Public Policy Monograph

1998 No. 1

Financing the Retirement of Future Generations

The Problem and Options for Change

American Academy *of* Actuaries

AMERICAN ACADEMY *of* ACTUARIES

The American Academy of Actuaries is the public policy organization for actuaries of all specialties within the United States. In addition to setting qualification standards and standards of actuarial practice, a major purpose of the Academy is to act as the public information organization for the profession. The Academy is nonpartisan and assists the public policy process through the presentation of clear actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials and congressional staff, comments on proposed federal regulations, and works closely with state officials on issues related to insurance.

This report was prepared by the Academy's nine-member Task Force on Trends in Retirement Income Security. In addition to actuaries, who are experts in calculating the cost of future risk, the task force includes individuals outside the actuarial profession. The Academy believes retirement security is such an important and broad topic that the public is best served by a report reflecting cross-disciplinary views.

The report presents the results of a review of data on each of the major sources of security during retirement: Social Security, employer-sponsored pensions, individual savings, and health insurance. After reviewing current sources of income during retirement, the task force examined expected costs for Social Security and Medicare over the next 30 to 40 years and the primary demographic and economic factors underlying those costs. Even with increases in funding, it seems clear that some reductions in publicly provided retirement benefits will be unavoidable. The task force then reviewed current trends and considered the likely future performance of employer pensions and personal savings to make a preliminary evaluation of the extent to which private systems for delivering retirement income can be expected to compensate for reductions under the public systems. Finally, the task force outlines options that Congress can consider to bring public programs into better financial balance and to encourage the expansion of private programs and individual savings.

While the report seeks to be comprehensive by examining all major retirement income delivery systems, it does not focus on the problems of specific subsegments of the population. Hence, the focus is on Social Security and Medicare, not on Supplemental Security Income (SSI) and Medicaid, which are primary sources of support for the low-income elderly. Similarly, the specific problems faced by women in general and widows in particular are not addressed. The task force does not consider the issues facing these population groups unimportant. To the contrary, they are very important. Nonetheless, they are beyond the scope of the task force's current effort.

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1998 NO. 1

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Executive Summary

America's retirement income policies need to be significantly changed. The changes should be comprehensive and made as soon as possible.

Our problems go beyond the baby boom generation

The retirement income challenge in the United States is not based solely on changing demographics (such as the retirement of the baby boom generation). The problems facing our retirement security systems are also the result of increasing life expectancies, which add cost to both our retirement and health systems. These problems will not be "fixed" when the baby boom generation goes away.

A comprehensive approach is required

Fixing one program or policy while ignoring the impacts on others will no longer work. Experience has shown that changes intended to reduce costs in one program often result in shifting costs and sometimes increase overall costs. If consumption-based taxes encourage individual savings but discourage employer-sponsored pensions, for example, total savings for retirement could be reduced, especially among the middle class. Similarly, cutbacks in social insurance programs could shift costs to employers, individuals, and public assistance programs. Raising payroll taxes in one program may limit the ability to raise them for other programs. Hence policies need to be considered across the board, including public programs, tax policy, private pensions, individual savings, and investments.

The time for action is now

The problems in retirement income policies can only get worse if action is delayed. Medicare costs will exceed revenues in 10 years, and in 15 years Social Security will begin to draw down its reserves to cover benefits. The baby boom generation about to enter retirement will have greater needs for retirement income than the previous generation, but fewer resources to meet its needs. Individuals, families, businesses, and governments will need considerable time to adjust to changes in public programs and in private pensions and savings. Delay will reduce the options available and make changes more controversial and disruptive.

Social Security options

The Old-Age, Survivors, and Disability Insurance (OASDI), or Social Security, program is the most important retirement protection program for Americans. Over 90 percent of the over-65 population receives Social Security benefits. Nearly two-thirds of aged Social Security beneficiaries receive half or more of their total money income from Social Security. Actuaries at the Social Security Administration estimate that unless the system is changed, it will have insufficient income to pay full benefits beginning in 2029. To protect the system's solvency, Congress will have to consider far-reaching options for reform.

Structural changes. Privatization, whether through defined contribution individual accounts or investing Social Security reserves in the private market, does not in itself solve the problem of maintaining current benefit levels, and it exposes individuals and families to greater investment risks than the current system. Furthermore, privatization through individual accounts could have substantial transition costs, which would require an infusion of general revenue or a higher payroll tax rate. Privatization, however desirable from a policy perspective, is not required from an actuarial standpoint. The system as currently structured could be brought into actuarial balance through one or more adjustments in taxes, benefit levels, or both.

Tax adjustments. Four basic options are available: increase the payroll tax rate, increase the limit on taxable earnings, increase the taxation of benefits, and extend coverage to currently noncovered workers. Of these, increasing the payroll tax can produce the most revenue and be timed to match the program's income needs.

Benefit adjustments. Three principal options are available: change the initial benefit formula, increase the normal and early retirement ages, and reduce cost-of-living adjustments. Changing the benefit formula or increasing the retirement age can produce needed savings and be timed to produce revenues when needed. Cutting cost-of-living adjustments (COLAs) can produce significant savings, but, if enacted now, would not produce increased savings when the program's income needs increase the most—after all the baby boomers have retired.

Other options. Means testing or general revenue financing could also be considered. While means testing could generate substantial savings, it creates incentives to consume more or reduce assets to qualify for benefits and changes the nature of the program from an "earned right" to a welfare benefit. General revenues could theoretically provide any level of subsidy needed to balance program income and expenditures, but would compromise the self-supporting nature of the program as well as make it more difficult to balance the budget.

Medicare options

The Medicare program (HI and SMI) was designed primarily to meet the acute health care needs of the elderly. Virtually everyone over age 65 receives subsidized health insurance through Medicare. At present, Medicare spending is growing

faster than nearly all other major federal programs. Without significant reform, Medicare's Hospital Insurance Trust Fund is projected to be exhausted by 2011. Congress will have to consider far-reaching options for reform in order to protect the Medicare system's solvency.

Structural changes. With the 1997 enactment of Medicare+Choice (Medicare Part C), Congress took a major step toward restructuring. Individuals will not only be able to choose between traditional Medicare and alternative private-sector programs but will be able to select among various managed care and fee-for-service offerings. Of special interest will be the success of the various private-sector offerings and how individuals change their choices as their health status changes. Both sets of choices will be critical to how successful the new approach can be in controlling the growth in Medicare costs. The new law also includes a demonstration project for medical savings accounts, the results of which are needed before a final judgment can be made about this approach. Another approach, the voucher alternative, has not been adequately analyzed or tested.

Tax adjustments. For Medicare Part B, Supplementary Medical Insurance (SMI), beneficiary premiums could be increased, but this would absorb retirement income from other sources and thus reduce retirement income security overall. Since general revenues already support 75 percent of the cost of SMI, the alternative for additional SMI revenue would be a new earmarked tax, such as a payroll tax. For HI, the value of benefits could be taxed, but this would absorb income from other sources like an SMI premium increase. A payroll tax increase, as with Social Security, could be structured to provide adequate funding for HI, but would increase tax burdens on current workers.

Benefit adjustments. Increasing the eligibility age to 70 would substantially help Medicare financing but would lead to higher costs for employers that fill in the insurance gap between ages 65 and 70 and would likely lead employers to cut back or even drop coverage. Deductibles and co-payments could be increased, but those would be picked up for the most part by individual or employer-sponsored Medigap policies, resulting in very little impact on utilization or overall net costs. At the same time, the increase in Medigap costs would encourage some to reduce coverage or drop it altogether. Continued reductions in or control of provider reimbursements would save significant amounts but would have to be carefully structured to ensure that providers could not avoid them through unbundling of services and other practices. Cutting back on some covered services, such as home health care and durable medical equipment, may be justified by indications of overutilization, fraud, and abuse.

Pensions, savings, and other options

Assuming that at least part of the solution will include scaling back the commitments of public programs, strong incentives are needed to encourage increased individual and group savings. Among the options that could be considered are:

Regulatory simplification. For most workers, employer-sponsored plans provide the most effective way to save privately for retirement. Yet the regulation of traditional defined benefit plans has become so complex, changes so frequent, and administration so costly that small employers have largely abandoned them and very large numbers of medium-sized employers have dropped their defined benefit programs. Simplification of defined benefit and defined contribution plans should be considered wherever possible. In the task force's opinion, simplification of the discrimination rules is most critical. Just the cost of applying these rules to 401(k) plans can make even this fairly simple type of plan impractical for smaller employers. Congress should also consider reducing funding constraints for defined benefit plans and simplifying the distribution rules for all qualified plans.

Increased incentives for small employer plans. For small employers, regulatory simplification may not be enough. Their financial situation may require greater flexibility regarding when pension contributions are made and how much the employers contribute. Expanded use of simplified plans is also an option. In the past this approach has met with limited success. However, practitioners think this may be changing with the recent introduction of Savings Incentive Match Plan for Employees of Small Employers (SIMPLE) plans. An approach that has not been tried is encouraging the expansion of new types of hybrid plans.

Expanded incentives for individual saving. Consideration should be given to allowing everyone the same opportunity to save for retirement on a tax-favored basis as workers with employer plans. Congress could consider allowing those not covered by an employer plan to create their own plans in ways that go well beyond current (individual retirement account) IRA options, as modified through the Taxpayer Relief Act of 1997. Even workers who are currently covered by a plan may not have an adequate pension program, especially if they lacked coverage in one or more previous jobs. Allowing everyone IRA contributions up to a flat amount (such as $5,000) or even a flat percentage of income would help assure greater across-the-board access to retirement income adequacy.

Tighter early withdrawal rules. To make increased opportunities to save through tax-favored pension vehicles meaningful for retirement income security, policy makers should not make preretirement withdrawal rules any more liberal and, as a quid pro quo for higher allowable contributions, may want to consider making the early withdrawal rules more restrictive for all plans, including IRAs.

Better public education. It seems almost inevitable that families are going to be called upon to provide more of their own retirement income in the future, and already tens of millions of workers must make decisions about how money in their 401(k) and other defined contribution pension plans is invested. To help ensure that Americans save more and do it better, the government should consider a serious public education campaign to make the public more economically literate.

Congress took a good first step in the Savings Are Vital for Everyone's Retirement (SAVER) Act, but much more could be done. Earmarked funds could be allocated to such a campaign, and government agencies given specific directions regarding their participation. It may even be worthwhile to make such education a regular part of secondary school curricula.

Evaluating policy options

Although the task force does not recommend any particular set of solutions, it does outline a wide array of options that merit consideration. It also underscores the urgency of taking decisive steps now to begin rebalancing our nation's programs for supporting financial security in retirement. In the spirit of taking action much sooner rather than later, the task force suggests that a number of measures be considered that may help advance the public debate.

First, changes to the public and private programs supporting retirement have far-reaching implications for the vast majority of Americans. There are many important quantitative, as well as qualitative, considerations. Although policy makers must weigh all of these, the task force believes that examining proposals on a consistent basis will greatly assist understanding and add clarity to the debate for both policy makers and the public.

In the Social Security area, consistent examination of proposals should include, at a minimum, basic tests of actuarial viability and some standard measures of any reform proposal on individual workers and beneficiaries. The actuarial tests all proposals might have to satisfy should include restoration of 75-year actuarial balance, positive trust fund balances in all years, and stable or slightly growing trust fund balances at the end of the period. Demonstrations of effects on individuals could include income replacement ratios and "money's worth" measures at different income levels. At the time of this writing, the Academy's Committee on Social Insurance is considering specific criteria to suggest to policy makers.

Along similar lines, Congress should also consider adopting guidelines for pension regulatory changes. The Academy has developed eight guidelines for evaluating legislative and regulatory proposals in the pension area (Appendix A). To ensure better regulation, policy makers could consider adopting their own guidelines for evaluating changes to ERISA and related tax provisions. Generally simple in nature, the Academy guidelines vary from evaluating whether a change would encourage growth in both defined benefit and defined contribution plans to whether it is based on sound actuarial principles.

