retirees. The median value of nonfinancial assets is greater than that for financial assets in each of the generations and has increased across the cohorts. While the ownership of nonfinancial assets increased for the Baby Boom, relative to current retirees, it decreased for Generation X relative to both the Baby Boom and current retirees.

Figure 8: Median Value of Total Assets, Financial Assets, and Nonfinancial Assets, and the Percentage of Households with These Assets for Households Headed by a 25- to 34-Year Old



Source: Federal Reserve Board.

Note: GAO analysis based on data from the Survey of Consumer Finances.

The degree to which the younger cohorts will be able to add to the assets that we observe when they are ages 25 to 34 will be affected by a number of demographic and economic factors. Individuals have control over some of these factors. For example, they can determine how much education they receive, how long they work, whether both spouses in a couple work, how much they save while they are working, and whether they stay married or get divorced. On the other hand, individuals have no direct control over the rate of growth of real wages, the performance of the overall economy, the rate of return on financial assets, changes in housing prices, shifts in pension coverage and generosity of benefits, the state of the health care system, changes in life expectancy, and the resolution to the funding shortfall for Social Security and Medicare. One of the resolutions to the funding shortfall for both Social Security and Medicare is to increase the payroll tax that employees and employers pay. An

increase in the payroll tax, of course, reduces the amount of an individual's disposable income available to both consume and save. On the other hand, if individuals expected Social Security benefits to be reduced, they might increase their personal saving in order to offset this reduction in benefits. Likewise, increases in life expectancy may also require increased saving in order to provide for a greater number of years in retirement or might induce people to work longer.

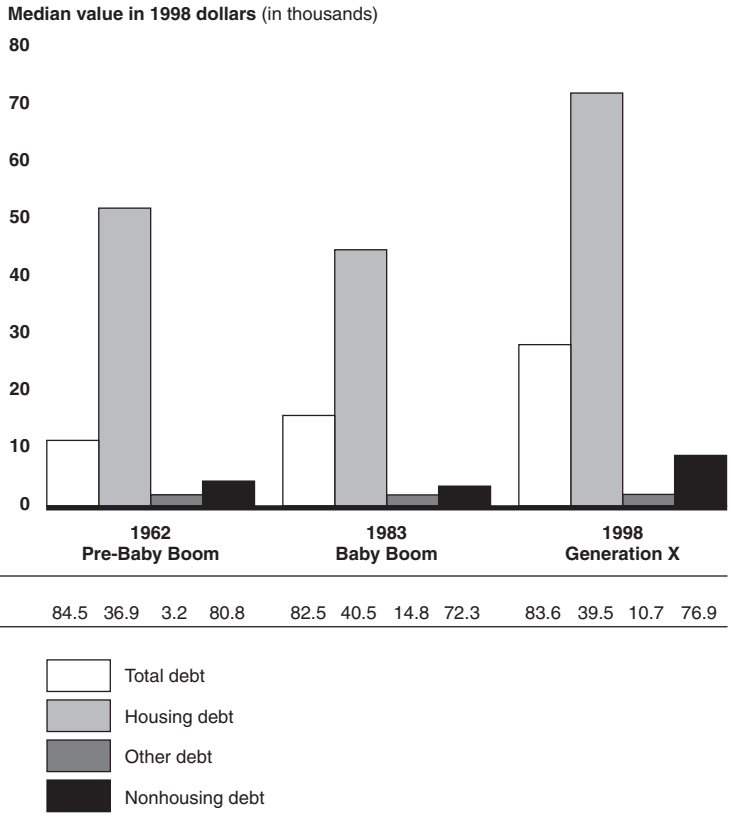
The Younger Generations, Especially Generation X, Have Higher Levels of Debt Than Current Retirees Did at Similar Ages

For households headed by a 25- to 34-year old, overall debt levels increase across the generations. (See fig. 9.) The median level of debt for the Baby Boom is 38 percent greater than that for the Pre-Baby Boom generation while Generation X's median level of debt is 146 percent greater than that of the Pre-Baby Boom generation and 78 percent greater than that of the Baby Boom. The percentage of households with debt changed very little, however, remaining at roughly 83-84 percent across the generations. Thus, those households that go into debt are going into debt more deeply with each new generation.

The increase in debt levels between the Baby Boom and Generation X was due largely to increases in housing debt.[15] The median value of housing debt increased between the Baby Boom and Generation X by 61 percent. The percentage of households with housing debt changed very little between these two generations, however, remaining at roughly 40 percent.

[15]Median values of debt are calculated only for those households that have debt.

Figure 9: Median Value of Debt and the Percentage of Households with Debt for Households Headed by a 25- to 34-Year Old (Total Debt, Housing Debt, Financial Debt, and Other Debt)



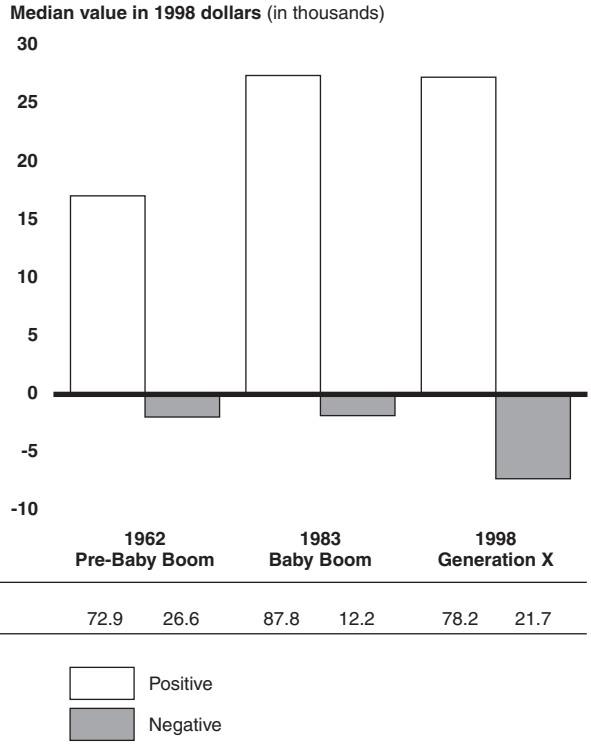
Source: Federal Reserve Board.

Note: GAO analysis based on data from the Survey of Consumer Finances. The median for housing debt is larger than the median for total debt because these medians come from two different distributions. Total debt includes credit card and installment debt as well as housing debt. Because the distribution of the value of total debt includes relatively low levels of nonhousing debt as well as the higher levels of housing debt, the median will be lower than the median for housing debt. Nonhousing debt includes debt for other residential property, such as vacation homes, debt for nonresidential real estate, business debt, credit card debt, and installment loans. Other debt includes loans against pensions, loans against life insurance, and margin loans.

The amount of debt carried by a household will affect the value of its net worth. For households headed by a 25- to 34-year old, the percentage of households with positive net worth and the median value of positive net worth increased between the Pre-Baby Boom and Generation X; however, the median value of negative net worth is also much higher for Generation X. (See fig. 10.) The median value of net worth for households with positive net worth increased by 60 percent between the Pre-Baby Boom

and the two younger generations. The percentage of households with negative net worth is smaller for the two younger generations than for current retirees when they were young. However, the median value of net worth for households with negative net worth is about four times larger for Generation X than for the Baby Boom or the Pre-Baby Boom.

Figure 10: Median Value of Positive and Negative Net Worth and the Percentage of Households with Net Worth for Households Headed by a 25- to 34-Year Old



	1962 Pre-Baby Boom		1983 Baby Boom		1998 Generation X	
Percentage of households	72.9	26.6	87.8	12.2	78.2	21.7

Source: Federal Reserve Board.

Note: GAO analysis based on data from the Survey of Consumer Finances. Net worth is defined as assets minus debt. If assets are greater than debt, the household has positive net worth. If debt is greater than assets, the household has negative net worth. Therefore, the positive and negative net worth columns will not sum to total net worth since they are based on different distributions.

Within Each Generation, the Value of Net Worth Is Lower for Those Who Do Not Own Their Own Home, Are Less Educated, or Are Single

The younger generations in general have experienced an increase in net worth relative to current retirees at the same age, with the Baby Boom having a median net worth three times that of the older generation and Generation X having a median net worth two and a half times that of current retirees. However, there are some groups within these cohorts that have not benefited as much as others. (See table 1.) For example, the median net worth for Baby Boom and Generation X homeowners is between $17,000 and $35,000 greater than that for Pre-Baby Boom homeowners; for nonhomeowners, net worth between the older and younger cohorts differs by only $2,300 to $3,700. Median net worth has increased across the cohorts for all education levels, but much less so for those without a high school degree. Both single headed households and households headed by a married couple have seen increases in net worth; however, the increases have been much smaller for single headed households. These trends have increased the disparity in net worth within the younger generations compared to the Pre-Baby Boom.

Table 1: The Median Value of Net Worth for Households Headed by a 25- to 34-Year Old—Differences by Homeownership, Marital Status, and Education

In 1998 dollars

	Median		
	Pre-Baby Boom (1962)	**Baby Boom (1983)**	**Generation X (1998)**
Homeowners	$25,594	$60,521	$43,100
Nonhomeowners	982	4,699	3,300
Less than high school	815	4,658	2,500
High school graduate	10,044	17,195	17,920
College graduate	23,953	36,569	30,020
Married	9,165	31,677	34,501
Not married	0	7,160	5,750
All households	**$6,072**	**$19,504**	**$15,500**

Source: GAO analysis based on data from the Survey of Consumer Finances.

Another measure of the well-being of different generations is the ratio of net worth, or wealth, to income. Median ratios of wealth to income for households headed by a 25- to 34-year old are presented in table 2. The Baby Boom and Generation X have higher wealth-to-income ratios than current retirees had at similar ages. This suggests that households in the younger generations have been able to accumulate more wealth than was the case for current retirees. The ratios also reflect the differences across demographic groups within generations. Within each generation, ratios of

wealth to income are higher for the well-educated, the married, and homeowners.

Table 2: Median Value of Wealth-to-Income Ratios for Households Headed by a 25- to 34-Year Old—Differences by Homeownership, Marital Status, and Education

	Median		
	Pre-Baby Boom (1962)	Baby Boom (1983)	Generation X (1998)
Homeowner	0.641	1.343	1.044
Nonhomeowners	0.052	0.167	0.151
Less than high school	0.029	0.216	0.159
High school graduate	0.278	0.525	0.586
College graduate	0.510	0.799	0.743
Married	0.261	0.755	0.742
Not married	0.000	0.299	0.268
All households	0.214	0.562	0.523

Source: Federal Reserve Board.

Note: GAO analysis based on data from the Survey of Consumer Finances.

Generation X and the Baby Boom Are Estimated to Have Similar Levels of Real Retirement Income, but Generation X Could Have Lower Replacement Rates

In our simulations, Generation X and the Baby Boom[16] have similar levels of retirement income in real terms (adjusted for inflation). Social Security benefit levels for Generation X and the Baby Boom will depend on how the Social Security funding shortfall is resolved. The shift to greater DC pension coverage does not have much effect on the pension income of Generation X relative to the Baby Boom. However, replacement rates for Generation X are estimated to be lower than for the Baby Boom under each scenario we considered, suggesting retirement income for Generation X may not keep up with the rising standard of living, absent increases in other sources of retirement income, or increases in rates of return.

[16]For our analyses, we considered two illustrative birth cohorts—Baby Boomers born in 1955 and Generation Xers born in 1970.

Cross-generational Comparisons of Retirement Income Levels Will Be Affected by the Resolution to the Social Security Funding Shortfall

Our simulations suggest that Generation X will have real retirement income[17] that is similar or somewhat higher than the Baby Boom, depending on how the Social Security funding shortfall is resolved.[18] If the shortfall is resolved by increasing the program's revenues[19] to maintain scheduled benefits, then Generation X is estimated to have somewhat higher real retirement income at age 62 than the Baby Boom generation. (See table 3.) Because our simulations assume that real earnings increase over time,[20] Generation X would have higher Social Security benefits than the Baby Boom. However, if the shortfall is resolved through gradual benefit reductions over time,[21] then Generation X is estimated to have real retirement income levels at age 62 that are more similar to those of the Baby Boom. (See table 4.) Because the benefit reductions increase over time, they would have more impact on Generation X than on the Baby Boom, leading to slightly lower Social Security benefits for Generation X relative to the Baby Boom.

[17]Due to the current state of the simulation models used, the measure of retirement income used here includes Social Security benefits, private pension income, and spouse's earnings. Private pensions include both DB and DC plans. See appendix I for a description of the DB and DC plans modeled.

[18]While there are many ways of achieving the same result, we chose to focus on the polar cases or bounds for change within the current system. For additional information on the benchmarks, see U.S. General Accounting Office, *Social Security: Program's Role in Helping Ensure Income Adequacy*, GAO-02-62 (Washington, D.C.: Nov. 30, 2001) and appendix I.

[19]There would be no change in benefits, but additional revenue would enter the system through increased taxes, general revenue transfers, or some similar means.

[20]Our simulations are based on the intermediate assumptions in the 2001 Social Security Trustees Report.

[21]There would be no change in the amount of revenue entering the system, instead, initial Social Security benefits would be reduced each year in order to make the system solvent over the 75-year projection period.

Table 3: Median Monthly Household Retirement Income and Its Major Components, at Age 62, if Social Security Shortfall Addressed by Increasing Revenues

	Baby Boom	Generation X
Retirement income	$3,147	$3,365
Pension income (DB and DC)	$962	$942
Social Security benefits	$1,366	$1,549

Source: GEMINI/PENSIM.

Note: Median values at age 62 discounted to 2001 dollars and DC account balances annuitized at retirement. Not all components of retirement income are shown. Pension income is measured across all individuals in the cohort. Median pension income for those covered by a pension is $1,495 for the Baby Boom and $1,440 for Generation X. In our simulations, the rates of return for DC pension contributions vary over time and by individual. Median spousal earnings for those spouses working are $3,295 for the Baby Boom and $3,375 for Generation X.

Changes to the Social Security system could also affect other forms of retirement income, especially those not considered here. If program revenues were increased by raising Social Security payroll taxes, then individuals would have less disposable income to save for retirement. This could take the form of decreases in personal saving or lower contributions to DC pension plans. Instead, if general revenues were used, the funding of other programs could be affected, which could lower some individuals' income from other income support programs, such as Supplemental Security Income (SSI). The timing and implementation of the changes to the Social Security system are also relevant since action taken later rather than sooner would necessitate larger tax increases or benefit reductions and the impact on Generation X could be even greater.