Congress should also consider taking strong action to gather better, fuller information on pensions and private savings. Congress should not attempt to resolve important issues if the required data have not been collected or the appropriate research completed. In its own interest, Congress may want to consider funding and demanding the information needed to track what is happening in all areas important to financing retirement. As part of such an effort, Congress might consider requiring annual or biannual reports similar to those for Social Security and Medicare that examine the financial status and projection of benefits for private pension programs and individual savings. If properly executed, over time, such reports could prove invaluable to the policy-making process.

Finally, Congress and the executive branch should consider using long-run revenue calculations for pensions. Under current budget rules, revenue implications of changes to the tax code and rules governing public and private pension plans are "scored" based on a budget cycle of five to, at most, ten years. For pensions, calculating revenue gains and losses over short time frames makes little fiscal sense. The fundamental fault of such an accounting system was strikingly demonstrated during the 1997 Medicare debate. One group of proposed changes would have reduced program costs during the current budget cycle but caused them to increase much more than otherwise shortly thereafter. The same result occurs repeatedly for pensions (e.g., when new limits on compensation levels that can be pre-funded are introduced or when minimum vesting periods are changed).

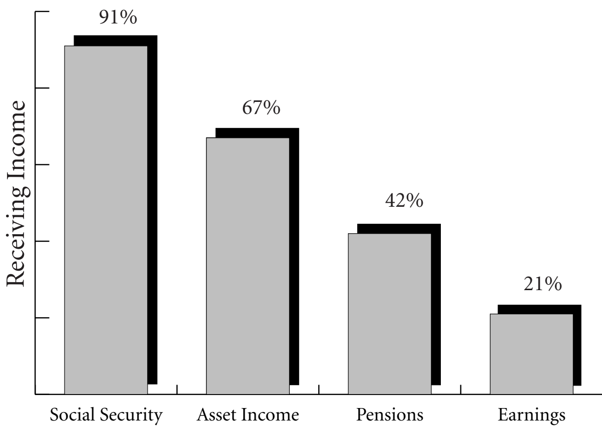
Current Sources of Retirement Income

Knowledge of the relative importance of our nation's major systems for providing income to current retirees is important to understanding the impact of demographic and economic trends on retirement income security in the future and the ramifications of options for changing the current systems.

Non-poor individuals and couples 65 and older rely on four basic income sources—Social Security, employer-sponsored pensions, income from their savings, and earnings. Of these, Social Security is most widespread. Over 90 percent of the over-65 population receives Social Security benefits.[1] The second most common source of income is assets, followed by employer pensions, and earnings (fig. 1).

Figure 1

Sources of Income for Americans Over 65, 1994

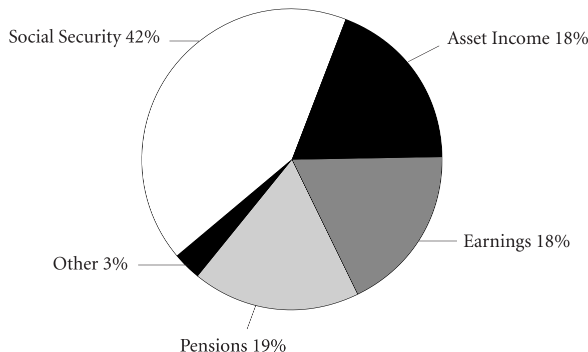


Source: *Income of the Population 55 or Older, 1994*, Susan Grad, Social Security Administration, Office of Research and Statistics, January 1996, Table I. 1, p. 1.

Social Security also makes up the largest share of the aged population's total income. Social Security accounts for 42 percent—twice the amount of any other source. Although the percentage of those who receive income from assets, pensions, and earnings varies substantially, overall each source accounts for about 20 percent of the income for aged individuals and couples (fig. 2).

Figure 2

Amount of Income of the Aged from Major Sources, 1994

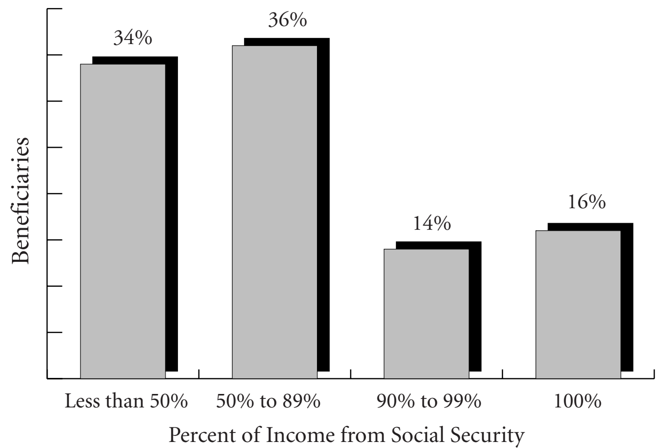


Source: *Income of the Aged Chartbook, 1994,* Social Security Administration, Office of Research and Statistic, June 1996 (rev.), p. 15.

A surprising number of the elderly rely heavily on Social Security. Nearly two-thirds of aged Social Security beneficiaries receive half or more of their total money income from Social Security, and 30 percent receive more than 90 percent of their income from this single source (fig. 3).

Figure 3

Reliance on Social Security by the Aged, 1994

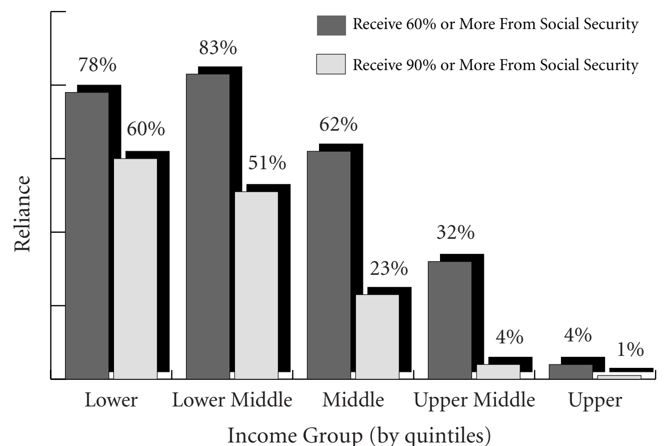


Source: *Income of the Aged Chartbook, 1994*, Social Security Administration, Office of Research and Statistics, June 1996 (rev.), p. 9.

Heavy reliance on Social Security is not restricted to the least well off among the elderly. Six out of ten in the middle 20 percent of the income distribution rely on Social Security for 60 percent or more of their income, and 23 percent rely on Social Security for 90 percent or more of their income. Even among the upper-middle-income elderly, 32 percent rely on Social Security for more than 60 percent of their income (fig. 4).

Figure 4

Reliance on Social Security According to Income Group, 1994



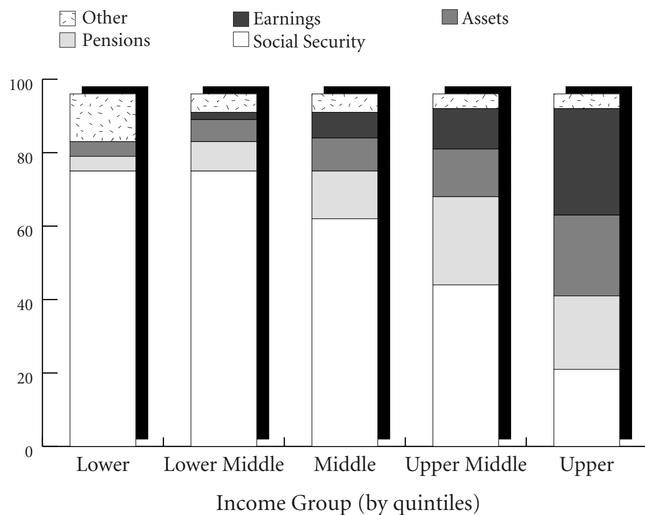
Source: *Income of the Population 55 or Older, 1994*, Susan Grad, Social Security Administration, Office of Research and Statistics, January 1996, Table VI.A. 2, p. 91.

Despite this heavy reliance on Social Security, income from other sources is also of paramount importance. This is especially true for the higher-income aged, for whom Social Security replaces the lowest percentage of preretirement earn-

ings. For those in the top 20 percent of income distribution, Social Security accounts for less than 25 percent. For this group, pensions and assets make up almost half of all income. Even for the upper-middle-income elderly, who receive nearly half their income from Social Security, pensions and assets account for nearly 40 percent (fig. 5).

Figure 5

Share of Income for the Aged from Major Sources, by Income Group, 1994

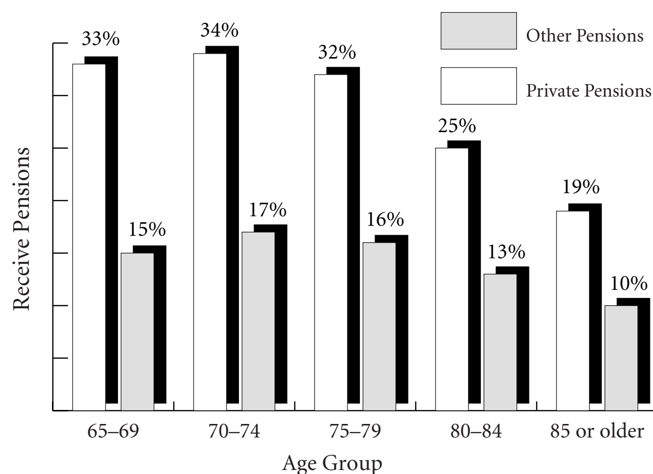


Source: Income of the Population 55 or Older, 1994, Susan Grad, Social Security Administration, Office of Research and Statistics, January 1996, Table VII.5, p. 113.

Thirty percent of aged couples and individuals receive private pensions or annuities (up from 18 percent in 1974). This has been an important and growing source of retirement income. A third of those under age 80 receive income from private pensions. Among 80-year-olds, pension receipt drops to 25 percent, and to 19 percent for those over 85, which largely reflects differences in marital status and sex between the younger and older age groups (fig. 6). About 40 percent of

Figure 6

Share of Aged Who Receive Pensions, by Age Group, 1994



Note: Other pensions include Railroad Retirement plus federal, state, local, and military pensions.

Source: Income of the Aged Chartbook, 1994, Social Security Administration, Office of Research and Statistics, June 1996 (rev.), p. 13.

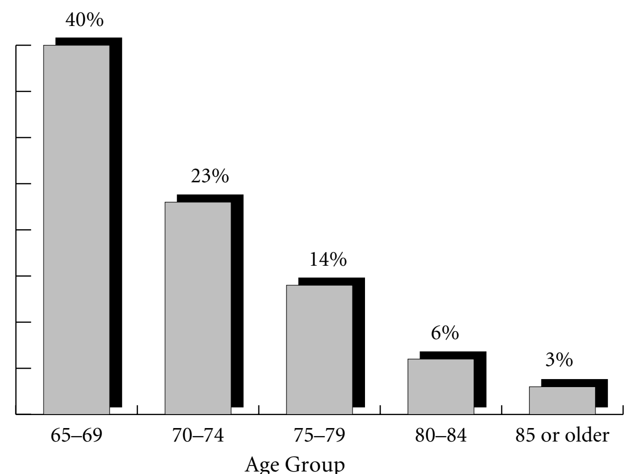
married couples receive a private pension regardless of age. The same is true for single men over 65, where the percentage is 31 regardless of age. It is only among single women that the proportion receiving a pension falls with age. Nearly a quarter of 65-to-69-year-old single women receive a private pension. By age 85, the percentage has fallen to 13. The observed decline in pension receipt among older age groups reflects the increasing proportion of nonmarried women in these groups and their decline in pension receipt at advanced ages. Thus, the underlying benefit patterns are consistent with the maturing of private pension systems over the past 20 to 25 years, and the stability of pension coverage since the mid-1970s. As the system continues to mature, ERISA's joint and survivor provisions should increase the number of very old women with a private pension benefit. Overall, those who receive private pensions, on average, have 25 percent more income than retirees who rely only on Social Security for a monthly income.

Asset income is also widely received, although its distribution is highly skewed. Among the 67 percent who report this source of income, 45 percent receive less than $1,000 a year. At the other extreme, 11 percent receive $15,000 or more in annual income from their investments.

Earnings are the most age-sensitive source of income for the aged population. Among younger retirees, 40 percent have some earned income. Practically none of the very elderly have earned income (fig. 7). The older the couple or individual, the less likely it is that they have earnings; if they do, they earn less as they grow older.

Figure 7

Share of Aged Americans Who Receive Earnings, by Age Group, 1994



Source: Income of the Aged Chartbook, 1994, Social Security Administration, Office of Research and Statistics, June 1996, (rev.), p. 13.

Because Social Security is the most prevalent and important single source of income for the retired population, it is more politically visible and receives more attention. Yet pension and personal savings provide nearly 40 percent of all income to aged Americans, an amount that rivals that received from Social Security. Without meaningful employer-sponsored pensions and significant personal savings, the American dream of a comfortable retirement is likely to become more difficult to attain for many Americans.

The Retirement Challenge

Social Security

Social Security Old-Age, Survivors, and Disability Insurance (OASDI) was designed to give proportionally greater payments to lower-wage workers. At present, workers who consistently earn a minimum wage (about 45 percent of the average wage) will have replacement rates of about 60 percent of their preretirement earnings. Individuals with average earnings throughout their working lives can expect to receive Social Security benefits that replace roughly 43 percent of their preretirement income. Finally, those consistently earning the maximum taxable wage level can expect to receive Social Security benefits that replace about 25 to 28 percent of their earnings before retirement.[2] The benefit formula is also designed so that workers with higher average wages will always receive higher benefit amounts, although the income still represents a lesser proportion of preretirement wages.

In addition to being more generous to lower-wage workers, the Social Security benefit formula treats married and single individuals differently, which means that individuals and couples that have similar incomes and pay the same amounts of payroll taxes do not necessarily receive the same benefits. The differences can be particularly striking between married individuals who never worked but receive substantial benefits based on their spouses' earnings, and nonmarried or divorced workers.

Social Security is financed through earmarked payroll taxes. The 1998 payroll tax rate is 12.4 percent (half paid by the employer, half by the employee). Under current law, this rate is not scheduled to increase. During 1998, the payroll tax will be levied on annual wages up to $68,400, an amount that increases annually based on average covered wages. The program also receives income from the taxation of Social Security benefits. The revenue generated through taxing benefits is currently equivalent to an additional payroll tax of 0.23 percent.[3] The Social Security trust funds also receive interest income from government securities they hold.

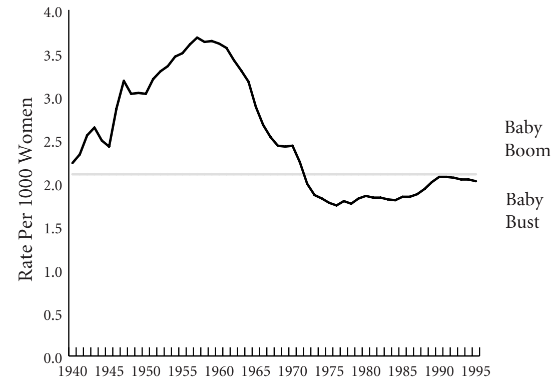
Throughout most of its history the system has been run on a pay-as-you-go basis, with limited advance funding. Thus, each generation of workers pays the benefits of current retirees and, in return, has its benefits paid by the following generation. As noted below, excess contributions can accumulate in trust funds, as is currently happening. However, few would argue that this truly constitutes advance funding.

Population aging. Following World War II, there was a dramatic increase in fertility rates in the United States. Rates began to soar in 1946 and, although they peaked in 1957, their effect on annual birth rates persisted until 1964. Following the post-war increases, fertility rates plummeted and, since the early 1970s, have remained below zero population growth (fig. 8).

The baby boom generation (those born between 1946 and 1964) is 50 percent larger than the generation it is now supporting in retirement. The post-1964 baby bust generation, on the other hand, is smaller than the generation that it will eventually have to help to support.

Figure 8

Total Fertility Rates, 1940–1995



Note: Total fertility estimates how many children a woman is likely to have during her entire reproductive cycle. The straight line is the replacement fertility rate.

Source: Life Tables for the United States Social Security Area 1900–2080, Actuarial Study No. 107, Felicitie Bell, Alice Wade, and Stephen Goss, U.S. Department of Health and Human Services, August 1992, Table 3, p. 3. Rates after 1991 are from the 1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Table II.D2, p. 63.

Not only are there relatively fewer younger people, but the older people they are expected to help support in retirement are living longer as well. When Social Security began paying benefits in 1940, only about half of 21-year-old men could expect to reach 65 to collect benefits, and those who did could expect to collect benefits for 12 years. By 1990, nearly 75 percent of them could expect to reach 65 and collect benefits for 15 years. These trends are expected to continue at least until the middle of the 21st century. At that time, an expected 83 percent of 21-year-old men will reach 65, and they can expect to live another 18 years. The past and projected mortality gains for women are equally impressive (fig. 9).

Figure 9

Historic and Projected Changes in U.S. Life Expectancies, 1940–2050

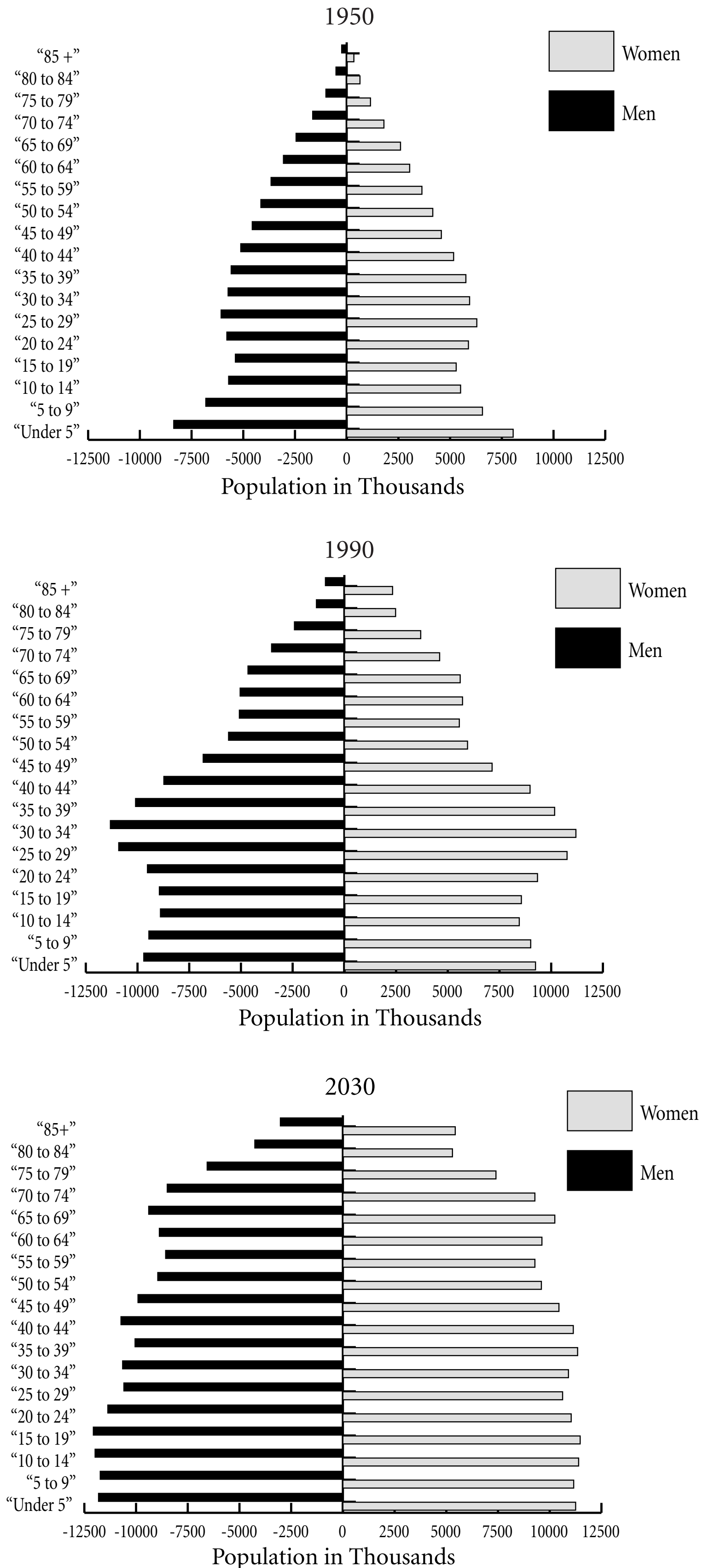
Year Cohort Turns 65	Percentage surviving from age 21 to 65: Male	Percentage surviving from age 21 to 65: Female	Remaining life expectancy at 65: Male	Remaining life expectancy at 65: Female
1940	54	61	12.7	14.7
1950	56	65	13.1	16.2
1960	60	71	13.2	17.4
1970	64	77	13.8	18.6
1980	68	81	14.6	19.1
1990	72	84	15.3	19.6
2000	76	85	15.8	20.1
2010	78	87	16.3	20.5
2020	79	88	16.8	21.0
2030	80	89	17.2	21.5
2040	82	89	17.6	22.0
2050	83	90	18.0	22.4

Source: Retooling Social Security for the 21st Century, C. Eugene Steuerle and Jon M. Bakija, The Urban Institute Press, Washington, D.C., 1994, Table 3.2, p. 41.

As a result, the Social Security Administration estimates that the number of beneficiaries will more than double by 2050.[4] Moreover, because longevity has increased, this level of beneficiaries will tend to persist despite the baby bust. Longevity, then, can be expected to permanently change the age distribution of the population, and even after the baby boom is gone, the number of people over age 65 will not drop substantially (fig. 10).

Figure 10

U.S. Population Distribution, by Age and Sex, in Selected Years

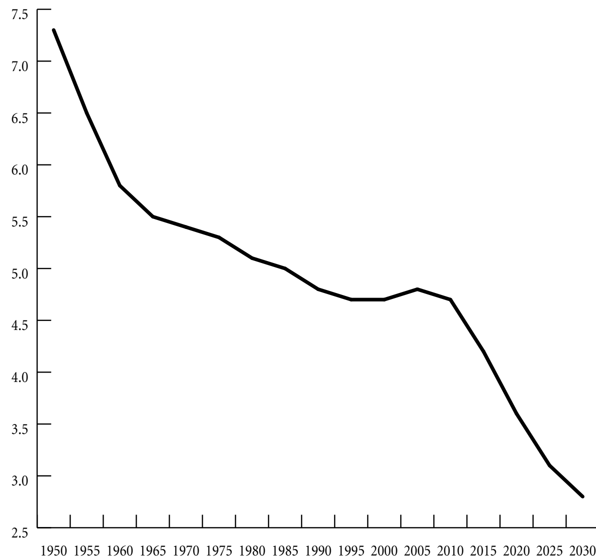


Source: Population Projections of the United States, by Age, Sex, Race, and Hispanic Origin, Current Population Reports, Series P25-1104, U.S. Bureau of the Census, 1993. The year 2030 is based on the middle-series projections.

Changes in the size of the work force. The impact of these demographic trends on the labor force will be dramatic. The traditional working-age population (those between the ages of 20 and 64) has increased by 13 to 20 million in each decade since 1970. However, it is expected to grow by only seven million between 2010 and 2020, and between 2020 and 2030 it is expected to actually decrease by 700,000. So, at the same time that the number of expected Social Security beneficiaries is doubling, there will be fewer potential wage earners entering the labor force. As a result, the potential number of workers supporting each over-65 person will plummet. Between 2010 and 2020, the ratio of the working-age population to the elderly is projected to drop from 4.7 to 3.6, and by 2030 it is expected to have fallen to 2.8 working-age persons for each person over 65 (fig. 11).