Table 4: Median Monthly Household Retirement Income and Its Major Components, at Age 62, if Social Security Shortfall Addressed by Reducing Benefits

	Baby Boom	Generation X
Retirement income	$3,011	$2,991
Pension income (DB and DC)	$962	$942
Social Security benefits	$1,234	$1,199

Source: GEMINI/PENSIM.

Note: Median values at age 62 discounted to 2001 dollars and DC account balances annuitized at retirement. Not all components of retirement income are shown. Pension income is measured across all individuals in the cohort. Median pension income for those covered by a pension is $1,495 for the Baby Boom and $1,440 for Generation X. In our simulations, the rates of return for DC pension contributions vary over time and by individual. Median spousal earnings for those spouses working are $3,295 for the Baby Boom and $3,375 for Generation X.

Generation X and the Baby Boom May Have Similar Levels of Pension Income Even When Pension Coverage Shifts from DB to DC Plans

Generation X and the Baby Boom are estimated to have similar levels of pension income when our simulations assume that the rate of DB and DC pension coverage is constant over time.[22] (See table 4.) DC account balances are annuitized at retirement to facilitate comparisons. While Generation X's simulated higher earnings might have suggested higher pension income as well, they may have been too young to completely benefit from the strong stock market of the 1990s. The assumption that the rate of pension coverage is constant over time has not been the experience of private pensions in the United States over the last 25 years. DB coverage has declined, and DC coverage has increased.

Generation X and the Baby Boom are estimated to have similar levels of pension income even when our simulations assume Generation X only has access to DC pension plans.[23] (See table 5.) While assuming that all pension coverage will shift to DC plans represents the extreme case, it does provide a bound to our estimates. These simulations provide some insight into the impact that the continuing shift from DB to DC pension coverage might have on retirement income for Generation X, since the final outcome of this shift is uncertain.

[22]The Economic Growth and Tax Relief Reconciliation Act of 2001 increased the limits on contributions to DC pension plans and the maximum DB pension. The act also contained a sunset provision, which will return these limits to their pre-act levels in 2010. Legislation has been proposed that would eliminate the sunset provision in the act. Since no action has been taken on this legislation, we present our findings under the sunset scenario. Our simulations of a no-sunset scenario appear in appendix II.

[23]This result may depend on the rates of return. In our analyses, the mean nominal rates of return, which all returns varied around, were 6.3 percent for Treasuries, 6.8 percent for corporate bonds, and 10 percent for equities. See the limitations of analysis in appendix I.

Table 5: Median Monthly Household Retirement Income and Its Major Components, at Age 62, if Social Security Shortfall Addressed by Reducing Benefits and Generation X Having Only DC Pension Plans

	Baby Boom	Generation X
Retirement income	$3,011	$3,096
Pension income (DB and DC)	$962	$984
Social Security benefits	$1,234	$1,199

Source: GEMINI/PENSIM.

Note: Median values at age 62 discounted to 2001 dollars and DC account balances annuitized at retirement. Not all components of retirement income are shown. Pension income is measured across all individuals in the cohort. Median pension income for those covered by a pension is $1,495 for the Baby Boom and $1,700 for Generation X. In our simulations, the rates of return for DC pension contributions vary over time and by individual. Median spousal earnings for those spouses working are $3,295 for the Baby Boom and $3,375 for Generation X.

Replacement Rates Lower for Generation X Relative to the Baby Boom

In our simulations, Generation X has a lower earnings replacement rate[24] than the Baby Boom (see table 6) even though the Baby Boom and Generation X are estimated to have similar levels of retirement income. Our assumption of increasing earnings over time leads to Generation X having a lower replacement rate. The largest difference between the cohorts, in terms of replacement rates, occurs under the Social Security benefit reduction scenario since benefit levels are falling more for Generation X while earnings are unchanged. While the shift in pension coverage raises the level of retirement income for Generation X, it does not change the replacement rate.[25]

The earnings replacement rate is an indicator of how well individuals are doing at maintaining their pre-retirement standard of living. While our estimated replacement rates do not cover all individuals in each generation or include all forms of retirement income, they still might indicate a decline in the standard of living during retirement for Generation X. However, this does not take into account that retirement income may increase because of behavioral changes or other external

[24]Our earnings replacement rate is calculated as retirement income at age 62 divided by earnings at age 61. Given the complexity of trying to calculate replacement rates at the household level when spouses are not the same age and beneficiaries become entitled at different ages, we calculated replacement rates at age 62 only for retired workers who had worked at age 61 and whose spouses, if married, were the same age.

[25]Our shift to all DC coverage assumed that some individuals who were previously covered by a DB plan would choose not to contribute to a DC plan. This decrease in pension coverage may offset the increase in pension income, leaving the median replacement rate unchanged.

factors. Since Generation X is still relatively young, it is possible that some members of this cohort may change their behavior and save more or work longer.[26] Also, variations in rates of return could be greater than expected, causing some individuals in our simulations to experience higher asset returns. Any of these factors could raise retirement income and, possibly, Generation X's replacement rate. If this were to occur, the difference in replacement rates between the Baby Boom and Generation X could be smaller than we estimate.

Table 6: Median Household Replacement Rates for Baby Boom and Generation X

	Baby Boom	Generation X
Social Security Tax Increase Scenario, Constant DB/DC	74.6%	68.1%
Social Security Benefit Reduction Scenario, Constant DB/DC	70.7%	60.4%
Social Security Benefit Reduction Scenario, Generation X only has DC	70.7%	60.2%

Source: GEMINI/PENSIM.

Note: The replacement rate is calculated as retirement income at age 62 divided by earnings at age 61 for retired workers who worked at age 61 and whose spouses, if married, were the same age. Some but not all of the difference in replacement rates between generations may be explained by the difference in the normal retirement age.

The Distribution of Retirement Income Will Vary within Generations, and Certain Groups Will Be More Likely to Have Lower Retirement Incomes

Our simulations suggest that retirement income will vary significantly within both Generation X and the Baby Boom. Retirement income will also vary by demographic group, with income being lower for the less educated and single women.

[26]In order to facilitate comparison, we examined retirement income at age 62. However, differences in life expectancy and health status, particularly for Generation X, may lead to more years in retirement and a need for more assets. If people work longer because they are healthier and anticipate living longer, examining retirement income at 62 may not capture these behavioral changes.

The Distribution of Retirement Income Will Vary within Both Generation X and the Baby Boom

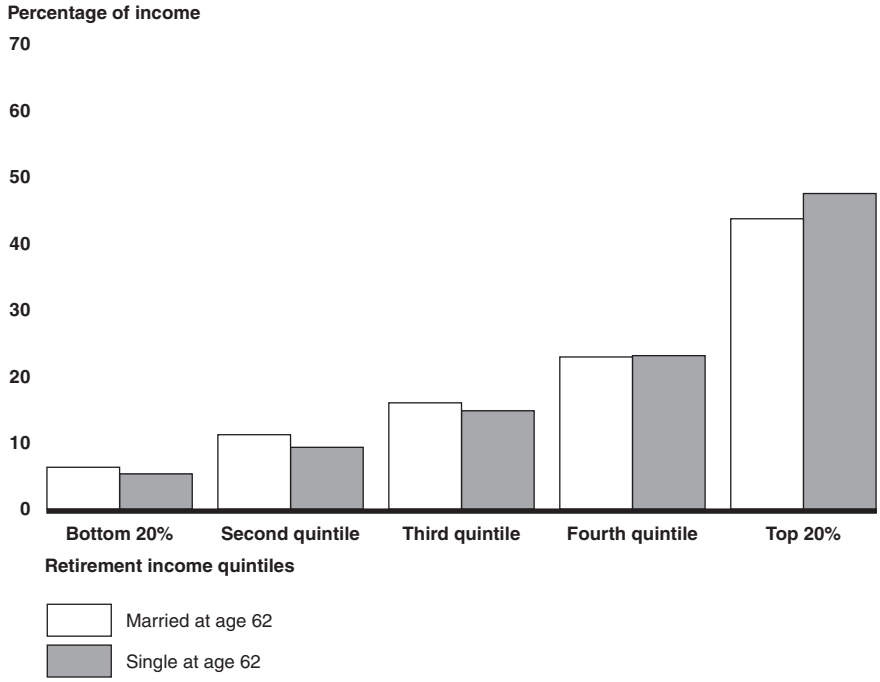
Simulated retirement income will vary widely across households within both Generation X and the Baby Boom.[27] For example, if married households in Generation X were arranged from lowest to highest in terms of their retirement incomes at age 62, the top 20 percent would receive over 40 percent of all retirement income while the bottom 20 percent would receive less than 7 percent. (See fig. 11.)[28] The disparity between the top 20 percent and bottom 20 percent is even larger for single persons. Because retirement income is closely linked to earnings, which are known to vary significantly,[29] this degree of variation in estimated retirement income is not surprising.

[27]Because projected distributions for the two generations are very similar we only present figures and tables for Generation X in this section and present the same information for the Baby Boomers in appendix II. The projections discussed here assume funded Social Security benefits, no extension of raised pension contribution limits, and the coverage rates for DB and DC pensions remain constant over time. The distributions under alternative scenarios, including employers only offering DC plans to Generation X, are also very similar (see app. II).

[28]Simulated retirement income is pre-tax and excludes important components of retirement income both of which affect the degree of variation. Examining after tax income would most likely reduce variation because of the progressive nature of the income tax. Simulated income exlcudes personal savings and SSI and other forms of public assistance. Including personal savings would most likely increase variation as there is great variation in the distribution of wealth. Including SSI would raise the bottom of the distribution (see Arthur B. Kennickell, *An Examination of Changes in the Distribution of Wealth from 1989 to 1998: Evidence from the Survey of Consumer Finances*, Federal Reserve Board (June 2000)).

[29]See U.S. Census Bureau, Current Population Reports: P60-204, *The Changing Shape of the Nation's Income Distribution 1947-1998*, (Washington, D.C.: 2000).

Figure 11: Proportion of Household Retirement Income for Each Quintile of the Retirement Income Distribution at Age 62 for Generation X

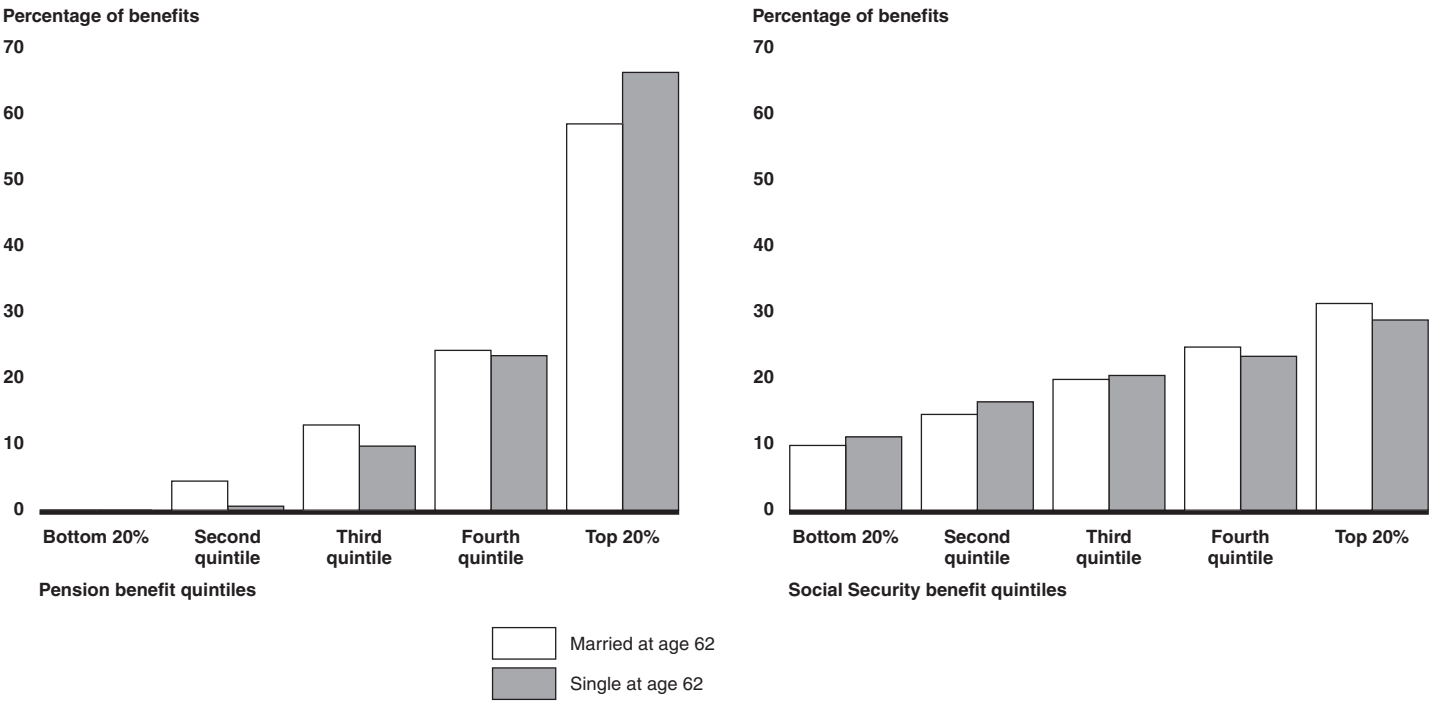


Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

When examining the sources of retirement income, simulated pension benefits are less evenly distributed than simulated Social Security benefits. Married couples in the top 20 percent in terms of pension benefits receive over 58 percent of all pension benefits while those in the bottom 20 percent receive no benefits at all, as shown for Generation X in figure 12. In comparison, married couples in the top 20 percent in terms of Social Security benefits receive about 31 percent of all Social Security benefits, while those in the bottom 20 percent receive about 10 percent.

Figure 12: Proportion of Household Pension Benefits and Household Social Security Benefits for Each Quintile of the Pension Benefit and Social Security Benefit Distributions at Age 62 for Generation X



Source: GEMINI/PENSIM.