Figure 11

Number of Persons Aged 20 to 64 for Each Person 65 and Older, 1950–2030



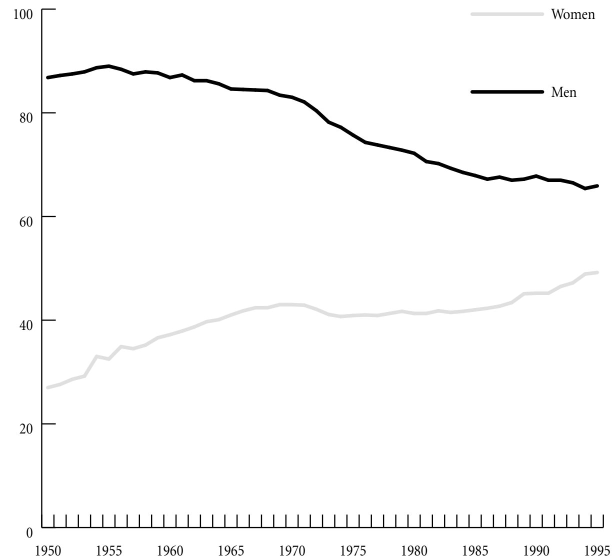
Source: 1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Table II.H1, p. 148.

In their annual reports the Social Security trustees translate these trends into the number actually working in covered employment to the projected number of beneficiaries. According to their 1997 report, by 2030 there will be only two active workers for each Social Security beneficiary.[5]

Trends in labor force participation among workers over age 55 could make the situation even worse. Although people are living longer, they are not working longer. In fact, the average retirement age has decreased substantially over the past few decades, due in large part to the dramatic decreases in labor force participation among men. Between 1950 and 1985, the participation rates for men between ages 55 and 64 declined from just under 90 percent to just over 65 percent. Participation among men 65 and over declined even more precipitously from 45 percent in 1950 to 16 percent in 1985 (figs. 12, 13).

Figure 12

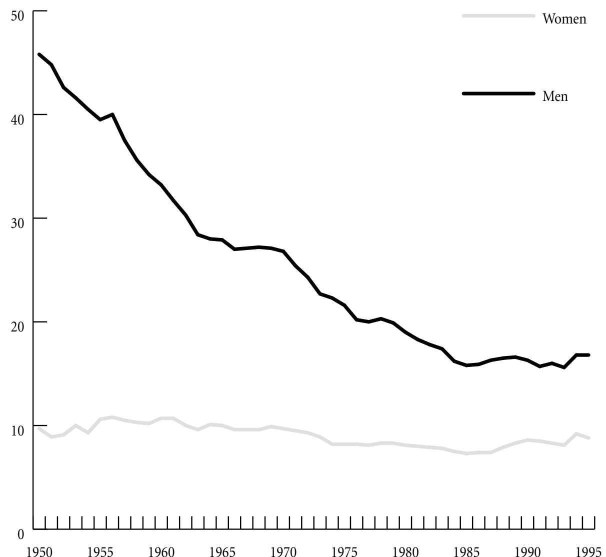
Labor Force Participation Rates of Men and Women Aged 55 to 64, 1950–1996



Source: Labor Force Statistics from the Current Population Survey, Bureau of Labor Statistics Web site (stats.bls.gov), Series ID: lfs604901, seasonally adjusted.

Figure 13

Labor Force Participation Rates of Men and Women Aged 65 and Older, 1950 to 1996



Source: Labor Force Statistics from the Current Population Survey, Bureau of Labor Statistics Web site (stats.bls.gov), Series ID: lfs604901, seasonally adjusted.

The steady decline in labor force participation of older men throughout much of the post-World War II period reflects in part the powerful influence of public retirement programs. Before the 1961 Social Security Act men could not receive Social Security old-age benefits until age 65. The 1961 act introduced age-62 retirement with reduced benefits. Before the introduction of reduced early benefits, there was almost no difference in labor force participation between men aged 61 and men aged 63. In 1960, 79 percent of 61-year-olds and 76 percent of 63-year-olds were in the labor force. By 1970, only 69 percent of 63-year-olds were still working.[6]

Similarly in 1965, Medicare was enacted to provide health insurance for those over age 65. Over the next several years benefits were improved and expanded. Before Medicare, in 1960, over half of all 65-year-olds were in the labor force. By 1980, only 35 percent were working.

The substantial downward trend in the labor force participation rates of older men began to abate during the early 1980s, and since 1985, participation rates for men over 55 have remained nearly constant.

In sharp contrast to men, participation rates for women over 65 have remained nearly stable since 1950, vacillating between 8 and 10 percent. For women 55 to 64, the rate increased steadily from 1950 to 1965, remained level until 1985, and then began to rise again, reaching nearly 50 percent in 1995.

Although there is ample room for participation rates to increase among those under 65 as well as those between 65 and 70, it seems unlikely that this will happen to any substantial degree without a clear message from employers or the government in the form of lesser monetary rewards for early retirement and greater ones for delayed retirement. In surveys, workers continue to state their preferences for retiring at or before age 65.

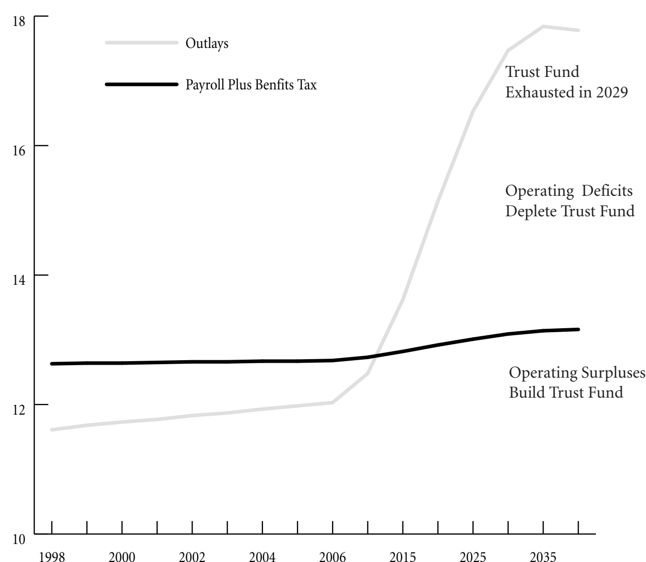
To stabilize the ratio of retirees to workers, U.S. fertility would have to surge back to the baby boom levels of the 1950s and early 1960s. That is not expected to occur. The United States already has one of the highest fertility rates in the developed world, and only 10 percent of Americans (as opposed to 50 percent in the 1950s) desire to raise families of the size common during the 1950s.[7]

Some have suggested that increased immigration could help rectify this situation. However, the necessary net inflow would probably be too great to be practical. Currently, the Social Security trustees reports assume that there will be a net annual inflow of 900,000 immigrants, including both legal and nonlegal entrants and exits. Under current assumptions about the age distribution of immigrants, each additional 100,000 immigrants improves the actuarial balance by about .06 percent of payroll. Based on these numbers, a fourfold increase in immigration (3.6 million people annually) would be needed to bring Social Security into actuarial balance. Adding 36 million new immigrants to the population each decade into the foreseeable future would likely trigger significant new social and economic problems.[8]

Program financing and future funding shortages. The problem of financing Social Security has been growing for several years, and in 1983 Congress addressed an immediate shortfall by cutting benefits and raising the payroll tax rate above that needed to finance current benefits. The excess revenues are being invested in interest-bearing Treasury securities, which can be redeemed later to finance future benefits. Under present growth rates, however, the tax rate will not be sufficient to cover disbursements by 2012, and outlays will exceed revenues. Social Security will then have to turn to its surpluses, which in turn are estimated to be exhausted by 2029 (fig. 14).

Figure 14

Social Security Tax Collections and Benefit Payments as a Percentage of Aggregate Taxable Payroll



Source: 1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, Table II.F13, p.110.

At the same time the surpluses are being drawn down, the payroll tax rate needed to cover benefits (the cost rate) will continue to increase. By 2029, when the surplus funds are expected to be exhausted, the current payroll tax rates will provide only 75 percent of the revenue needed to pay benefits. The shortfall will have to be made up through higher taxes, reduced benefits, or both. As the cost rate continues to rise after 2029, the program will become more out of balance[9]

Clearly, Social Security financing will demand action much sooner than 2029. Today's annual surplus accumulations are being absorbed by Treasury bonds, which, like other government debt, are claims against future generations. Such claims will have to be paid by further Treasury borrowing or by raising taxes. Redeeming the bonds will place additional stresses on the federal budget and upward pressure on interest rates.

Making the needed adjustments could seriously erode public support for Social Security in its current form. The return on each dollar contributed is already falling for successive gen-

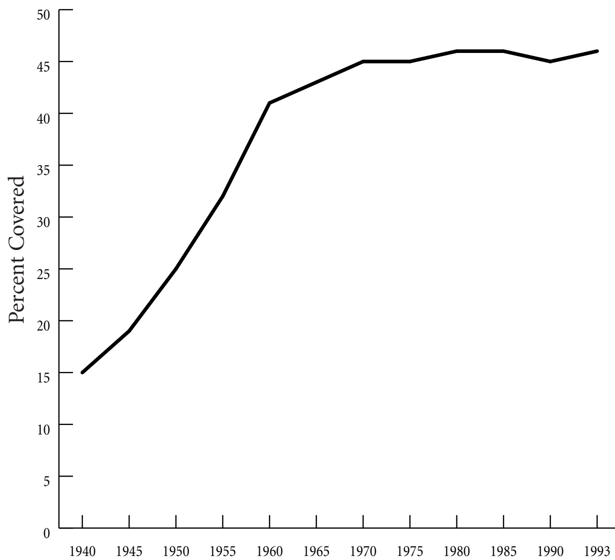
erations, and will soon be below inflation-adjusted returns on other investments. It will not be too long before the inflation-adjusted rate of return on contributions will be at, or below, 1 percent for higher-income young people, versus an inflation-adjusted rate of 3 percent or more for other investments.[10] Raising taxes, cutting benefits, or both, will lower the implicit investment return on Social Security contributions still further. Thus, what is a marginal investment for the baby boom generation will likely be an even worse deal for the generation that follows.

Employer-Sponsored Pensions

Employer-sponsored private pensions did not become widespread in the United States until after World War II. Private pension coverage grew rapidly during the 1950s and 1960s, then leveled off by the mid-1970s. Coverage since then has remained nearly constant at roughly 45 percent of private-sector wage and salary workers (fig. 15).

Figure 15

Percentage of U.S. Workers Covered by Private Pensions, 1940–1993



Source: Data for 1940-1970 from *Private Pension Plans,* 1950-1974, Alfred Skolnik, Social Security Bulletin, June 1976. Data for 1975-1993 based on U.S. Department of Labor analysis of IRS Form 5500.

Public-sector workers have traditionally had pension coverage. In 1993, 91 percent of the 18.6 million federal, state, and local employees worked for agencies that sponsored pension plans. Seventy-seven percent of all workers were actually covered.

In both the public and private sectors, there is a major difference in coverage between part-time and full-time employees. Only 12 percent of part-time workers in the private sector participate in pension plans, versus 50 percent of full-time workers. In the public sector, 30 percent of part-timers were covered in 1993, while 85 percent of full-time workers were covered.

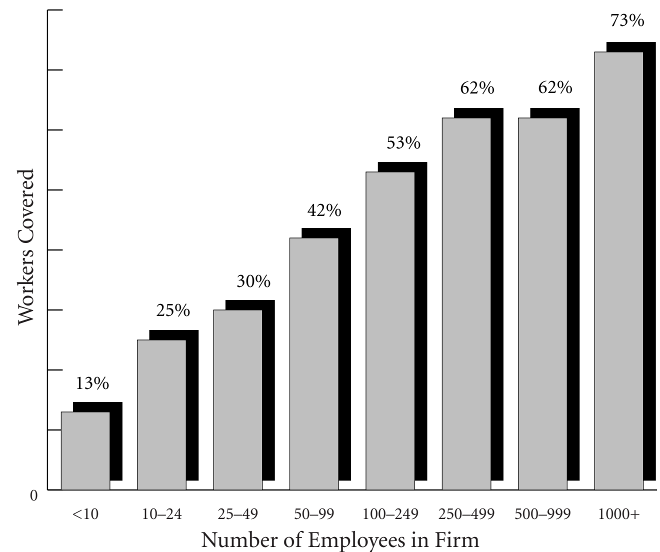
Among full-time workers, those least likely to have pension coverage are those under 25 and those with incomes under $10,000. However, coverage rises quickly with both age and income. It jumps from 22 percent for those under 25 to 50 percent for those 30 to 35, and rises to 63 percent for those 45 to 49. Similarly, the 8-percent coverage rate of those earning under $10,000 jumps to 42 percent at $15,000–$20,000 and rises steadily, reaching 81 percent for workers earning $50,000 or more.[11]

The opportunity to be covered by a pension plan also depends strongly on the size of one's employer. Today, as in the past, the largest employers are most likely to sponsor pension plans. Over 70 percent of full-time workers at firms with more than 250 workers are covered by at least one pension plan.