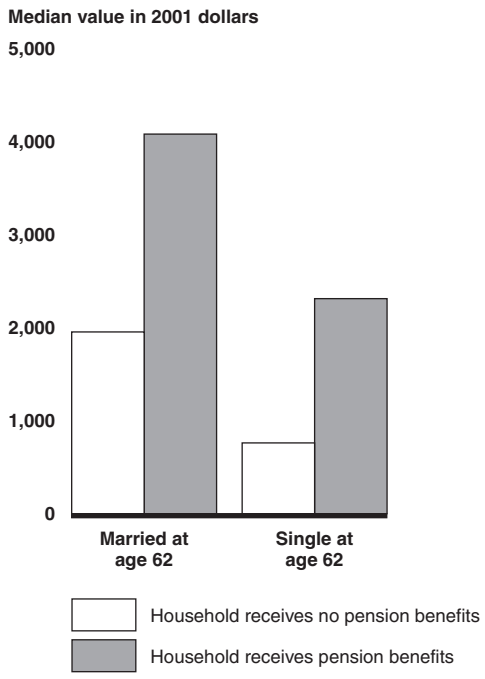
Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

Pension benefits are less evenly distributed for at least two reasons. First, by design, the Social Security benefit formula is more generous toward low-income and disabled workers, in contrast to pensions, which tend to play a larger role in the retirement income of higher earning workers.[30] Second, some workers have no pension coverage while nearly all workers are covered by Social Security. In our simulations, 20 percent of married households and 33 percent of single individuals in Generation X receive no pension benefits. The median retirement income for married households where at least one member has a pension is almost twice as large as the

[30]U.S. General Accounting Office, *Private Pension: Issues of Coverage and Increasing Contribution Limits for Defined Contribution Plans*, GAO-01-846 (Washington, D.C.: Sept. 2001).

median for married households where neither member has a pension. (See fig. 13.) The percentage difference between those with pensions and without pensions is even larger for single persons.

Figure 13: Median Monthly Household Retirement Income at Age 62 for Generation X by Pension Status



Source: GEMINI/PENSIM.

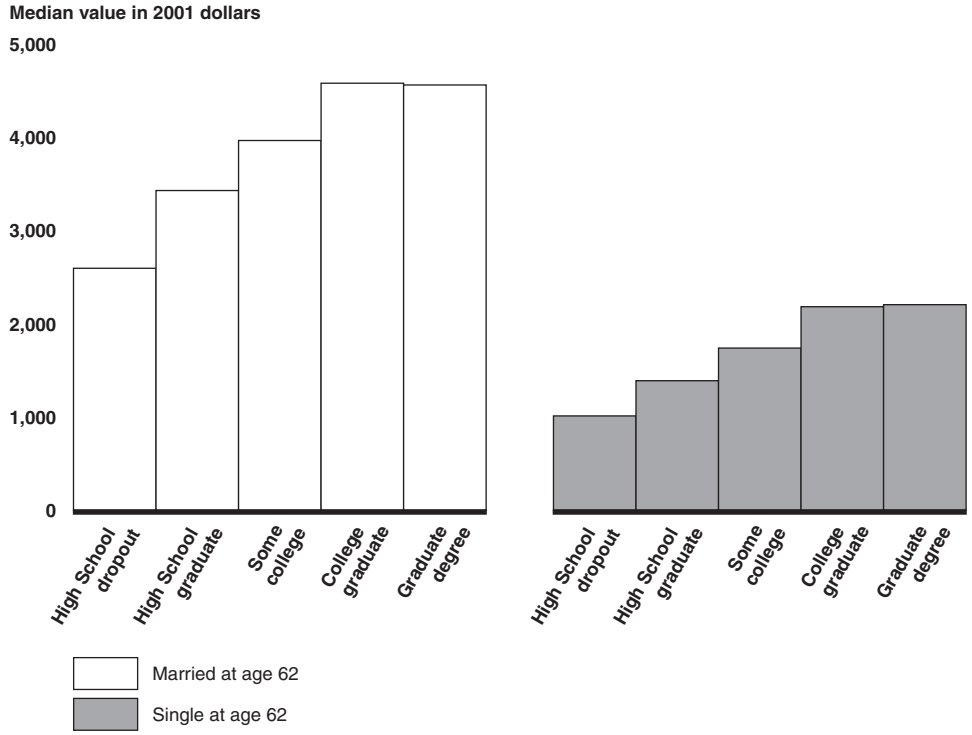
Note: Retirement income includes Social Security and pension benefits and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

Retirement Income Varies by Demographic Group

Simulated retirement income varies by educational attainment, marital status, and gender. Simulated retirement income is lower for those with less education, as shown for Generation X in figure 14. The median retirement income for married high school dropouts is about 43 percent less than the median for married college graduates. The percentage difference between single high school dropouts and single college graduates is even larger. The less educated have lower Social Security and pension benefits due to lower lifetime earnings and lower rates of pension coverage. In our simulations for Generation X, 66 percent of married

couples without high school degrees receive pension benefits as opposed to 87 percent of married college graduates.

Figure 14: Median Monthly Household Retirement Income at Age 62 by Educational Attainment for Generation X



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions. Educational attainment for married couples is defined as the attainment of the Generation X birth cohort member—the spouse may have attained a different level of education.

Simulated retirement income also varies by marital status with divorced and never married individuals having lower retirement incomes than widows and married couples. (See table 7.) Median retirement incomes for never married persons and divorced persons are about 23 percent less and 32 percent less, respectively, compared to that of widows. Median household retirement incomes for never married persons and divorced persons are about 58 percent less and 63 percent less, respectively, compared to that of married couples. Retirement incomes are less for

never married persons and divorced persons, even if one compares retirement income per household member.[31]

Table 7: Median Monthly Household Retirement Income at Age 62 by Marital Status for Generation X, in 2001 Dollars

	Household income	Income per household member
Never married	$1,572	$1,572
Married	$3,757	$1,878
Widowed	$2,047	$2,047
Divorced	$1,389	$1,389

Source: GEMINI/PENSIM.

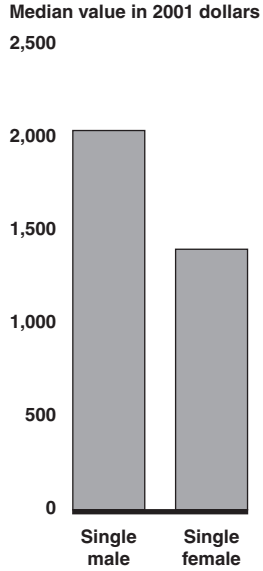
Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

How widows and married couples compare in terms of retirement income depends on the measure of income used. Widows have lower median retirement income than married couples using household income as the measure, but greater median retirement income using income per household member as the measure. (See table 7.) Whether or not married couples have a higher standard of living than widows depends on how much they save by sharing their expenses.

Simulated retirement income is lower for single women than for single men, as shown for Generation X in figure 15. The median retirement income for single women is about 31 percent less than the median for single men. Again this is due to lower lifetime earnings and a lower rate of pension coverage. Sixty-three percent of single women in Generation X receive pension benefits as opposed to 74 percent of single men.

[31]Comparing the retirement incomes of single individuals to married couples is complicated by the difference in household size. Comparing household income without adjusting for household size makes married couples appear better off than they may actually be because their incomes must support two people instead of one. Comparing income per household member makes married couples look worse than they may actually be because it assumes there are no savings associated with cohabitation. In this case, regardless of the measure chosen, divorced and never married persons have lower median retirement incomes.

Figure 15: Median Monthly Retirement Income at Age 62 by Gender for Single Person Households for Generation X



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security and pension benefits. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

Variation in simulated retirement income suggests some members of both generations may be at greater risk of retiring with insufficient resources. Assessing the sufficiency of simulated retirement income is difficult because we do not simulate assets, earnings in retirement, and SSI and other public assistance programs. However, retirees who earned low earnings over their working years may not have substantial assets or earnings in retirement, and SSI provides only a very modest level of support and is restricted to the poorest of retirees.

Concluding Observations

Our analysis of wealth at ages 25 to 34 and our simulations of Social Security and pension benefits at age 62 suggest that both the Baby Boom and Generation X are likely to have similar levels of retirement income in real terms, but that level may not support Generation X's future living standards. Our analysis also indicates that across the generations, similar subgroups of the population are most vulnerable in retirement.

The levels of retirement income that Baby Boom and Generation X workers will actually receive depend in part upon their own behavior, such as how long they work or how much they save, and in part upon factors they cannot control, such as the performance of the overall economy, the rate of return on financial investments, and changes in Social Security and health care financing. Individuals' behavior, and future economic events, may vary significantly from the assumptions underlying our models, especially for those workers who still have many years to work before retirement. In addition, estimates of future retirement income depend on adequate data on individuals' earnings, wealth, and pensions, not all of which are easily captured in existing data sets. Further, rising expectations about consumption, leisure and health care in retirement (and the costs of meeting these expectations) could require higher replacement rates for Generation X than for the Baby Boom in order to maintain the standards of living they achieved while working.

Government policy can potentially have an important effect on individuals' retirement income. Policies that encourage individuals to acquire more education and training, to work longer and to save more can help ensure higher retirement incomes in the future. Also, any reform that policymakers undertake with regard to the Social Security program or health care financing will have repercussions for the retirement income of Generation X and the younger half of the Baby Boom. Our work suggests the importance of all these policy actions reflecting a coordinated approach to future retirement income, and that they be made soon enough so the affected individuals will have adequate time to adjust their work and saving behavior accordingly. Finally, the continued vulnerability of certain segments of the population to inadequate resources at retirement suggests that successful retirement income policies would take potential impacts on these groups into consideration.

Agency Comments

We provided a draft of this report to SSA, Labor, and Treasury. All three provided technical comments, which we have incorporated as appropriate.

We are sending copies of this report to the Social Security Administration, the Department of Labor, and the Department of the Treasury. We will also make copies available to others on request. In addition, the report will be available at no charge on GAO's Web site at http://www.gao.gov.

If you have any questions concerning this report, please contact Barbara Bovbjerg at (202) 512-7215. See appendix III for other contacts and staff acknowledgments.

Sincerely yours,

Barbara D. Bovbjerg
Director, Education, Workforce
and Income Security Issues.

Appendix I: Scope and Methodology

To gain an understanding of what today's workers might expect to receive in terms of retirement income, we compared the wealth of current workers with that of current retirees, at similar points in their lives, and estimated the pension and Social Security benefits that the Baby Boom and Generation X might receive. To analyze personal wealth we used the Survey of Consumer Finances, a survey of U.S. households sponsored by the Board of Governors of the Federal Reserve System. To analyze how workers from the Baby Boom and Generation X compare in terms of the retirement income they can expect to receive and the likely distribution across workers within the Baby Boom and Generation X, we simulated expected retirement income at age 62.

Analysis of Personal Wealth

To analyze personal wealth, we used the Survey of Consumer Finances (SCF), a triennial survey of U.S. households sponsored by the Board of Governors of the Federal Reserve System with the cooperation of the U.S. Department of the Treasury. The SCF provides detailed information on U.S. households' balance sheets and their use of financial services, as well as on their pensions, labor force participation, and demographic characteristics as of the time of the interview. The SCF also collects information on households' total cash income, before taxes, for the calendar year preceding the survey. Because the survey is expected to provide reliable information both on assets that are fairly common—such as houses—as well as on assets that are owned by relatively few—such as closely held businesses—the SCF uses a sample design that includes a standard, geographically based random sample and a special over sample of relatively wealthy families. Weights are used to combine information from the two samples to make estimates for the full population. The 1962 SCF was conducted by the Census Bureau and surveyed 3,551 households. The 1983 SCF was conducted by the Survey Research Center of the University of Michigan and surveyed 3,824 households. The 1998 SCF was conducted by the National Opinion Research Center at the University of Chicago and surveyed 4,309 households.

Using the SCF, we analyzed how marital status, education, and homeownership are related to the wealth of households headed by a 25- to 34-year old. Using the 1962, 1983, and 1998 SCFs, we examined the ownership and level of household savings for current retirees (born between 1925 and 1945), the Baby Boom (born between 1946 and 1964), and Generation X (born between 1965 and 1976) when each generation

was 25 to 34 years old.[1] We selected this age group because this is the only age group for which we have data on personal wealth in each of the three generations.

Our measure of personal wealth includes tax favored retirement saving, such as individual retirement accounts (IRA) and 401(k)s and other thrift type plans, as well as savings that are not specifically dedicated to retirement but may enhance retirement income, such as liquid financial assets (checking accounts, savings accounts, money market deposit accounts, and money market mutual funds), other financial assets (certificates of deposit, mutual funds, stocks, and bonds), housing assets, and nonhousing assets (nonresidential real estate, business interests, and vehicles).[2] We also looked at housing liabilities and nonhousing liabilities (credit cards, installment loans, and other debts). For each component of personal wealth, we calculated the percentage of households owning that type of wealth as well as the median value. We looked separately at assets and debt and then combined them to calculate individual net worth.

For studies in which the focus is on saving or net worth, the SCF is preferable to other household income surveys, such as the Panel Study of Income Dynamics (PSID) or the Survey of Income and Program Participation (SIPP). The SCF has more detailed information about wealth holding, better distributional characteristics, less item nonresponse, and fewer imputed variables than the PSID or the SIPP.[3] However, the SCF, like all surveys, is subject to sampling errors, reporting errors, and nonresponse errors. Sampling errors result from the fact that survey estimates are based on a sample of the population rather than on a complete census of the population. Reporting errors arise because respondents may not understand what is wanted, may not know the information requested, or may be reluctant to reveal their actual income or wealth. Nonresponse errors arise when the family selected for

[1]Our analysis does not include every year of each generation. We selected household heads age 25-34 in the SCFs corresponding to those born between 1928 and 1937; 1949 and 1958; and 1964 and 1973.

[2]For individuals covered by pension plans, the SCF includes amounts accumulated under defined contribution plans but does not capture the expected value of future benefits under defined benefit plans.

[3]Karen M. Pence, *401(k) and Household Saving: New Evidence from the Survey of Consumer Finances* (Federal Reserve Board of Governors Working Paper, Dec. 2001), 4.

participation is not available to be interviewed, either because they refuse to participate or cannot be contacted.

Further, the sample sizes for the SCF are relatively small compared with surveys such as the Current Population Survey. For our analysis, we are concerned with the fact that small samples are vulnerable to bias from observations not representative of the population as a whole. For all of these reasons, our numbers should be interpreted with some caution.

Analysis of Simulated Retirement Income

To analyze how workers from the Baby Boom and Generation X compare in terms of the retirement income they can expect to receive and the likely distribution across workers within the Baby Boom and Generation X, we simulated expected retirement income at age 62. Our measure of retirement income consists of pension income, Social Security benefits, and spouse's earnings. It does not include personal savings, earnings in retirement, health benefits, or income from other income support programs (e.g., Supplemental Security Income). For our simulations, we used the Social Security and Accounts Simulator (SSASIM), Genuine Microsimulation of Social Security and Accounts (GEMINI), and Pension Simulator (PENSIM) simulation models. GEMINI estimated Social Security benefits and PENSIM estimated pension income from defined benefit and defined contribution plans for the 1955 birth cohort (Baby Boom) and the 1970 birth cohort (Generation X) and their spouses. Retirement income and its components were discounted to 2001 dollars, allowing us to make comparisons across cohorts in terms of the level of retirement income. However, these comparisons do not give an indication of standards of living in retirement. To make this comparison, we looked at the earnings replacement rate, calculated as retirement income at age 62 divided by earnings at age 61 for retired workers who worked at age 61 and whose spouse, if married, was the same age.

To examine the distribution of retirement income within both generations, we calculated the degree of variation by arranging households by retirement income and finding the proportion of that income received by each quintile.[4] To compare groups by demographics, we calculated median retirement income by educational attainment, gender, and marital status. Due to the difference in household size, we performed most of the above

[4]These calculations were repeated for pension income and Social Security benefits separately.

calculations separately for married couples and singles—those widowed, divorced, or never married—at age 62. When examining retirement income by marital status we calculated both household income and income per household member.[5]

SSASIM

SSASIM[6] is a Social Security policy simulation model developed by the Policy Simulation Group (PSG). The initial version of the model was developed under a series of contracts from the Social Security Administration as part of the 1994-96 Advisory Council on Social Security. SSASIM consists of two models, a macro model of aggregate program finances, and an embedded micro model of selected cohort individuals. In addition to current law policy, the model can simulate a variety of policy reforms, from incremental changes to broader structural reforms that would introduce individual accounts into the broader Social Security system.

GEMINI

GEMINI[7] is a policy microsimulation model also developed by the PSG. GEMINI is useful for analyzing the lifetime implications of Social Security policies for a large sample of people born in the same year and can simulate different reform features for their effects on the level and distribution of benefits. GEMINI uses as input birth cohort samples generated by PENSIM so as to represent the demographic and economic characteristics of historical birth cohorts. Also, GEMINI incorporates the same kind of Old Age, Survivor and Disability Insurance (OASDI) program logic as used in the micro model of SSASIM, with almost all assumption and policy parameters read from a SSASIM input database. GEMINI produces output files that contain detailed information about the life

[5]Comparing the retirement incomes of single individuals to married couples is complicated by the difference in household size. Rather than arbitrarily choosing an equivalence scale, we bounded the problem by comparing household income and income per household member. Comparing household income without adjusting for household size provides an upper bound for the income of married couples relative to the income of singles because it assumes that total household living expenses for two people are the same as for one. Comparing income per household member provides a lower bound for the income of married couples relative to the income of singles because it assumes there are no savings associated with cohabitation.

[6]For more information on SSASIM go to http://www.polsim.com/SSASIM.html.

[7]For more information on GEMINI go to http://www.polsim.com/GEMINI.html.

events and annual OASDI program experience of each individual in the cohort sample.

For our report, the PSG produced the GEMINI output files using the same 1955 and 1970 birth cohorts used in PENSIM for both a scheduled and funded Social Security scenario (see following paragraphs for more details.) The PENSIM and GEMINI output files were then merged, yielding an output file containing yearly Social Security benefits, pension income, and spouse's earnings from age 62 until death for each member of the cohort.

PENSIM

PENSIM[8] is a pension policy simulation model that is being developed by the PSG to analyze lifetime coverage and adequacy issues related to employer-sponsored pension plans. The development of PENSIM has been funded since 1997 by the Office of Policy and Research at the Employee Benefits Security Administration of the U.S. Department of Labor. PENSIM produces a random sample of simulated life histories for 100,000 people in a birth cohort and for their spouses who may have been born in a different year. The members of the birth cohort experience demographic and economic events, the incidence and timing of which vary by age, gender, education, disability, and employment status. The types of life events that are modeled in PENSIM include:

- demographic events (birth, death);
- schooling events (leaving school at a certain age, receiving a certain educational credential);
- family events (marriage, divorce, childbirth);
- disability events;
- initial job placement;
- job mobility events (earnings increases while on a job, duration of a job, movement to a new job, or out of the labor force);
- pension events (becoming eligible for plan participation, choosing to participate, becoming vested, etc.); and
- retirement events.

For our report, we specified a DB and DC pension plan, which the PSG entered into PENSIM to be used with the 1955 and 1970 birth cohorts to simulate pension benefits for the Baby Boom and Generation X. These

[8]For more information on PENSIM go to http://www.polsim.com/PENSIM.html.

simulations were conducted under both a sunset and no sunset pension scenario as well a scenario where Generation X only had access to DC pensions (see following discussion for more details).

Defined Benefit Plan

Our simulations assume a single type of DB pension plan for all workers covered by such a plan. This plan's structure is similar to the most common type of DB pension plan[9] in the private sector.[10]

In terms of structure, this plan has an eligibility requirement (consisting of a minimum age of 21 and 1 year of service) and 5 years cliff vesting. The plan's normal retirement age is 62 for workers with any years of service, and it has an early retirement option, with early retirement benefits beginning at age 55 for workers with 10 years of service. If a worker chooses to retire early there is a linear early retirement reduction of 5 percent per year (e.g., if a worker retires at age 55, he would receive 65 percent of the normal retirement benefit).[11] The plan pays a monthly benefit at retirement, rather than a lump sum.

In terms of the calculation of benefits, the traditional DB plan calculates benefits using a final average pay formula, such as:

X% * average Y years earnings at the end of career or when highest * years of service.

Surveys of DB plans in the United States indicate that, typically, the percentage credit (X%) is in the range of 1-1.75 percent.[12] For this report

[9]This section relies on data from the forthcoming report, Martin R. Holmer and Asa M. Janney III, Policy Simulation Group. *Characteristics of Pension Plans in the United States, 1996-98*, a report prepared at the request of the U.S. Department of Labor, Employee Benefits Security Administration, Office of Policy and Research, Feb. 25, 2003.

[10]However, DB plans in the future may differ as firms have been increasingly switching to cash balance plans. Cash balance plans are a type of DB plan that combine certain features found in both DB and DC plans. Participants' benefits are determined by a formula, like a DB plan, but benefits are expressed as account balances, similar to DC plans. U.S. General Accounting Office, *Cash Balance Plans: Implications for Retirement Income*, GAO/HEHS-00-207 (Washington, D.C.: Sept. 29, 2000) and *Answers to Key Questions About Private Pension Plans*, GAO-02-745SP (Washington, D.C.: Sept. 18, 2002).

[11]In our simulations all individuals retire at age 62.

[12]See U.S. Department of Labor, Bureau of Labor Statistics, *Employee Benefits in Medium and Large Private Establishments, 1997*, Bulletin 2517 (Washington, D.C.: Sept. 1999) and U.S. General Accounting Office, *Private Pensions: Implications of Conversions to Cash Blance Plans*, GAO/HEHS-00-185 (Washington, D.C.: Sept. 29, 2000).

we chose 1.25 percent. The most common definition of final average pay is the high consecutive 5 years of earnings. Therefore, the formula that we use to calculate DB benefits is:

1.25% * average of high consecutive 5 years pay * years of service.

Defined Contribution Plan

In our simulations of DC plans, all individuals covered by a DC pension plan are covered by the same plan. This plan's structure is similar to the most common type of DC pension plan[13] in the private sector.[14]

In terms of structure, this plan has an eligibility requirement (consisting of a minimum age of 21 and 1 year of service) and 5 year graded vesting.[15] At retirement,[16] individuals annuitize their account balances,[17] with married individuals purchasing a joint and one-half survivor annuity and single individuals purchasing a single life annuity.

Employees can contribute up to 12 percent of their earnings[18] and the employer match 50 percent of the employees' contributions up to 5 percent.[19] Employees can invest their contributions in their choice of equities and fixed income assets, where the fixed income assets will

[13]This section relies on data from the forthcoming report, Martin R. Holmer and Asa M. Janney III, Policy Simulation Group. *Characteristics of Pension Plans in the United States, 1996-98*, a report prepared at the request of the U.S. Department of Labor, Employee Benefits Security Administration, Office of Policy and Research, Feb. 25, 2003.

[14]This plan will most likely resemble a 401(k) plan.

[15]Graded vesting implies that an employee's nonforfeitable percentage of the employer contributions increases over time until it reaches 100 percent. In our simulations the nonforfeitable percentage reaches 100 percent after 5 years.

[16]In our estimates all individuals retire at age 62.

[17]In our simulations all individuals are assumed to purchase a nominal annuity.

[18]The dollar limit on employee contributions is $11,000 for 2002, increasing by $1,000 per year until reaching $15,000 in 2006 and is then adjusted for inflation in $500 increments.

[19]By law, combined employer and employee contributions are limited to the lesser of $35,000 or 25 percent of compensation in 2001. Beginning in 2006, combined contributions will be limited to the lesser of $40,000 (indexed for inflation) or 100 percent of compensation.

consist of Treasury bonds and corporate bonds.[20] Employees who leave before retirement can choose to have their account balances rolled over into another retirement account. In our simulations, rollover decisions are based on the data in table 11.

Assumptions also need to be made regarding participation and contribution rates, and asset allocation. Tables 8-11 provide information on the assumptions used for each of these factors. Table 8 provides data on participation rates by age and salary.

Table 8: Participation Rates by Age and Salary, 2001

Age	<$20,000	$20,000-$39,999	$40,000-$59,999	$60,000-$79,999	$80,000-$99,999	>$100,000
<20	17.2%	44.4%	[a]	[a]	[a]	[a]
20-29	32.1%	65.9%	78.0%	91.2%	93.1%	95.0%
30-39	45.2%	79.5%	89.0%	94.1%	95.6%	97.0%
40-49	49.9%	83.2%	88.0%	95.0%	96.8%	97.5%
50-59	57.7%	85.5%	83.7%	93.8%	96.6%	97.9%
60+	64.0%	86.7%	83.6%	90.3%	94.7%	96.2%

Source: Research Report: How Well are Employees Saving and Investing in 401(k) Plans, Hewitt Financial Services, 2001.

Note: In order to use these participation rates in our simulations, the salary categories listed in the table were normalized by dividing by the average wage index in 2001.

[a]Not applicable.

Data on contribution rates by age and salary are shown in table 9.

Table 9: Contribution Rates by Age and Salary, 1999

Age	<$20,000	>$20,000-$40,000	>$40,000-$60,000	>$60,000-$80,000	>$80,000-$100,000	>$100,000
20-29	5.1%	5.3%	6.8%	7.4%	6.8%	4.8%
30-39	6.4%	6.2%	6.8%	7.2%	6.9%	5.1%
40-49	6.9%	6.7%	7.1%	7.3%	6.8%	5.0%
50-59	7.8%	7.6%	8.3%	8.2%	7.3%	5.1%
60+	9.0%	8.5%	9.3%	9.0%	7.9%	5.1%

Source: Contribution Behavior of 401(k) Plan Participants, Sarah Holden and Jack VanDerhei, ICI Perspective, vol. 7/no. 4, October 2001 and Research Report: How Well Are Employees Saving and Investing in 401(k) Plans, Hewitt Financial Services, 2001.

[20]The mean nominal rates of return, which all returns varied around, for each asset class was 6.3 percent for Treasuries, 6.8 percent for corporate bonds, and 10 percent for equities, consistent with the assumptions used by the Office of the Chief Actuary at the Social Security Administration.

Note: Since high income individuals are constrained by limits on total contributions within a given year, and the rates in this table fall at higher salary levels, we used the data for the >$60,000 to $80,000 salary range for those salaried above $80,000. In order to use these contribution rates in our simulations, the salary categories listed in the table were normalized by dividing by the average wage index in 1999.

Table 10 provides data on average asset allocation rates by age and investment options.

Table 10: Average Asset Allocation Rates by Age and Investment Options, 2000

Age	Equity Funds	Balanced Funds	Bond Funds	Money Funds
20-29	77.7%	8.0%	7.1%	5.8%
30-39	78.7%	8.6%	6.4%	4.7%
40-49	74.1%	9.7%	7.7%	6.1%
50-59	67.4%	10.8%	9.3%	8.4%
60+	55.8%	12.5%	13.8%	12.4%

Source: 404(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2000, Sarah Holden and Jack VanDerhei, ICI Perspectives, vol. 7/no. 5, November 2001.

Note: Because the model we used has different investment categories than those listed in the table, money funds were put into Treasury bonds, bond funds were put into corporate bonds, and balanced funds were split evenly between equities and corporate bonds. Percentages in the table are percent of account balances.

Data on the distribution of assets at termination by asset levels is shown in table 11.

Table 11: Assets at Termination, 2000

Assets	Stayed in plan	Rolled over	Cashed out
<$10,000	21%	48%	32%
$10,000-$49,999	62%	27%	11%
$50,000-$99,999	69%	27%	4%
$100,000-$199,999	69%	28%	2%
$200,000+	69%	29%	2%

Source: Building Futures: How Workplace Savings are Shaping the Future of Retirement, Fidelity Investments, 2001.

Note: In our simulations, if a job ends without disability or retirement, the individual has the choice to rollover the funds to another retirement account. The percentages in the cashed out category were used as the probability of not rolling the funds into another retirement account at termination. Also, the dollar amounts were normalized by dividing by the average wage index in 2000.

Alternative Scenarios for Pensions and Social Security

Pensions

Our simulations considered several scenarios for pension benefits. One assumed that the sunset provision in the Economic Growth and Tax Relief Reconciliation Act (EGTRRA) of 2001 holds[21] and the other that the provisions in EGTRRA, which raise the limits on both DB and DC plans, do not sunset.[22] We also considered the scenario where the shift in coverage reached its extreme and Generation X only had access to DC plans.

Social Security

Our simulations of expected Social Security benefits consider two different scenarios[23] for resolving the funding shortfall. One scenario assumes scheduled benefits are paid while payroll taxes are increased to levels that support those benefits. Our scheduled benefits scenario increases the payroll tax once and immediately by the amount of the OASDI actuarial deficit as a percent of payroll so that benefits under the current system can continue to be paid throughout the simulation period.

The other scenario, the funded benefits scenario, assumes that benefits are reduced to levels supportable by current payroll tax rates. The benefit reductions used in this scenario reduce the primary insurance amount (PIA) formula factors by equal percentage point reductions (by 0.319 each year for 30 years) for those newly eligible in 2005, subjecting earnings across all segments of the PIA formula to the same reduction.

Assumptions and Limitations of the Simulation Analysis

Simulating retirement income almost 30 years into the future requires many assumptions and simplifications and, consequently, our simulations have a number of limitations. A primary limitation of our analysis is that our simulations do not include important components of retirement income such as personal savings, earnings in retirement, health benefits,

[21]The sunset provision would return any changes made under EGTRRA to their previous levels.

[22]See appendix II for figures and tables showing the level of real retirement income, replacement rates, and distributional statistics for the no sunset scenario.