In sharp contrast, only 18 percent of workers are covered by plans in firms with fewer than 25 employees. The low coverage in smaller firms has become an increasing concern, since employment has been growing most quickly in this sector. Currently, 25 percent of full-time, full-year workers are employed by firms with fewer than 25 workers (fig. 16).

Figure 16

Private Pension Coverage of Full-time Workers, by Firm Size, 1993

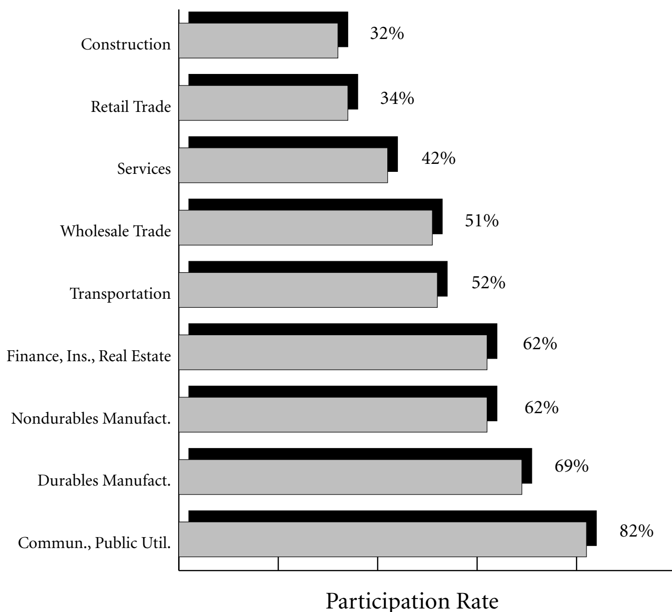


Source: Pension and Health Benefits of American Workers, U.S. Department of Labor, May 1994, Table B9, p. B-13.

Coverage rates also vary widely by industry. In the construction industry and in retail trades, coverage rates for full-time workers are in the low 30s; coverage rates are in the 60–70-percent range in the manufacturing and financial sectors. In public utilities, coverage exceeds 80 percent (fig. 17).

Figure 17

Private Pension Coverage of Full-time Workers, by Selected Industries, 1993



Source: Pension and Health Benefits of American Workers, U.S. Department of Labor, May 1994, Table B7, p. B-9.

The leveling off of private pension plan growth since the 1970s has been attributed to a number of factors—greater job creation in the small-business sector, growth in the lower-coverage services industries, and increased competition at home and abroad. Increased government regulation has also played a significant role, as discussed below. The important point is that coverage has not increased for the past 20 years, and few expect the situation to change. In fact, analysts now debate whether coverage may be declining.

Although total coverage is static, there have been dramatic changes within the private pension system. The most important have been a dramatic shift in the composition of plans and a stream of largely budget-driven pension legislation with accompanying regulations.

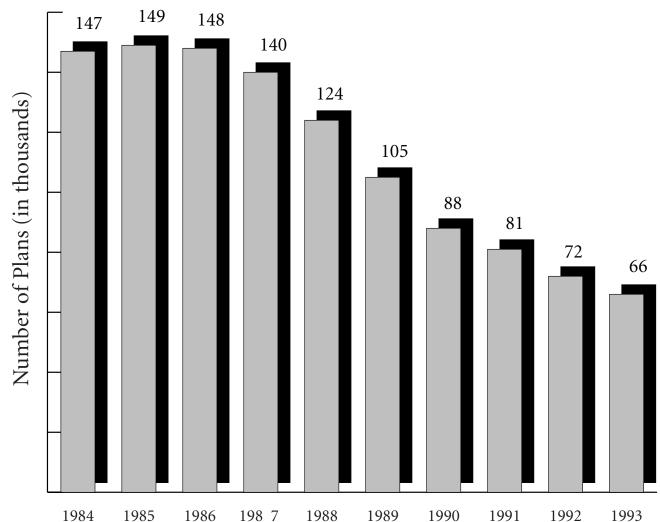
Decline of defined benefit plans. When Congress enacted the Employee Retirement Income Security Act (ERISA) in 1974, traditional defined benefit plans strongly dominated private-sector coverage. Concurrent with ERISA's enactment, an increasing number of employers began terminating their defined benefit plans. This initial rash of terminations was suspected to consist of plans for which ERISA compliance would be prohibitively expensive—poorly funded plans and those with little or no vesting before actual retirement eligibility. However, throughout the 1980s the number of defined benefit plan terminations increased steadily.[12]

According to IRS determination letter statistics, approximately 4,000 to 5,000 employers terminated their defined benefit plans each year during the early 1980s. The number increased to more than 12,000 a year by 1985, and jumped to more than 16,000 in 1989. Between 1989 and 1991, more than 42,000 employers terminated their defined benefit plans.[13]

At the same time that some employers are terminating plans, others are establishing new plans. However, on balance, the number of defined benefit plans has been decreasing steadily since 1986, when major new rules were enacted. In 1993, there were 55 percent fewer defined benefit plans than in 1986 (fig. 18).

Figure 18

Number of Defined Benefit Plans, 1984–1993



Source: Most Employers That Offer Pension Plans Use Defined Contribution Plans, General Accounting Office, GGD-97-1, 1997.

To better understand why employers were terminating defined benefit plans in such large numbers, the American Academy of Actuaries fielded a survey in late 1990 that asked enrolled actuaries about plan terminations in which they had been involved. The 1,084 plan terminations reported were distributed almost evenly between larger plans (500 or more participants) and smaller plans, and nearly all the terminations occurred from 1988–1990.

When asked to list up to three reasons why employers had terminated plans, 40 percent mentioned government regulation; this was given as the primary reason for 27 percent of the terminations. The smaller the plan, the more likely that government regulation was the primary reason for termination.

To examine longer-term trends, the survey also asked the actuaries about their termination experiences in the early 1980s. More than half said that business considerations were the primary impetus. Only 13 percent said that government

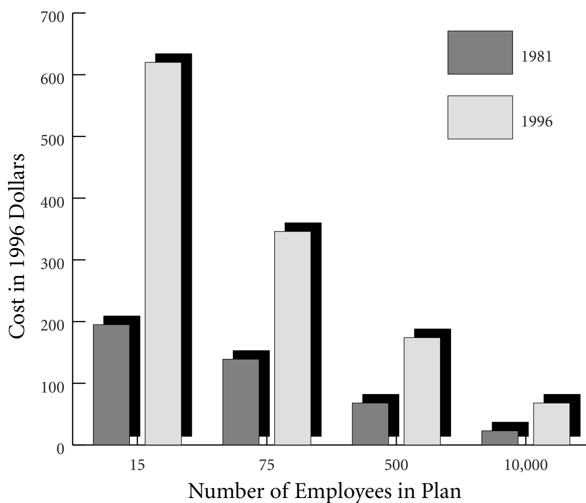
regulation was the primary reason. When asked about the late 1980s, however, only 18 percent said business considerations were the major reason, while 42 percent said that government regulation was the main driver.[14]

The study confirmed what many had previously thought and has subsequently been shown by others. The largely revenue-driven pension legislation from each new session of Congress since the early 1980s had been a large source of frustration to employers. Delays in issuing regulations, which left sponsors uncertain as to whether their plans were operating in accordance with the law, added to the frustration.

In addition, new and often complex rules added substantially to the cost of plan administration. Between 1981 and 1996, small employers' annual administrative costs went from $195 to $620 per worker. This more than 200-percent increase forced many small employers to abandon their defined benefit plans. Larger employers did not escape. Their administrative costs increased by 150 percent or more during the same period (fig. 19).

Figure 19

Comparisons of Administrative Costs per Worker for Defined Benefit Plans, by Size of Plan, 1981 and 1996



Source: Retirement Income Plan Administrative Expenses: 1981 through 1996, Edwin Hustead, the Hay Group, presented to the Pension Research Council, May 1996.

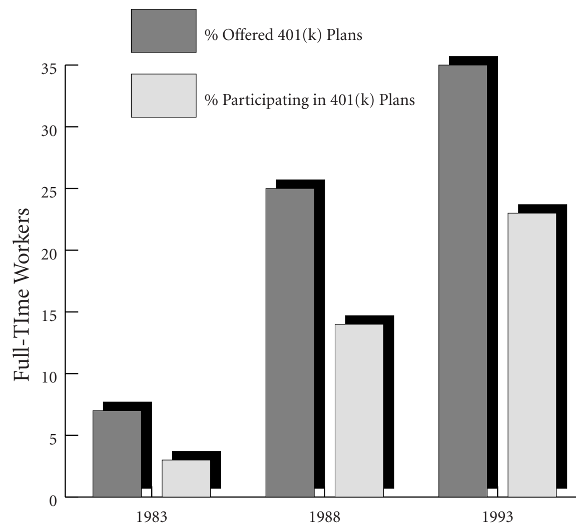
Growth in defined contribution plans. The flood of defined benefit plan terminations in the 1980s and early 1990s was accompanied by the rapid creation of defined contribution plans. Between 1983 and 1993, the number of defined contribution plans increased by 45 percent.[15]

Of particular note is the growth in 401(k) plans. These plans, which allow workers to defer compensation and accumulate assets at pretax rates of return, first became available in 1978. Until 1987, workers could contribute up to $30,000 a year to their plans. In 1987, contributions were limited to $7,000, indexed for inflation ($10,000 in 1998). Employers can match all or part of a worker's contributions, and about half do.[16]

The growth in 401(k) plans has been phenomenal. In 1983, 7 percent of workers reported that their employers offered such coverage. By 1988, 25 percent of workers reported that their employers had plans. By 1993, 35 percent of private-sector wage and salary workers had such plans available through their employers (fig. 20).

Figure 20

Pension Coverage of Full-Time Workers Under 401(k) Plans in Selected Years



Source: Pension and Health Benefits of American Workers, U.S. Department of Labor, May 1994, Table C13, p. C-19.

Such rapid growth has not necessarily been at the expense of other plans. It appears that the vast majority of 401(k) plans are in addition to other plans employers maintain for their workers. In 1990, 82 percent of those eligible to participate in 401(k) plans were also covered by defined benefit plans. Ten percent of eligibles had 401(k) plans as their only retirement plan.[17]

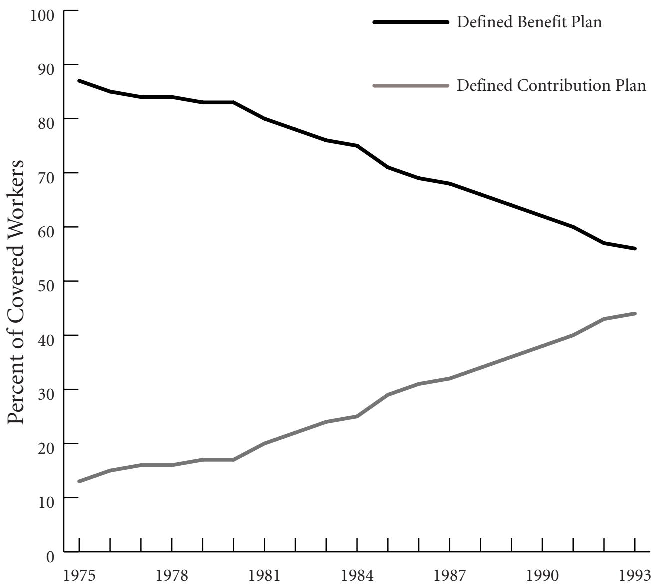
Over the past 20 years, however, defined contribution plans made substantial inroads in replacing defined benefit plans as the primary source of private pension coverage. In 1975, 87 percent of covered workers received their primary pension coverage through defined benefit plans. Less than 20 years later, this percentage had dropped to 56. If current trends continue, soon after the turn of the century defined contribution plans could replace defined benefit plans as the dominant form of employer-sponsored pension program (fig. 21).