[23]For additional information on the benchmarks, see U.S. General Accounting Office, *Social Security: Program's Role in Helping Ensure income Adequacy*, GAO-02-62 (Washington, D.C.: Nov. 30, 2001) and *Social Security Reform: Analysis of Reform Models Developed by the President's Commission to Strengthen Social Security*, GAO-03-310 (Washington, D.C.: Jan. 15, 2003).

and other public assistance programs such as SSI. Including personal savings might reduce retirement income for Generation X relative to retirement income for the Baby Boom if the post-1980 decline in personal savings rates continues.[24] Including earnings in retirement might increase Generation X's retirement income relative to the Boomers income if wages increase over time or if people in the future are more likely to work in retirement. From a distributional perspective, including personal savings would probably increase the upper quintile's share of retirement income[25] while including public assistance programs such as SSI would benefit the bottom of the distribution. Another component of well-being in retirement that we do not estimate are private and public health benefits. Including health benefits might reduce Generation X's standard of living in retirement relative to the Baby Boom due to falling health benefits and rising health care costs over time

An important assumption driving our results is that real wages grow over time. We assume real wages grow at 1.0 percent per year, following the 2001 Social Security Trustees Report's[26] intermediate assumption. If, instead, wages stagnate as in the 1980s and 1990s, then retirement income for Generation X relative to retirement income for the Baby Boom might be lower than our estimates.

Another critical assumption is the relative rate of DB and DC pension coverage. Over the last 25 years pension coverage has been shifting from DB to DC pensions. However, due to the uncertainty in predicting future relative coverage rates, our simulations either assume a constant rate of DB and DC coverage over time or only DC coverage for Generation X. The likely outcome is somewhere in between.

[24]On the other hand, over the same period household net worth increased potentially offsetting the impact of reduced saving rates on eventual assets in retirements. See U.S. General Accounting Office, *National Saving: Answers to Key Questions*, GAO-01-591SP (Washington, D.C.: June 2001).

[25]According to one analysis of the Survey of Consumer Finances, the top 10 percent of the wealth distribution held nearly 70 percent of all wealth. Arthur B. Kennickell, *An Examination of Changes in the Distribution of Wealth from 1989 to 1998: Evidence from the Survey of Consumer Finances*, Federal Reserve Board (June 2000).

[26]The Board of Trustees, Federal Old-Age and Surviviors Insurance and Disability Insurance Trust Funds, *The 2001 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds (*Washington, D.C.: Mar. 19, 2001).

An important omission under the scheduled Social Security benefit scenario is the impact of higher taxes or general revenue transfers on other sources of retirement income. Increased taxes or general revenue transfers will most likely be necessary to pay Social Security benefits as scheduled under current law. Tax increases might reduce saving for retirement and general revenue transfers might reduce funding for other government retirement programs such as SSI, Medicare, or Medicaid. The impact of tax increases may be larger for Generation X than for the Baby Boom because they will pay higher taxes for more years.

Another limitation is the sensitivity of estimated DC benefits to our assumptions about future rates of return. We assume individuals' rates of returns vary randomly around average rates projected by the Office of the Chief Actuary at SSA.[27] If average rates of return in the future are significantly different, then actual DC benefits could differ substantially from our simulations. While the model allows returns to vary stochastically by individuals, it cannot capture fluctuations in overall market rates of return. An ill timed stock market downturn could result in either generation's DC benefits being significantly lower than simulated. Retirement income for Generation X could be more sensitive to future rates of return than retirement income for the Baby Boom, if the trend toward DC pensions continues.

Another limiting assumption is that our simulations only include one kind of DB and DC plan, which clearly does not capture the full complexity of pension plans.[28] We attempted to choose the characteristics of each to be typical of today's pension plans. If they are not truly representative or if the characteristics of DB and DC plans change over time, then our results could be biased. In particular, the finding that the shift to DC plans only has a very modest effect on pension benefits may depend on our choice of plans.

While educational attainment has been increasing over time, this is not captured by the simulations. Both generations are assumed to achieve the same level of education as 35- to 44-year olds in the 1997 Current Population Survey. Higher levels of education for Generation X could increase their retirement income relative to the Baby Boom.

[27]The mean nominal rates of return, which all returns varied around for each asset class was 6.3 percent for Treasuries, 6.8 percent for corporate bonds, and 10 percent for equities.

[28]We did not examine the relative generosity of our DB and DC plans.

From a distributional perspective, the simulations are limited, in that they do not capture differences across the generations in the variation of earnings. By some measures, earnings disparity has been increasing over the last 20 years,[29] which could potentially lead to more variation in retirement income for Generation X.

The simulations assume the same cohort life expectancies as the 2001 Social Security Trustees Report's intermediate cost projection. Marital status at age 62 is calibrated to unpublished projections from the SSA's Office of the Chief Actuary. Assumed life expectancies may be too low, as some have argued that the Trustees underestimate future improvements in mortality rates.[30] Increased life expectancies would reduce DC benefits in our simulations because retirees would have to pay higher prices when annuitizing their retirement accounts.

Our simulations of retirement income do not take taxation into account. Incorporating taxes would not only lower disposable income, but would also reduce variation in income because federal tax rates are progressive and because only relatively higher income households are required to pay tax on their Social Security benefits.

Finally, we are only able to simulate retirement income for two illustrative birth cohorts as opposed to entire generations. The 1955 and 1970 birth

[29]Since the late 1960s inequality in individual earnings has been increasing as measured by Gini coefficients and the ratio of the 90th percentile to the 10th percentile. From the late 1960s to the early 1990s inequality in household income increased as measured by the share of aggregate income by income quintile. U.S. Bureau of the Census, *The Changing Shape of the Nation's Income Distribution 1947-1998*, Current Population Reports P60-204 (Washington, D.C.: June 2000).

[30]Social Security Advisory Board, *The 1999 Technical Panel on Assumptions and Methods: Report to the Social Security Advisory Board*, (Nov. 1999).

cohorts may not fully capture the experiences of the Baby Boom and Generation X, respectively.

Appendix II: Alternative Scenarios

For our analysis of estimated retirement income, we used two different scenarios for the changes to the pension limits under EGTRRA. One assumed that the sunset provision in EGTRRA holds and the other that the provisions, which raise the limits on both DB and DC plans, do not sunset.

Retirement Income Under the No-Sunset Pension Scenario

The following tables show estimated retirement income under the no-sunset pension scenario. Extending pension contribution limits beyond 2010 increases real retirement income and replacement rates for Generation X relative to real retirement income and replacement rates for the Baby Boom.

Table 12 shows the estimated median monthly household retirement income at age 62 under a scheduled (tax increase) Social Security scenario and a constant rate of DB and DC pension coverage.

Table 12: Median Monthly Household Retirement Income and its Major Components, at Age 62, if Social Security Shortfall Addressed by Increasing Revenues

	Baby Boom	Generation X
Retirement income	$3,156	$3,481
Pension income (DB and DC)	$966	$1015
Social Security benefits	$1,366	$1,549

Source: GEMINI/PENSIM.

Note: Median values at age 62 discounted to 2001 dollars and DC account balances annuitized at retirement. Not all components of retirement income are shown. Pension income is measured across all individuals in the cohort. Median pension income for those covered by a pension is $1,509 for the Baby Boom and $1,589 for Generation X. The rates of return for DC pension contributions vary over time and by individual. Median spousal earnings for those spouses working are $3,295 for the Baby Boom and $3,375 for Generation X.

Estimated median monthly household retirement income at age 62 under a funded (benefit reduction) Social Security scenario and a constant rate of DB and DC pension coverage is shown in table 13.

Table 13: Median Monthly Household Retirement Income and its Major Components, at Age 62, if Social Security Shortfall addressed by Reducing Benefits

	Baby Boom	Generation X
Retirement income	$3,021	$3,110
Pension income (DB and DC)	$966	$1015
Social Security benefits	$1,234	$1,199

Source: GEMINI/PENSIM.

Note: Median values at age 62 discounted to 2001 dollars and DC account balances annuitized at retirement. Not all components of retirement income are shown. Pension income is measured across all individuals in the cohort. Median pension income for those covered by a pension is $1,509 for the Baby Boom and $1,589 for Generation X. The rates of return for DC pension contributions vary over time and by individual. Median spousal earnings for those spouses working are $3,295 for the Baby Boom and $3,375 for Generation X.

Table 14 shows the simulated median monthly household retirement income at age 62 under a funded (benefit reduction) Social Security scenario and Generation X having only DC pension coverage.

Table 14: Median Monthly Household Retirement Income and its Major Components, at Age 62, if Social Security Shortfall Addressed by Reducing Benefits and Generation X Having Only DC Pension Plans

	Baby Boom	Generation X
Retirement income	$3,021	$3,195
Pension income (DB and DC)	$966	$1065
Social Security benefits	$1,234	$1,199

Source: GEMINI/PENSIM.

Note: Median values at age 62 discounted to 2001 dollars and DC account balances annuitized at retirement. Not all components of retirement income are shown. Pension income is measured across all individuals in the cohort. Median pension income for those covered by a pension is $1,509 for the Baby Boom and $1,835 for Generation X. The rates of return for DC pension contributions vary over time and by individual. Median spousal earnings for those spouses working are $3,295 for the Baby Boom and $3,375 for Generation X.

Replacement rates for the Baby Boom and Generation X under the different Social Security and pension coverage scenarios are shown in table 15.

Table 15: Median Household Replacement Rates for Baby Boom and Generation X

	Baby Boom	Generation X
Social Security Tax Increase Scenario, constant DB/DC	74.9%	70.9%
Social Security Benefit Reduction Scenario, constant DB/DC	71.0%	63.3%
Social Security Benefit Reduction Scenario, Generation X only has DC	71.0%	62.5%

Source: GEMINI/PENSIM.

Note: The replacement rate is calculated as retirement income at age 62 divided by earnings at age 61 for retired workers who worked at age 61 and whose spouses, if married, were the same age.

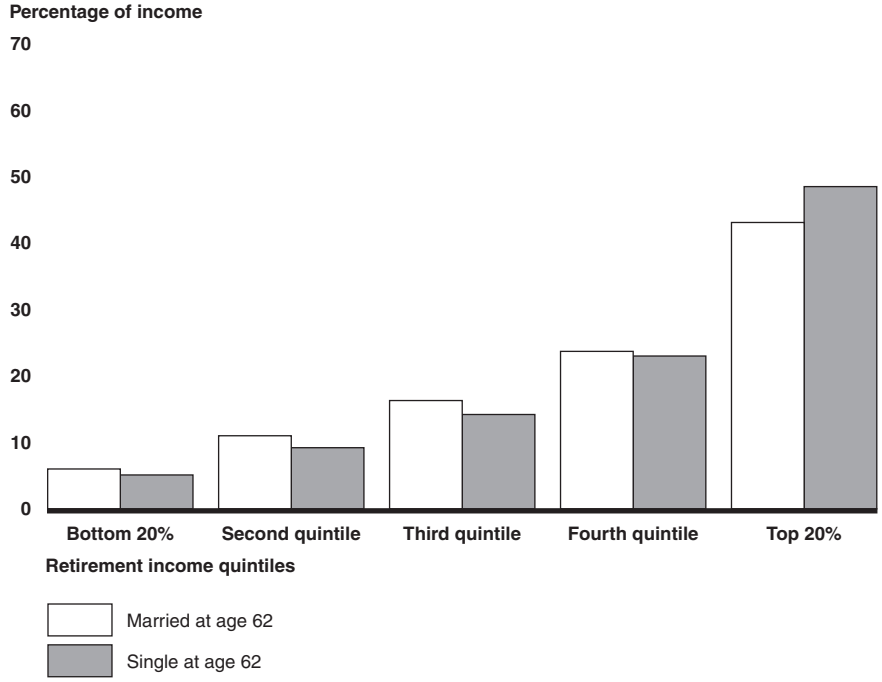
Distributional Figures and Tables for the Baby Boom and for Generation X under Alternative Scenarios

The distribution of simulated retirement income is very similar across the generations and across scenarios. For both generations and in all scenarios, retirement income is estimated to vary widely, pension benefits are less evenly distributed than Social Security benefits, and the less educated, single women, and those without pensions have lower retirement incomes.

Figures 16-20 and table 16 show the estimated distribution of retirement income for the Baby Boom assuming funded Social Security benefits, no extension of raised pension contribution limits beyond 2010, and a constant rate of DB and DC pension coverage over time. These are the same assumptions used for Generation X in figures 11-15 and table 7. We do not emphasize a comparison of the distributions across generations because our models do not capture differences across generations in the variation of earnings. By some measure earnings disparity has been increasing over the last 20 years,[1] which may result in retirement income varying more in Generation X than in the Baby Boom.

[1]U.S. Bureau of the Census, *The Changing Shape of the Nation's Income Distribution 1947-1998*, Current Population Reports: P60-204 (Washington, D.C.: June 2000).

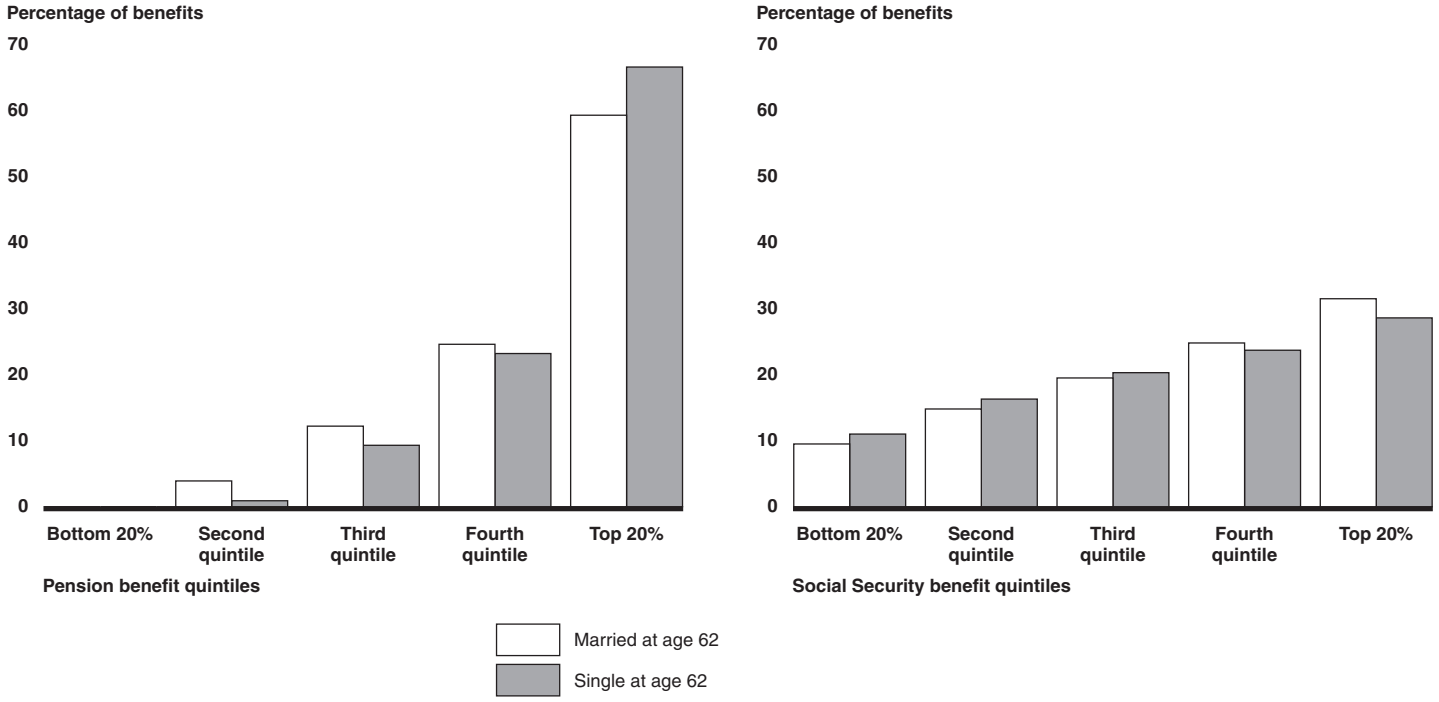
Figure 16: Proportion of Household Retirement Income for Each Quintile of the Retirement Income Distribution at Age 62 for the Baby Boom



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

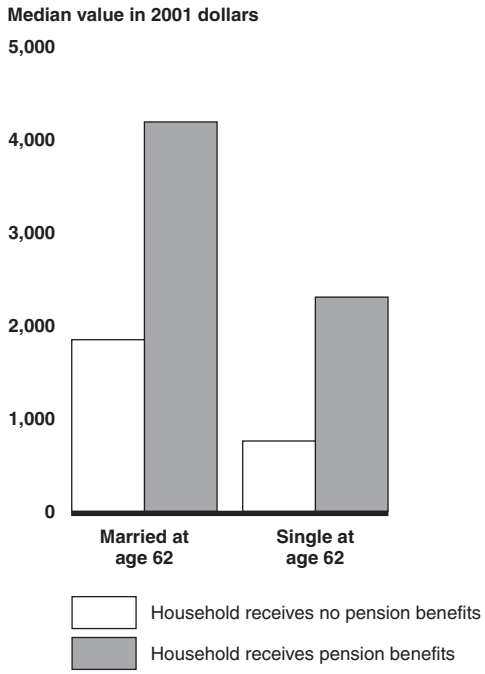
Figure 17: Proportion of Household Pension Benefits and Household Social Security Benefits for Each Quintile of the Pension Benefit and Social Security Benefit Distributions at Age 62 for the Baby Boom



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

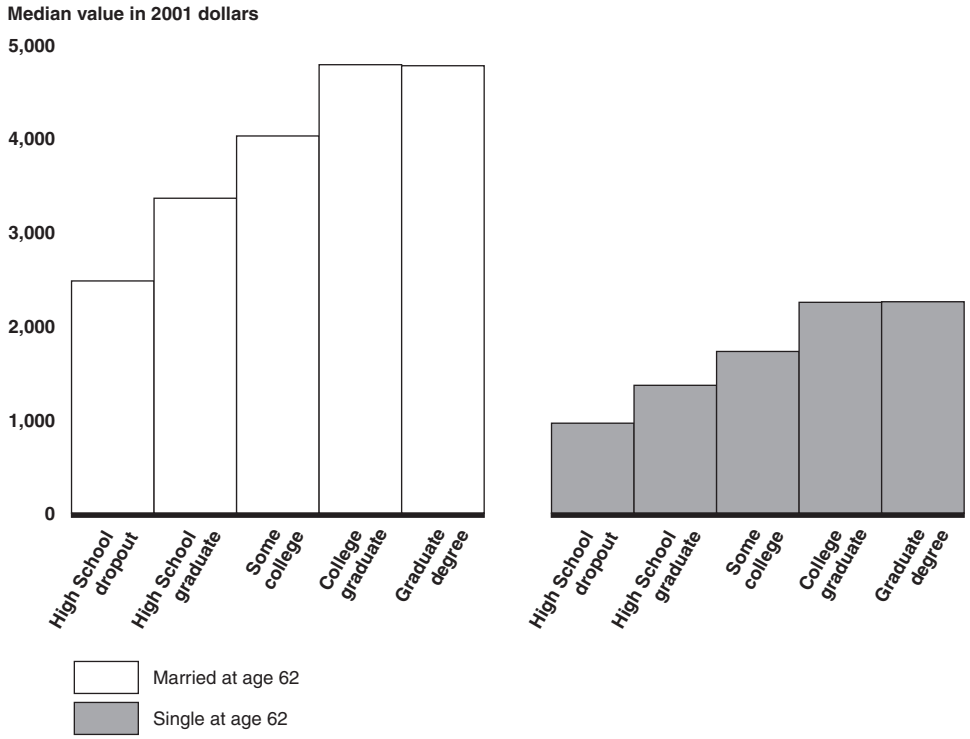
Figure 18: Median Monthly Household Retirement Income at Age 62 by Pension Status for the Baby Boom



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions

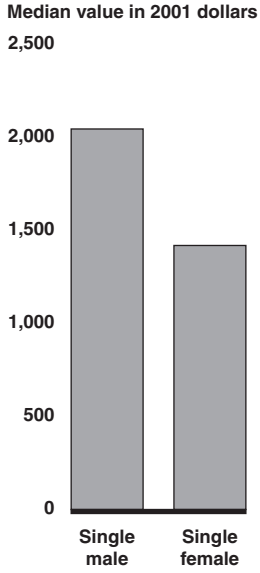
Figure 19: Median Monthly Household Retirement Income at Age 62 by Educational Attainment for the Baby Boom



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions. Educational attainment for married couples is defined as the attainment of the Baby Boom cohort member—the spouse may have attained a different level of education.

Figure 20: Median Monthly Retirement Income at Age 62 by Gender for Single Person Households for the Baby Boom



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security and pension benefits. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

Table 16: Median Monthly Household Retirement Income at Age 62 by Marital Status for the Baby Boom, in 2001 Dollars

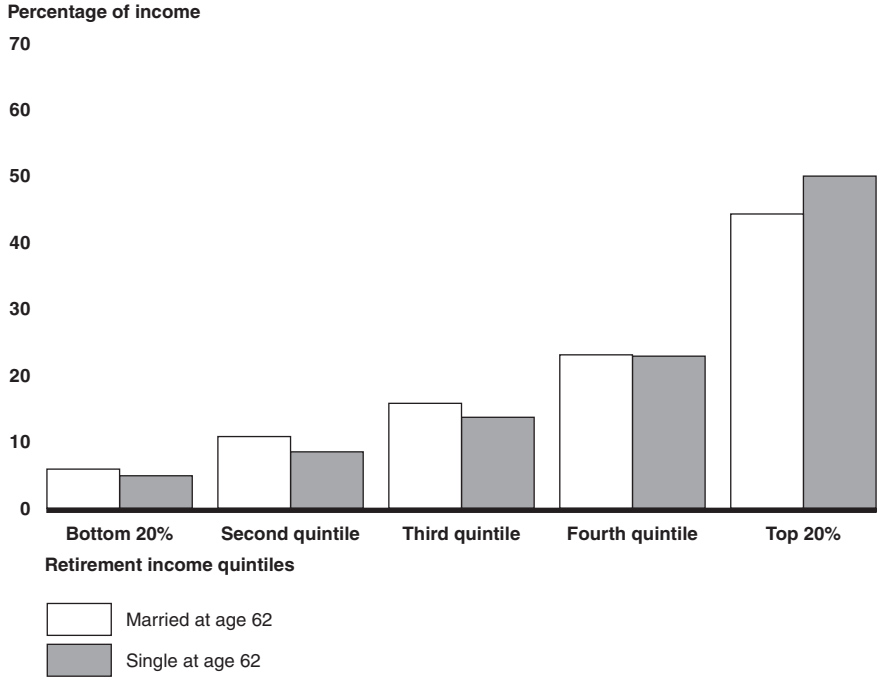
	Household income	Income per household member
Never married	$1,546	$1,546
Married	$3,783	$1,891
Widowed	$2,039	$2,039
Divorced	$1,399	$1,399

Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

Figures 21-25 and table 17 show the estimated distribution of retirement income for Generation X assuming funded Social Security benefits, no extension of raised pension contribution limits beyond 2010, and all pensions are DC pensions.

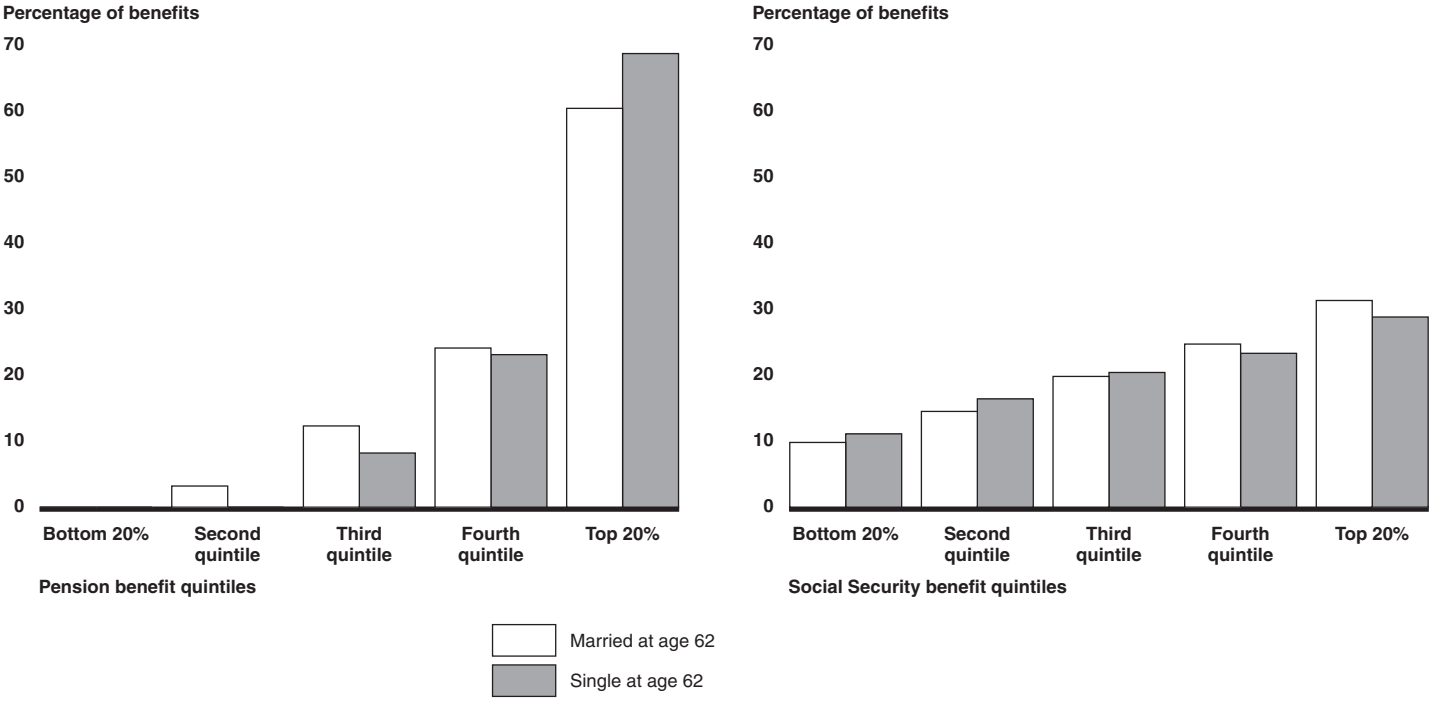
Figure 21: Proportion of Household Retirement Income for Each Quintile of the Retirement Income Distribution at Age 62 for Generation X When All Pensions Are DC Pensions



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and employers with pension plans only offer DC pensions.

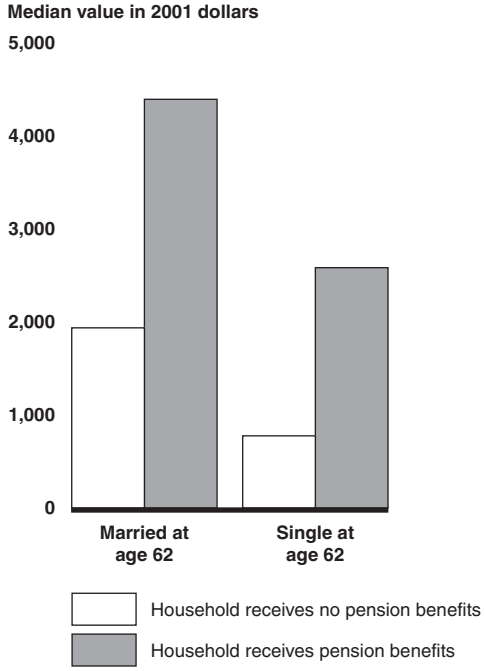
Figure 22: Proportion of Household Pension Benefits and Household Social Security Benefits for Each Quintile of the Pension Benefit and Social Security Benefit Distributions at Age 62 for Generation X When all Pensions are DC Pensions



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and employers with pension plans only offer DC pensions.