This shift has raised a number of concerns, including the possibility that most defined contribution plans are less generous, the use of pension assets before retirement, potential low rates of return, and the fear that less secure plans will replace more secure ones.

Plan generosity. The Academy's 1990 survey confirmed that terminated defined benefit plans are often replaced with less generous plans. Two-thirds of the employers offered other plans after terminating their defined benefit plans, and eight

Figure 21

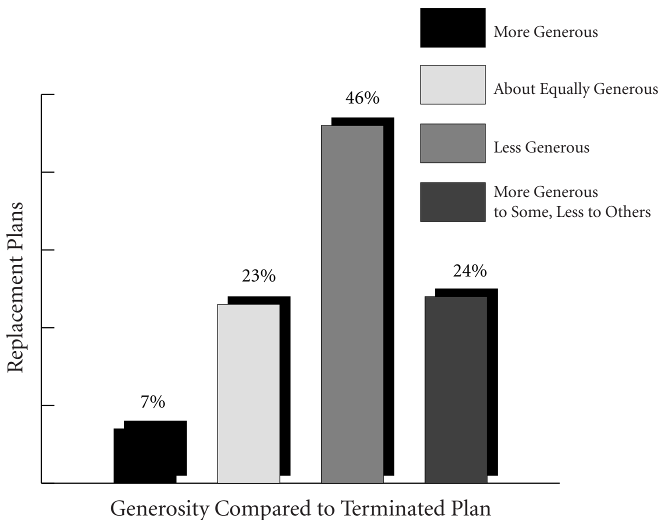
Primary Type of Plan Under Which Workers Were Covered, 1975–1993



Source: Abstract of 1993 Form 5500 Annual Reports, U.S. Department of Labor, Pension and Welfare Benefits Administration, Private Pension Plan Bulletin, Winter 1997. Derived from Table F4, p. 76.

Figure 22

Generosity of Plans Replacing Terminated Defined Benefit Plans, 1988–1990



Source: Results of the American Academy of Actuaries *Survey of Defined Benefit Plan Terminations,* American Academy of Actuaries, Washington, D.C., June 24, 1992, Table 13.

out of every ten workers retained coverage, but 90 percent of the replacement plans were based on defined contributions.

The actuaries overseeing the terminations rated about half the replacement plans as less generous; an additional 24 percent were rated more generous to some workers and less to others. This was true regardless of whether the replacement plans were ones the employer already had in force or were newly created (fig. 22).

Defined contribution plans can be less generous in several ways. They can generate lower benefits for most or many workers. And, by definition, they lack such features as subsidized early-retirement benefits that longer-service workers might otherwise enjoy and, in the case of downsizing, actually need.

Some analysts are further concerned that defined contribution plans will yield relatively lower benefits because the funds will not be well invested. Workers nearly always have a choice of investment options under defined contribution plans. A number of studies have indicated that they often choose safer, albeit lower-return, options.

A study using 1989 data showed that common stocks account for 21 percent of the asset value in 401(k) plans, while insurance company products, mostly guaranteed insurance contracts (GICs), account for 41 percent. GICs generally have much lower, though much more certain, expected rates of return than a mixture of common stocks. Data for later years indicate that workers are becoming less risk averse and investing more heavily in stocks and mutual funds. However, this too may be a concern. If, as some fear, the stock market is overvalued, the switch to stocks and mutual funds may be occurring at the wrong time.[18]

In the case of some workers, defined contribution plans may be more generous. Since the plans are fully portable, workers own the money in their retirement accounts. Even if they change jobs, the amounts in their accounts continue to grow through investment returns. When workers with defined benefit plans change jobs, on the other hand, the amount of their benefit no longer grows. This happens because retirement benefits from most defined benefit plans are based on years of service and salary level. When workers leave jobs, their benefit levels are based on their last salaries. The value of these frozen benefit amounts erodes over time with inflation.

Although there is as yet little evidence that the labor force is more mobile, now, as in the past, many workers change jobs several times during their careers. For them, defined contribution plans can have clear advantages.

The more rapid vesting of benefits under defined contribution plans also helps many workers, especially women who move in and out of the labor force. Employees have full ownership in their own contributions and the investment income on them. In addition, many employers vest their contributions immediately. As a result, about one-third of covered workers are fully vested for all contributions immediately. For most of the other two-thirds of workers, employers' contributions become fully vested in five or fewer years.[19]

Benefit security. For defined benefit plans, the employer bears the investment risk if the value of the plan's assets decline. Defined contribution plans, on the other hand, place the entire investment risk on the worker. The employer's liability is limited to the contribution obligation. Should the assets in a worker's account fall in value at or near retirement age, the worker could lose a substantial part of the expected benefits. This could easily happen to any particular set of assets a worker might hold. It can also happen to an entire cohort of workers. Over the two years 1973 and 1974, stock market prices fell about 25 percent. In 1987, there was a similar downward adjustment. The value of bonds can also fluctuate widely.

Another threat to benefit security is lack of asset diversification. In the past, employers often required workers to invest large portions of their defined contribution accounts in the company's own stock, and some still may encourage such behavior. Some workers, of course, have profited handsomely from this lack of diversification. Others have lost nearly all their retirement savings when the company's stock declined dramatically in value. Even without prodding from employers, workers may choose not to diversify their investments and, hence, expose themselves to large risks.

One of the most serious drawbacks to defined contribution plans as vehicles for retirement saving is that nearly all of them permit lump-sum distributions of account balances to workers who leave the company. Despite having to pay taxes on the income, as well as a 10-percent tax penalty, most workers spend the funds they receive from their defined contribution plans when they change jobs. In 1990, 10.8 million people received lump-sum distributions amounting to $126 billion. Only 56 percent ($71 billion) was rolled over into individual retirement accounts (IRAs). [20]

Changing jobs may not even be necessary to withdraw the funds. Workers with 401(k) and other defined contribution plans often have lenient withdrawal provisions available to them. Unlike traditional plans, 401(k) and other individual account plans permit "hardship withdrawals" for medical expenses, education expenses, and first-home purchases. Although withdrawals must be counted as income and taxes must be paid on the money withdrawn, about half the workers in these plans can withdraw funds without changing employers. Half the workers covered are also permitted to borrow against their accounts.[21]

Studies show that older workers and those with larger amounts in their plans are more likely to return withdrawn money to retirement accounts. For example, in 1993, 60 percent of workers aged 55 to 64 who received distributions put the entire amount into retirement or other savings. Fewer than half of 45-to-54-year-olds put the entire distribution into savings or investments (fig. 23). The tendency of workers under 55 to use amounts saved for retirement for other purposes is especially unfortunate. As shown later, amounts put aside earlier in a worker's career are generally worth much more at retirement than similar amounts saved late in one's career.

Figure 23

Workers' Uses of Their Most Recent Lump Sum Distributions from Pension Plans

	Age at Receipt of Lump Sum				
Use of Lump Sum	**Under 25**	**25 to 34**	**35 to 44**	**45 to 54**	**55 to 64**
Retirement savings	3%	14%	27%	34%	42%
Other financial savings	11	11	13	13	18
Home, business, debt repayment	19	28	22	17	10
Spent	56	32	23	21	10
Multiple and other uses	10	14	16	15	20
Total	100%	100%	100%	100%	100%

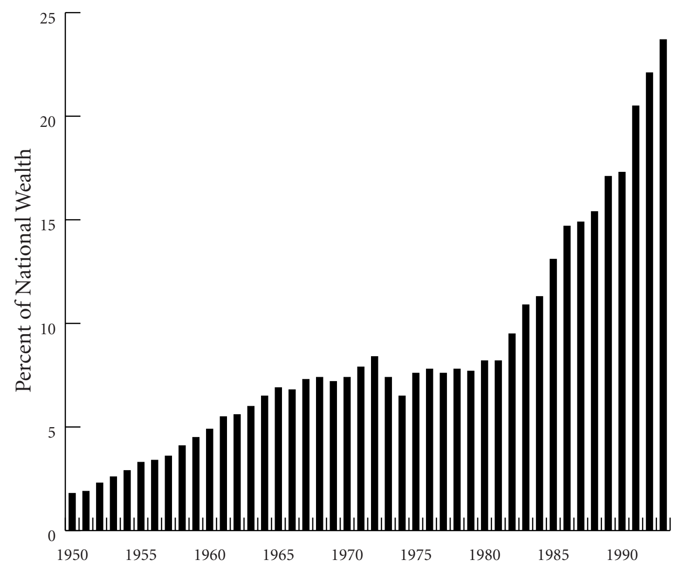
Source: Pension and Health Benefits of American Workers, U.S. Department of Labor, May 1994, Table D5, p. D-5.

One bright note is that the number of workers preserving their lump sum distributions in IRAs or some other retirement program is on the increase. Only 6 percent of workers receiving their most recent lump sum distribution before 1980 put it in a new retirement account. This jumped to 15 percent for lump sums received from 1980 to the end of 1986, and to 27 percent for lump sums from 1987 to April of 1993.[22] The increase after 1986 may have been due in part to the stiffer, 10-percent tax penalty that went into effect then.

Trends in pension wealth and plan funding. It is not widely appreciated how important employer pension programs are to the savings of working adults. Along with home ownership, employer-sponsored pensions are the most important way that Americans save, and over the past several decades pensions have been a tremendous source of capital. In 1950, pension assets accounted for about 2 percent of national wealth. By 1993, they accounted for nearly 25 percent (fig. 24).

Figure 24

Pension Assets as a Percentage of National Wealth, 1950-1993



Source: The Aging of the Baby Boom Generation, Sylvester Schieber and John Shoven, for ACCF Center for Policy Research, January 1997 (rev.), Figure 2, p. 3.

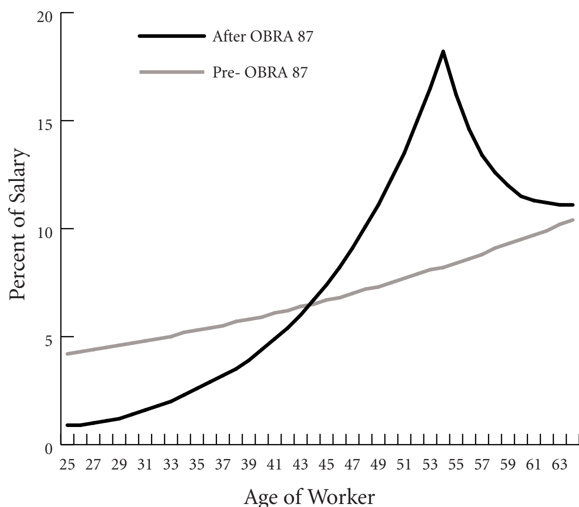
It is not clear how much longer pension plans will continue to be the engine for savings that they have been for the past 15 to 20 years. At some point, they may well change from net buyers of assets to net sellers. This is not a negative development, per se. The pension assets have been accumulated for this purpose. However, given the size of the baby boom generation relative to the cohorts that follow it, there could be impacts on the aggregate economy, just as there appeared to be impacts on housing prices in the 1970s.

Moreover, recent developments are likely to have a major impact on future contributions to defined benefit plans. Much of the extraordinary growth in pension wealth during the 1980s was the result of historically high stock and bond returns, far higher than pension fund managers had assumed. For defined benefit plans, higher-than-expected returns on already invested funds translate directly into lower future contributions. With over half of all pension funds backing defined benefit plan promises, the impact on future pension savings of unexpectedly high rates of return can be substantial.[23]

In addition, defined benefit plan funding has been restricted by revenue-driven funding rules in the Omnibus Budget Reconciliation Act of 1987 (OBRA 87). As a result of that law, employers have had to defer funding a major portion of benefits until late in the workers' careers. Formerly, employers could fund benefits more evenly over a worker's career (fig. 25).

Figure 25

Projected Annual Cost, as a Percentage of Salary, of Funding a Pension for a 25- Year-Old Worker over a 40-Year Career, Before and After OBRA 87



Source: U.S. Retirement Policy, Sylvester Schieber and Laurene Graig, Watson Wyatt Worldwide, Washington, D.C., 1994, Figure 13, p. 29.