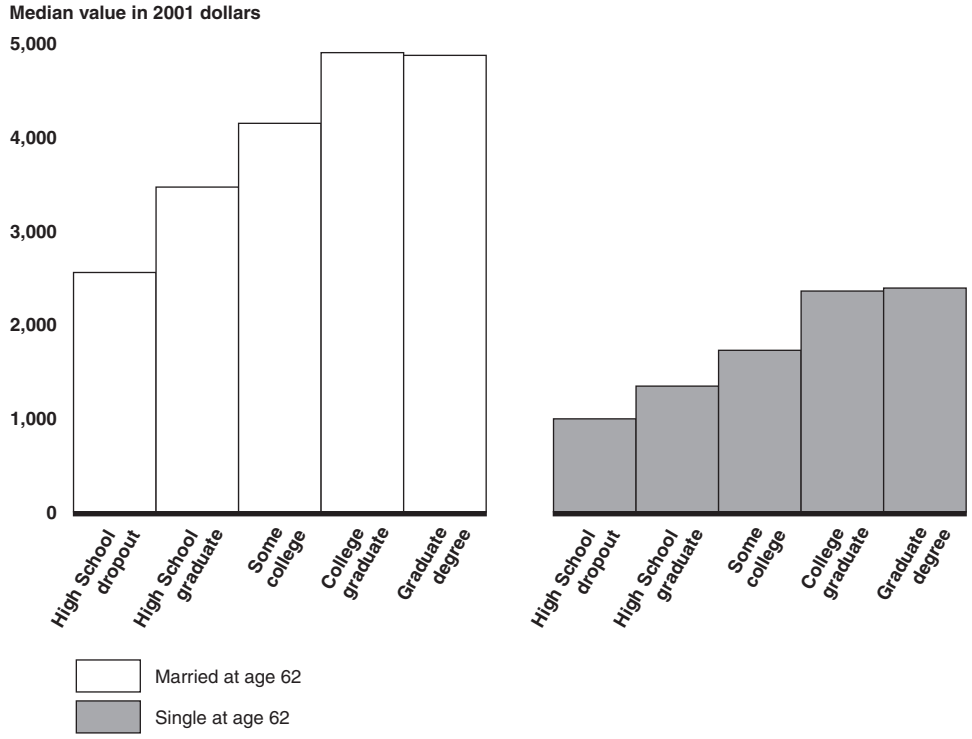
Figure 23: Median Monthly Household Retirement Income at Age 62 by Pension Status for Generation X When All Pensions Are DC Pensions



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and employers with pension plans only offer DC pensions.

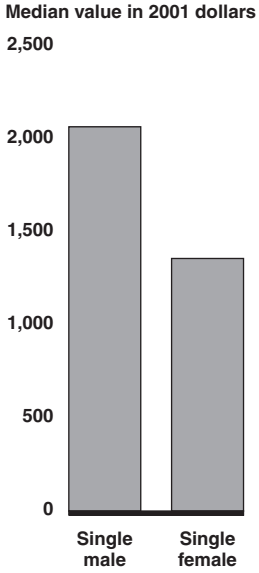
Figure 24: Median Monthly Household Retirement Income at Age 62 by Educational Attainment for Generation X When All Pensions Are DC Pensions



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and employers with pension plans only offer DC pensions. Educational attainment for married couples is defined as the attainment of the Baby Boom cohort member—the spouse may have attained a different level of education.

Figure 25: Median Monthly Retirement Income at Age 62 by Gender for Single Person Households for Generation X When All Pensions are DC Pensions



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security and pension benefits. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and employers with pension plans only offer DC pensions.

Table 17: Median Monthly Household Retirement Income at Age 62 by Marital Status for Generation X When All Pensions are DC Pensions, in 2001 Dollars

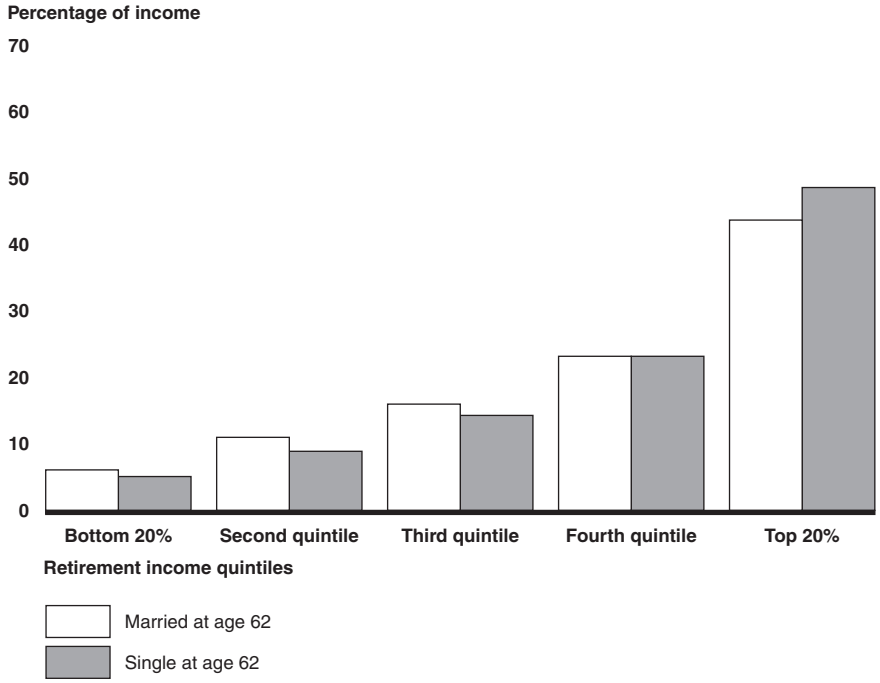
	Household income	Income per household member
Never married	$1,528	$1,528
Married	$3,892	$1,946
Widowed	$2,145	$2,145
Divorced	$1,358	$1,358

Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, no extension of raised pension contribution limits, and employers with pension plans only offer DC pensions.

Figures 26-30 and table 18 show the estimated distribution of retirement income for Generation X assuming funded Social Security benefits, extension of raised pension contribution limits beyond 2010, and a constant rate of DB and DC pension coverage over time.

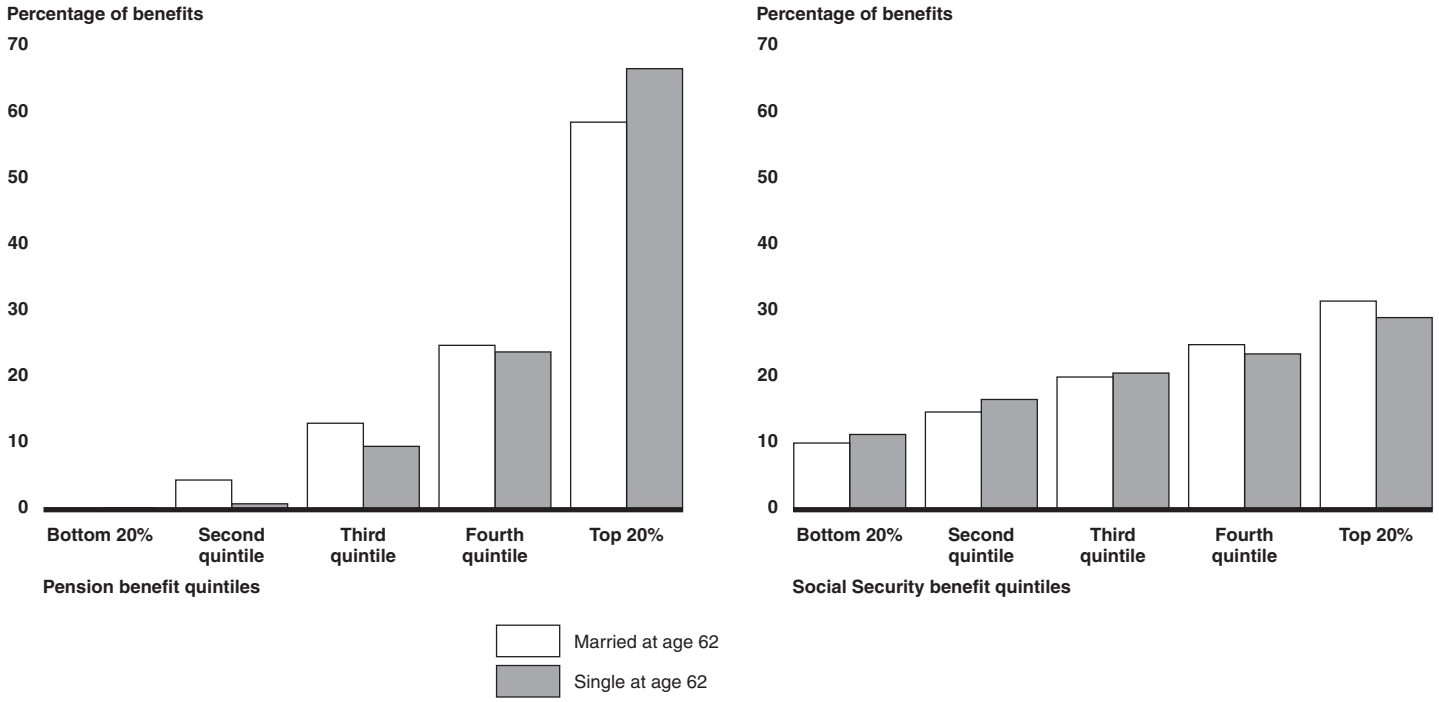
Figure 26: Proportion of Household Retirement Income for Each Quintile of the Retirement Income Distribution at Age 62 for Generation X with Extension of Raised Pension Contribution Limits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

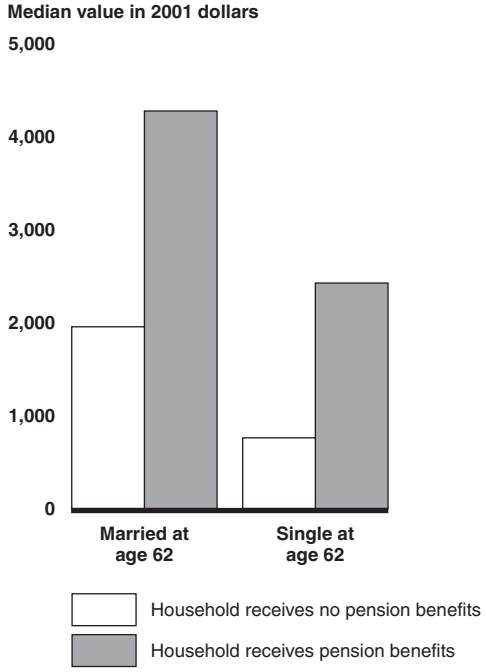
Figure 27: Proportion of Household Pension Benefits and Household Social Security Benefits for Each Quintile of the Pension Benefit and Social Security Benefit Distributions at Age 62 for Generation X with Extension of Raised Pension Contribution Limits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

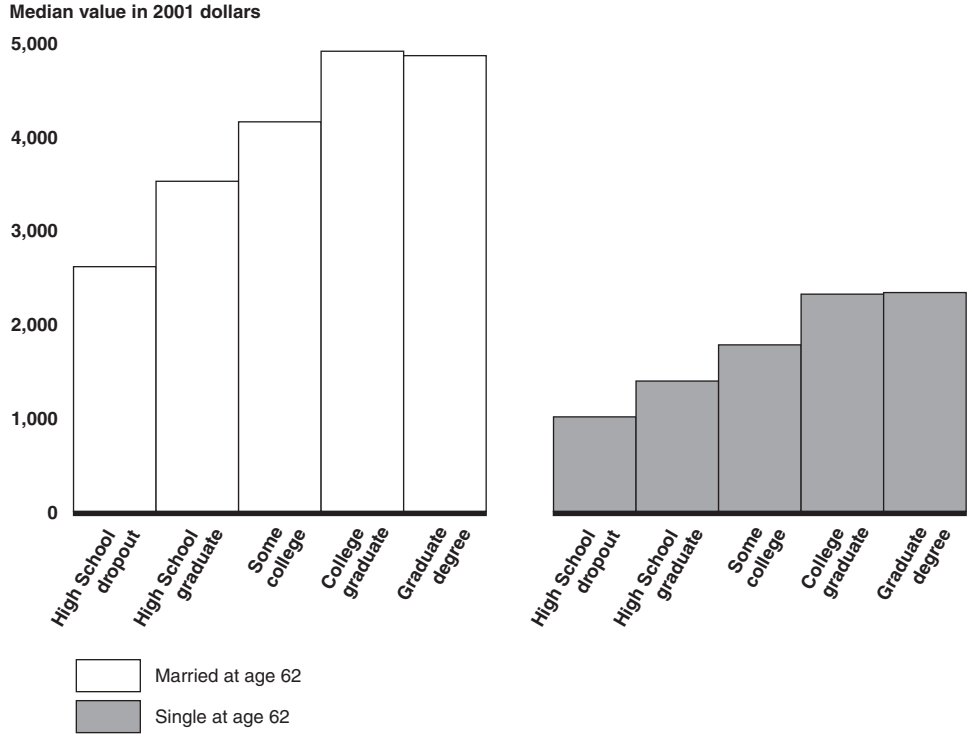
Figure 28: Median Monthly Household Retirement Income at Age 62 by Pension Status for Generation X with Extension of Raised Pension Contribution Limits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

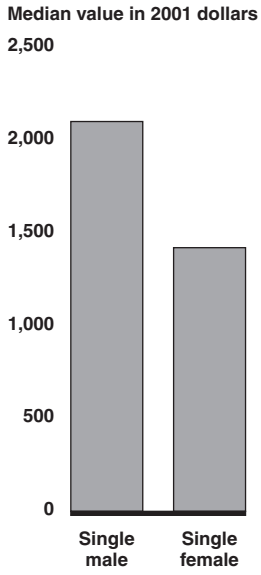
Figure 29: Median Monthly Household Retirement Income at Age 62 by Educational Attainment for Generation X with Extension of Raised Pension Contribution Limits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions. Educational attainment for married couples is defined as the attainment of the Generation X birth cohort member—the spouse may have attained a different level of education.

Figure 30: Median Monthly Retirement Income at Age 62 by Gender for Single Person Households for Generation X with Extension of Raised Pension Contribution Limits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security and pension benefits. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

Table 18: Median Monthly Household Retirement Income at Age 62 by Marital Status for Generation X with Extension of Raised Pension Contribution Limits, in 2001 Dollars

	Household income	Income per household member
Never Married	$1,598	$1,598
Married	$3,912	$1,956
Widowed	$2,108	$2,108
Divorced	$1,403	$1,403

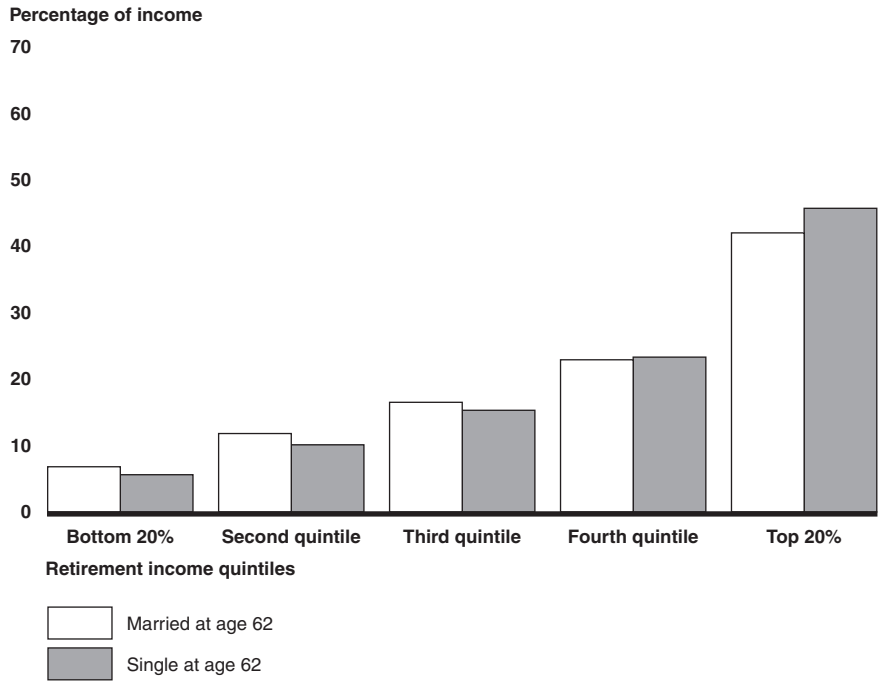
Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Simulations assume all workers retire completely at age 62, Social Security benefits are reduced to funded levels, extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

Figures 31-35 and table 19 show the estimated distribution of retirement income for Generation X assuming scheduled Social Security benefits, no

extension of raised pension contribution limits beyond 2010, and a constant rate of DB and DC pension coverage over time.