The OBRA 87 funding restrictions, plus higher-than-projected rates of return, mean that many employers have been on an extended contribution holiday. However, the same demographic factors that are affecting Social Security will also affect defined benefit plans, and in the long run the private pension situation is analogous to that of Social Security. The same demographics will eliminate current funding surpluses, the contribution holiday for defined benefit plans will end, and these employers will either need to increase their contributions or cut benefits prospectively. In the meantime, employers will have adjusted to the very low contributions that they have had to make, and may be reluctant to divert funds from business operations to make the larger ones.

A number of factors will influence how this scenario is likely to play out. For many large employers health benefit costs, not pensions, are the larger concern. Also, large employers reexamine their compensation packages frequently and may intentionally or unintentionally be altering their defined benefit plans in ways that will avoid larger future contributions.

It is possible, perhaps even likely, that employers will be facing the same tough choices that face Social Security soon after the turn of the century. How soon the contribution holiday will end, and how much the contribution rate for any particular pension plan will have to increase, depends in large part on future rates of return and the demographics of the plan. However, in many cases a 60-percent increase in the contribution rate would be within the reasonable range.[24] Such increases could result in benefit cuts. Although workers' accrued benefits cannot be reduced, future benefit accruals can.

Benefits of future retirees. For Social Security, the future situation is clear, as are the questions that need to be answered. The current system cannot be maintained indefinitely without benefit cuts, tax increases, some combination of the two, or a major restructuring. The future situation for private pensions as a major source of future retirement income is much more ambiguous. However, a few things seem clear.

First, workers will be much more personally responsible for their pension saving in the future. Defined contribution plans are now the primary type of plan for nearly half of those with pension coverage. Thus, pensions in the future will be less tied to salary levels at retirement and to employers' savings choices. Rather, pension income at retirement will be the result of individual workers taking responsibility to save through their employers' defined contribution plans, to invest in reasonably safe but not overconservative ways, to avoid taking preretirement distributions, and, finally, to make appropriate decisions about how to spend their retirement accounts in their retirement years.

Second, a much larger percentage of workers is likely to receive private pensions in the future. In 1974, ERISA set minimum standards for vesting. Subsequent changes have shortened vesting periods more, so that most plans now vest benefits within five or fewer years.[25] As a result, having a vested right to a pension should become much more commonplace in the future. The two major projection studies completed to date support this conclusion.[26]

The largest unknown for private pensions is how large, and how well targeted, benefits are likely to be. One recent study projected pension benefits through 2030.[27] Depending upon the scenario, 77 to 82 percent of baby boomers were projected to receive pensions. However, the projection indicated that, on average, the benefits in 2030 will not be appreciably higher than they were in 1990, after adjusting for inflation. In addition, a significant percentage of retirees in 2030 was projected to receive relatively small benefits.

There is little doubt that private pensions will help support the baby boomers in their retirement. But how much of the gap will they fill when Social Security and Medicare benefits are reduced? Even if benefits are widespread, will plans largely benefit baby boomers who have other substantial assets, and contribute little to middle-class families, who would otherwise expect at most half their earnings to be replaced by Social Security? Will pensions be sufficient to contribute more to the increasingly higher health care expenses of the aged?

Personal Savings

The primary personal asset of most Americans is their own homes. The other assets of most families are modest, and what one household saves scarcely offsets what another household borrows. As a result, our nation's aggregate savings rate, except for employer-sponsored pensions, has been barely positive over the past decade.[28, 29]

Many reasons have been advanced to explain the anemic savings rate in the United States, especially as it has fallen over the past 10 years. Until recently, one reason was the decline in the percentage of people in the population between the ages of 45 and 64, the age group considered the most aggressive savers. It was thought that once baby boomers entered this age group, the personal savings rate would climb. However, recent statistics indicate that, although many baby boomers have already entered the traditionally peak savings years, personal savings rates continue to fall (fig. 26). This is especially disturbing because employer and employee contributions to pension and 401(k) plans are included in personal savings.

Figure 26

Personal Savings Rates, 1950–1996

Years	Average Percentage
1950–59	6.8
1960–69	7.4
1970–79	8.1
1980–84	8.2
1985–89	5.6
1990–94	5.0
1995–97	4.5

Note: Personal savings includes employer and employee contributions to employer-sponsored pension plans. Rates are a percentage of disposable personal income.

Source: U.S. Department of Commerce, Bureau of Economic Analysis as reported by the American Savings Education Council, http://www.asec.org/persav.htm, December 15, 1997.

Another reason for reduced savings is increased consumption levels among retirees. Although savings declined among all groups during the 1980s, it was especially marked among older age groups. One study shows that those 65 and over had the highest decline in household-level savings, from 11.2 percent in 1963 to 2.5 percent in 1986.[30]

Another study goes a step further, concluding that the elderly are pushing up household consumption in both nonmedical consumption and total consumption. In 1960–61, 70-year-olds consumed only 63 percent of the nonmedical products and services that 30-year-olds used. Today, consumption by 70-year-olds is up to 91 percent of the 30-year-olds' level.[31]

One implication is that intergenerational programs like Social Security, which redistribute income from savers among the working-age population to older consumers, will depress the savings rate below the level it would otherwise have been. If this is true, in the future the impact will be even greater if fewer workers are paying more to finance the immediate benefits of Social Security retirees.

Current tax policy also does not favor many forms of personal savings, even though targeted tax incentives generally have had a favorable impact. Home ownership is favored through itemized deductions for mortgage interest payments and property taxes and through special capital gains treatment. There are also incentives to save for retirement through insurance annuities and IRAs.

There is considerable debate about the degree to which tax preferences for particular forms of personal savings actually increase savings. The history of IRAs is a good example of how limited incentives are likely to actually affect personal savings.

In 1981, Congress extended IRA eligibility to all taxpayers and increased the contribution limits on tax-deductible payments. Banks and other financial institutions initiated intense marketing campaigns to bring the friendlier eligibility rules to the public's attention. IRA popularity expanded rapidly as a result, and between 1981 and 1987 IRAs accounted for almost 20 percent of all personal savings.[32] In 1986, the lenient eligibility rules were rescinded. In 1987, personal savings declined and have remained depressed.

Superficially, the IRA policy appears to have been highly successful. However, there are several caveats. Even though IRAs accounted for 25 percent of personal savings at one point, personal savings did not increase by 25 percent. A part of the IRA savings seems almost certain to have been a diversion from other types of personal savings. Second, the rapid demise in IRA savings coincided with the rapid increase in employer-sponsored, contributory 401(k) plans. Some analysts have pointed out that a part of savings through IRAs was diverted to 401(k) plans. This is almost certainly true, since 401(k) plans have greater tax advantages for savers whose employers offered them. However, this does not help explain a decrease in the personal savings rate. In the national income accounts, both IRA and 401(k) contributions are included in personal savings.

In spite of substantial disagreement among economists on the effectiveness of IRAs in increasing savings, a number of helpful findings have emerged from the research in this area. There is growing evidence that people participate in various saving activities quite independently, without an integrated savings plan. If people took an integrated approach, then those participating in pension plans would have lower non-pension savings and vice versa. However, this does not appear to be the case. Bureau of Labor Statistics (BLS) data from the 1981–88 Consumer Expenditure Surveys indicate that those with pension plans have higher, not lower, rates of non-pension saving. This appears to be true even for people with similar incomes.[33] Hence, the data do not support the argument that employer-sponsored pensions totally displace other forms of personal savings.

Other studies that have examined substitutions between pension coverage and household saving tend to reinforce these findings. One noted study found that some reduction in other saving was associated with pension coverage.

However, the differences in accumulated wealth between those with and without pension coverage fell far short of a complete offset. This was true regardless of the type of pension coverage.[34] Findings such as this seem to emerge consistently, regardless of the form of savings. There is some offset between forms of savings, but it is less than total. The debate is over how large the offset is likely to be.

These findings have important policy implications. If the government creates a new form of tax-favored savings, then the amount saved in this form will not all represent new savings. Similarly, if the government eliminates one form of savings vehicle, such as IRAs, it cannot be expected that the money that would have been saved in that vehicle will simply be moved to another type of vehicle. Experience seems to indicate that large numbers of Americans use savings vehicles only if they are convenient, heavily marketed, and clearly subsidized by someone like an employer or the government.

A corollary of this finding can also be applied to public programs that do not in themselves constitute savings. If the government reduces Social Security or other programs that support retirement, then some families will save more for retirement. However, overall savings will not increase enough to replace the cutback without added inducements to save.

Other reasons believed to contribute to low personal savings rates are the proliferation of consumer credit and the number and increasing complexity of financial instruments that create confusion about their use and concern about their volatility. Also, real wages have been stagnant for 19 years, which means baby boomers' wage rates have not grown as rapidly as their parents' did at similar ages. Baby boomers are having children later, leaving them fewer years to save after the child-rearing years. Also, baby boomers will likely use more of their savings to educate their children, who are now more likely to pursue increasingly expensive college educations.

According to one analyst, baby boomers must triple their current savings if they want to enjoy an undiminished living standard in retirement.[35] If Social Security benefits are significantly reduced, current savings would have to be increased perhaps five times over today's levels.

Other, less obvious, factors also influence savings behavior. Evidence from various surveys shows that financial knowledge significantly affects saving. People who describe themselves as "very financially knowledgeable" saved several times as much for retirement as those who described themselves as "not very financially knowledgeable." In addition, financial knowledge and adult behavior are strongly related to developmental experiences. Baby boomers who, as children, talked with their parents about financial decisions, received allowances, held bank accounts, held securities, and took courses in economics or related subjects save more.[36] Finally, Americans tend to "live for today." As shown in a recent survey, many Americans expect the essentials of middle-class life.[37] Preparing for retirement pales by comparison.

Some have argued that inheritances will rescue large numbers of baby boomers. This is unlikely, even though one study placed the combined potential inherited wealth of baby boomers at $10.4 trillion. It is important to remember that these inheritances will not occur all at once but over 40 years or more; that the total barely exceeds $100,000 per bequest, which will be divided among siblings; and that bequests will be largely concentrated among the offspring of parents in the top 10 percent of the income distribution. It is also not clear how much of the $10.4 trillion will materialize as transferable wealth. For example, increasing numbers of couples plan for retirements of 25 years or more and may minimize the risk of outliving their wealth by purchasing annuities that guarantee a lifetime income, but do not transfer any money to their children. Finally, improved longevity means that many baby boomers will be well into retirement before their parents die. As in the past, inheritances will be an important source of retirement income for some but are unlikely to help the many.

Overall, it seems unlikely that baby boomers will increase their personal savings enough during their working lives to contribute what will be needed to compensate for changes in publicly provided benefits. As larger and larger numbers of the baby boom generation approach retirement, the trends that helped ease the way financially for their parents are likely to turn against them and their cohorts who follow. Housing values are not likely to increase dramatically, but may fall. Financial markets are less likely to deliver the high returns that have helped higher-income units among the baby boomers' parents. Nor will baby boomers retire at, or soon after, a time when the real values of public benefits have been increasing rapidly. In fact, the opposite is almost certain to be the case.

Work and Retirement

Although retirement has almost always been discussed as an all-or-nothing proposition, that is not really true. In the late sixties and early seventies about 25 percent of men did not go directly from a career job to retirement. They chose other paths toward retirement such as part-time work, self-employment, or work in an alternative occupation. More recent data show that, of a group of men 51 and 61 in 1992 who were not working in 1994, a third had moved from a career job to a shorter-term bridge job before retiring completely.[38]

In addition to gradual retirement, some families have always used earnings to supplement their retirement income. Currently, 20 percent of couples and individuals over 65 with Social Security benefits also have earnings. Among those 62 to 64, about half have earnings. Although neither gradual retirement nor some work during retirement are new, recent evidence suggests that using earnings to supplement retirement income, or perhaps to conserve it, may be a major trend on the horizon.

After three decades of steadily declining labor force participation, rates for men over 55 leveled in the mid-1980s, suggesting that retirement ages may have stopped falling. However, the aggregate picture may be masking some important underlying developments.