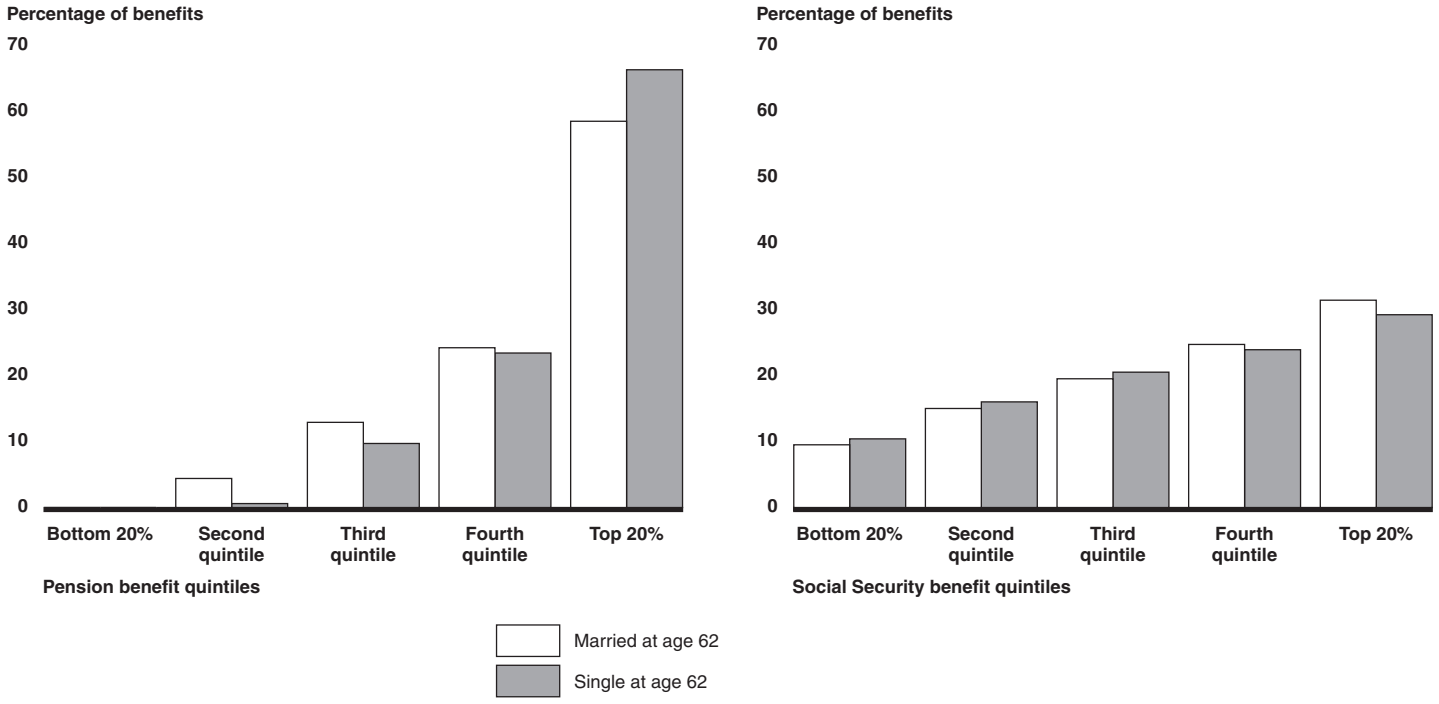
Figure 31: Proportion of Household Retirement Income for Each Quintile of the Retirement Income Distribution at Age 62 for Generation X with Scheduled Social Security Benefits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are paid as scheduled under current law, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

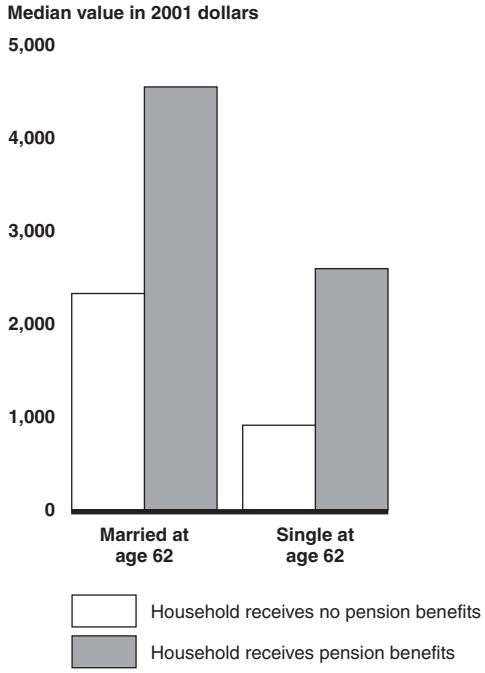
Figure 32: Proportion of Household Pension Benefits and Household Social Security Benefits for Each Quintile of the Pension Benefit and Social Security Benefit Distributions at Age 62 for Generation X with Scheduled Social Security Benefits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are paid as scheduled under current law, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

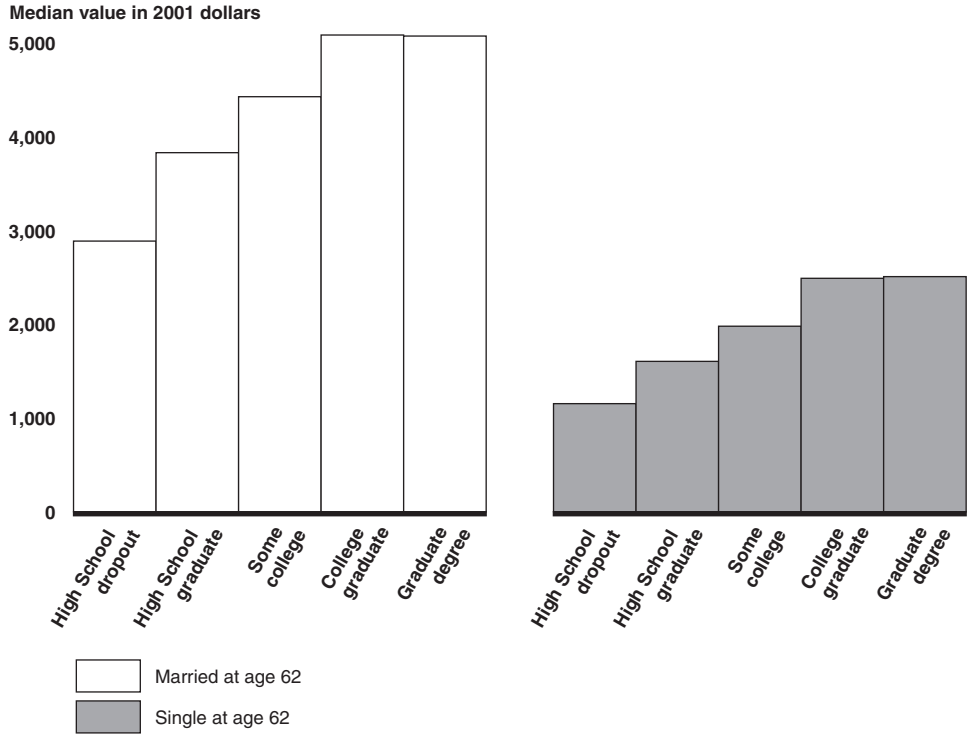
Figure 33: Median Monthly Household Retirement Income at Age 62 by Pension Status for Generation X with Scheduled Social Security Benefits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are paid as scheduled under current law, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

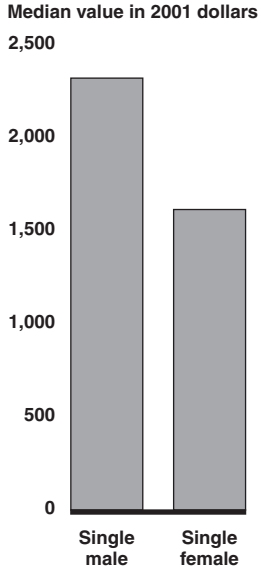
Figure 34: Median Monthly Household Retirement Income at Age 62 by Educational Attainment for Generation X with Scheduled Social Security Benefits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are paid as scheduled under current law, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions. Educational attainment for married couples is defined as the attainment of the Baby Boom cohort member—the spouse may have attained a different level of education.

Figure 35: Median Monthly Retirement Income at Age 62 by Gender for Generation X for Single Person Households with Scheduled Social Security Benefits



Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security and pension benefits. Single individuals include those divorced, widowed, or never married at age 62. Simulations assume all workers retire completely at age 62, Social Security benefits are paid as scheduled under current law, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions.

Table 19: Median Monthly Household Retirement Income at Age 62 by Marital Status for Generation X with Scheduled Social Security Benefits, in 2001 Dollars

	Household income	Income per household member
Never Married	$1,810	$1,810
Married	$4,190	$2,095
Widowed	$2,306	$2,306
Divorced	$1,622	$1,622

Source: GEMINI/PENSIM.

Note: Retirement income includes Social Security benefits, pension benefits, and earnings of younger spouses. Simulations assume all workers retire completely at age 62, Social Security benefits are paid as scheduled under current law, no extension of raised pension contribution limits, and constant rates of coverage over time for DB and DC pensions

Appendix III: GAO Contacts and Staff Acknowledgments

GAO Contacts

Alicia Puente Cackley (202) 512-7022
Barbara Smith (202) 512-3651

Staff Acknowledgments

In addition to those named above, the following individuals made significant contributions to this report: Michael J. Collins, Gordon Mermin, Janice Peterson, Brendan Cushing-Daniels, Barbara Alsip and Patrick DiBattista, Education, Workforce, and Income Security Issues; Grant Mallie, Applied Research and Methods; and Marylynn Sergent, Strategic Issues.

Related GAO Products

Social Security Reform: Analysis of Reform Models Developed by the President's Commission to Strengthen Social Security. GAO-03-310. Washington, D.C.: January 15, 2003.

Social Security: Analysis of Issues and Selected Reform Proposals. GAO-03-376T. Washington, D.C.: January 15, 2003.

Private Pensions: Participants Need Information on the Risks of Investing in Employer Securities and the Benefits of Diversification. GAO-02-943. Washington, D.C.: September 6, 2002.

Private Pensions: Improving worker Coverage and Benefits. GAO-02-225. Washington, D.C.: April 9, 2002.

Private Pensions: Key Issues to Consider Following the Enron Collapse. GAO-02-480T. Washington, D.C.: February 27, 2002.

Social Security: Program's Role in Helping Ensure Income Adequacy. GAO-02-62. Washington, D.C.: November 30, 2001.

Private Pensions: Issues of Coverage and Increasing Contribution Limits for Defined Contribution Plans. GAO-01-846. Washington, D.C.: September 17, 2001.

Retirement Savings: Opportunities to Improve DOL's SAVER Act Campaign. GAO-01-634. Washington, D.C.: June 26, 2001.

National Saving: Answers to Key Questions. GAO-01-591SP. Washington D.C.: June 1, 2001.

Cash Balance Plans: Implications for Retirement Income. GAO/HEHS-00-207. Washington, D.C.: September 29, 2000.

Private Pensions: Implications of Conversions to Cash Balance Plans. GAO/HEHS-00-185. Washington, D.C.: September 29, 2000.

Social Security Reform: Implications for Private Pensions. GAO/HEHS-00-187. Washington, D.C.: September 14, 2000.

Pension Plans: Characteristics of Persons in the Labor Force Without Pension Coverage. GAO/HEHS-00-131. Washington, D.C.: August 22, 2000.

Social Security: Evaluating Reform Proposals. GAO/AIMD/HEHS-00-29. Washington, D.C.: November 4, 1999.

Integrating Pensions and Social Security: Trends Since 1986 Tax Law Changes. GAO/HEHS-98-191R. Washington, D.C.: July 6, 1998.

Social Security: Different Approaches for Addressing Program Solvency. GAO/HEHS-98-33. Washington, D.C.: July 22, 1998.

401(k) Pension Plans: Loan Provisions Enhance Participation But May Affect Income Security for Some. GAO/HEHS-98-5. Washington, D.C.: October 1, 1997.

Retirement Income: Implications of Demographic Trends for Social Security and Pension Reform. GAO/HEHS-97-81. Washington, D.C.: July 11, 1997.

GAO's Mission

The General Accounting Office, the audit, evaluation and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through the Internet. GAO's Web site (www.gao.gov) contains abstracts and full-text files of current reports and testimony and an expanding archive of older products. The Web site features a search engine to help you locate documents using key words and phrases. You can print these documents in their entirety, including charts and other graphics.

Each day, GAO issues a list of newly released reports, testimony, and correspondence. GAO posts this list, known as "Today's Reports," on its Web site daily. The list contains links to the full-text document files. To have GAO e-mail this list to you every afternoon, go to www.gao.gov and select "Subscribe to daily E-mail alert for newly released products" under the GAO Reports heading.

Order by Mail or Phone

The first copy of each printed report is free. Additional copies are $2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. General Accounting Office
441 G Street NW, Room LM
Washington, D.C. 20548

To order by Phone:
Voice: (202) 512-6000
TDD: (202) 512-2537
Fax: (202) 512-6061

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm
E-mail: fraudnet@gao.gov
Automated answering system: (800) 424-5454 or (202) 512-7470

Public Affairs

Jeff Nelligan, managing director, NelliganJ@gao.gov (202) 512-4800
U.S. General Accounting Office, 441 G Street NW, Room 7149
Washington, D.C. 20548

PRINTED ON RECYCLED PAPER