Between 1984 and 1993, while males between ages 50 and 64 participated in the labor force at stable rates, participation rates in this age range by men who were also receiving retirement benefits rose noticeably.[39]

Several factors have been cited to help explain recent increases in work activity among male pensioners under 64. One is the decline in inflation-adjusted values of pensions after retirement. Employers have been less likely to grant retirees ad hoc increases in pension benefits to help offset cost-of-living increases. According to the Department of Labor, employers granted increases of only 1 to 2 percent a year from 1984 to1992. Erosion of retirees' annuities due to inflation, coupled with longer life expectancies and improved health, may be encouraging greater labor force participation among retirees, especially those who retired early. Increases in the percentage of retired people taking unplanned retirements (due to early-out incentives and buyouts) may also have encouraged increased work activity among early retirees. Also, it is likely that the shift toward individual control of pension accounts, which means the accounts often earn less, together with frequent spending of distributions, encourages work after receipt of the first benefit.

Finally, labor market trends were generally favorable for older workers during the 1980s. During the latter part of the economic expansion that occurred between 1984 and 1989, labor shortages caused employers to seek older workers. However, as a result of the recession in the early 1990s, many older workers lost their jobs or were offered early retirement.

Although it is still too early to evaluate recent trends, it may be that more retirees will want to participate in some paid employment after retiring from their primary jobs. This may be one of the ways that the baby boom generation attempts to maintain its standard of living during retirement. However, relying on earnings as a continued source of income after retirement is risky. At any given time, the ability to supplement retirement income through paid employment will depend upon labor market conditions, as well as continued good health. Moreover, as suggested by the recession of 1990, unlike in the past, it may be older workers, not the youngest ones with the shortest service, who are most likely to be encouraged to leave first when labor markets become slack. In fact, it now seems likely that older workers who are also short-service or part-time will be subject to the last-in-first-out rule whenever firms experience a slackening of demand.

Health insurance may also be increasingly a problem. Employers will not want to provide it for older, short-service workers, while at the same time older, semi-retired workers may increasingly need it. Any mandate requiring employers to provide health insurance will clearly discourage hiring older workers, or at least determine the conditions of employment, such as the number of hours and whether a job can be full-year or must be clearly temporary.

Trends in transitions to retirement bear careful, ongoing scrutiny. It is not yet possible to anticipate the extent to which employers will want to hire older workers and the willingness and ability of older workers to accept jobs. When large numbers of the baby boom generation begin leaving the labor force, the demand for older, skilled workers may increase, causing some to defer retirement and others to retire only partially. However, it is too early to predict the most likely labor force dynamics.

Financing Health Care

Virtually everyone over 65 receives subsidized health insurance through Medicare. In addition, a third receives subsidized health benefits through former employers.[40] Although these health benefits do not constitute fungible income, they directly affect economic well-being and the amount of cash required to maintain a given standard of living. This is true at any age, but especially for the aged, where health care expenditures are several times higher than those of workers in their forties and younger (fig. 27).

Figure 27

Deviations in Insured Health Care Costs from the Average for Insured Adult Males and Females by Age

Age Group	Male	Female
20–29	.6	1.2
30–39	.8	1.4
40–44	1.0	1.6
45–49	1.2	1.7
50–54	1.6	2.0
55–59	2.2	2.3
60–64	3.0	2.7
65–69	3.7	3.3
70–74	4.5	3.9
75–79	5.2	4.4
80–84	5.6	4.9
85 or older	5.7	5.1

Note 1: Variations in costs are shown as ratios to the cost for 40-to-44-year-old males. Thus, the cost for 20-to-29-year-old males is only six-tenths of the cost for 40-to-44-year-old males, while medical costs for 70-to-74-year-old males are four and a half times higher. Similarly, the cost for 20-to-29-year-old females is 1.2 times the cost for 40-to-44-year-old males, and for 70-to-74-year-old females the cost is 4.4 times that of 40-to-44-year-old males.

Note 2: Medical costs include health care costs except those for long-term care.

Source: Derived from health cost factors provided by William M. Mercer Incorporated.

Currently, the health care expenditures of retirees are financed through four major sources: the Medicare Hospital Insurance (HI) and Supplementary Medical Insurance (SMI) programs, employer-sponsored retiree health insurance, privately purchased health insurance (often referred to as Medigap or MedSupp), and out-of-pocket payments. In addition, the Medicaid public assistance program pays for a substantial amount of the aged's long-term care. Of these, Medicare is the largest, paying 45 percent of the overall health care costs of the aged.

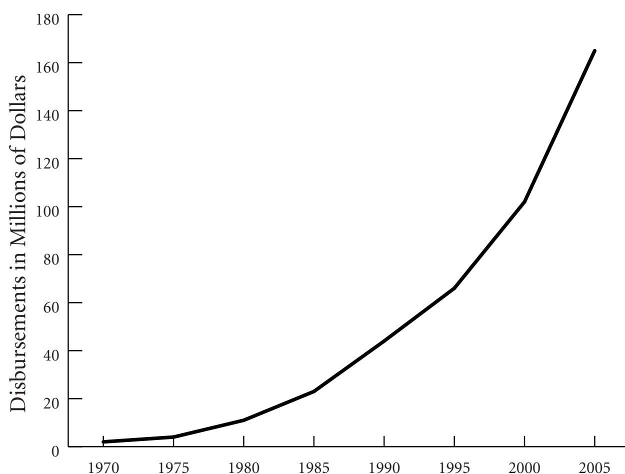
Medicare. The Medicare program was designed primarily to meet the acute health care needs of the elderly, that is, short-term hospital stays and payments for physicians and outpatient services. The HI portion pays for hospital and other inpatient care costs, and is financed by a payroll tax of 2.90 percent (1.45 percent paid each by the employer and the employee).

SMI, which pays doctor bills and other outpatient expenses, is not financed through payroll taxes. It is funded through premiums paid by program participants, as well as contributions from general tax revenues. In 1998, direct monthly premiums of $43.80 per participant are expected to pay 25 percent of SMI costs. The other 75 percent will come from general revenues and trust fund income.[41] Financing levels for SMI are recalculated each year based on projected costs for the year. In the past, the participants' share of program costs has varied. Under changes enacted in 1997, each year's premium rate for participants will be set at the level necessary to cover 25 percent of program costs.

Medicare spending is growing faster than nearly all other major federal programs. Before the 1997 budget agreement, the Health Care Financing Administration (HCFA) projected that, between 1997 and 2006, Medicare spending would grow from $213 billion to $457 billion. The contribution from general revenues to the SMI fund alone is expected to increase from an estimated $60 billion in 1997 to $156 billion in 2006.[42] Historically, SMI costs have nearly doubled every seven to eight years, and this trend is expected to continue (fig. 28).

Figure 28

Historic and Projected SMI Disbursements, 1970–2005



Source: 1997 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund, Table II.D2, p. 27.

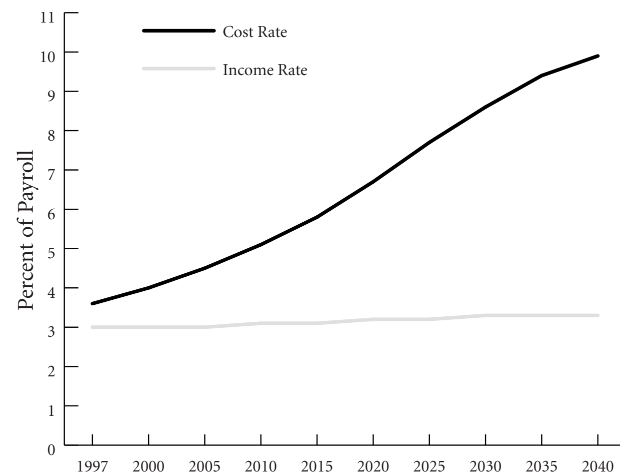
To avert a near-term financial crisis in the HI portion of the Medicare program, Congress made a number of changes in 1997. The most far-reaching was the introduction of Medicare Part C (Medicare+Choice). Under this restructuring, participants can now choose to participate in the traditional Medicare Parts A and B or in Medicare Part C. If Part C is selected, then the participant must select one of several approved private sector health insurance programs. These include health maintenance organization (HMO) options, as well as preferred provider organizations (PPOs), provider sponsored organizations (PSOs), and fee-for-service options. As a demonstration project, a limited number of participants may opt for medical savings accounts. The hope is that making managed care options universally available and encouraging competition among health care providers will lower program costs. To help ensure this, greater restrictions have been placed on annual increases in provider costs.

An important part of averting a near-term financial crisis in the HI program was shifting costs for home health care services from the HI program to the SMI program over a six-year period. Of course, this will increase SMI costs. However, the SMI program is insulated against financial crises because 75 percent of its cost is financed directly from general revenue. If its cost increases, there is simply a larger draw on general government revenues to pay benefits. To slow the rate of growth in SMI costs, the Balance Budget Act of 1997 imposes prospective payment systems on many services covered by Part B.

Although changes adopted in 1997 will defer a financial crisis in the HI program until the end of the next decade, they do not address the financing of Medicare benefits for the baby boom generation and beyond. Data from the 1997 trustees' reports, the most recent available, show that the cost of the HI program as a percent of taxable payroll already outstrips the current payroll tax rate of 2.9 percent, and is expected to continue to increase. According to the1997 report, which was issued prior to the Balanced Budget Act of 1997, by 2010, when the first of the baby boom generation reaches retirement age, HI disbursements will be 5.1 percent of payroll. And by 2030, when the last of the baby boom generation reaches retirement age, program costs will have reached nearly 9 percent of payroll (fig. 29). Since Congress has yet to enact any tax hikes for the program, HI benefits are not sustainable at their current levels.

Figure 29

HI Program Cost and Income Rates
as a Percentage of Aggregate Payroll



Source: 1997 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund, Table II.E2, p. 42.

When SMI is added to the equation, the cost picture becomes even more bleak. Using data from HCFA's projections in the 1997 trustees' reports, it is possible to estimate the tax rate that would be required if both HI and SMI were financed through a flat payroll tax. Under this assumption, the current rate would have to be 5.4 percent to cover total expected 1997 HI and SMI expenditures. By 2010, the rate

would need to be 8.8 percent. By 2020 it would be 12.1 percent and in 2040, when those currently entering the labor force are getting ready to retire, the cost would represent 17 percent of payroll (fig. 30).

Figure 30

Combined HI and SMI Disbursements as a Percentage of Aggregate Payroll, 1996–2040

Year	HI Payroll Tax Rate	Implicit SMI Payroll Tax Rate	Total Disbursements as a Percentage of Payroll
1996	3.48%	1.90%	5.38%
2000	3.96	2.22	6.18
2005	4.53	2.89	7.42
2010	5.08	3.76	8.84
2015	5.82	4.69	10.51
2020	6.74	5.38	12.12
2025	7.70	6.10	13.80
2030	8.63	6.74	15.37
2035	9.37	7.09	16.46
2040	9.86	7.14	17.00

Source: HI payroll tax rates are from the *1997 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund*, Table II.E2, p. 42. Although SMI is not financed through a payroll tax, the cost as a percentage of payroll can be derived from the above table and Table III.B1, p. 70.

Figure 31

Growth in Consumer and Medical Prices, Based on the Consumer Price Index, for Selected Decades

CPI General Decade	CPI Medical Inflation Rate	Inflation Rate	Ratio of Medical to General Inflation Rate
1950–59	2.1	4.0	1.9
1960–69	2.7	4.3	1.6
1970–79	7.8	8.2	1.1
1980–89	4.7	8.1	1.7
1990–96	3.0	6.2	2.1

Source: Economic Report of the President, Washington D.C., February 1997, Table B-58, p. 365.

As bleak as these results may seem, they could nevertheless be optimistic. Since 1950, the cost of medical care has risen, on average, at least 1.5 times faster than general prices (fig. 31). The trustees' projections assume that future trends will begin falling below the current trend in health care costs in 2010, shortly before the baby boom generation reaches eligibility age. Based on 47 years' experience, projecting a decline so soon in the future seems optimistic.

It is anticipated that the government will take action beyond that in the 1997 Balanced Budget Act before any of these alarming scenarios actually occurs. Nonetheless, the government's projections underscore the need for immediate, additional action. Even under HCFA's most optimistic 1997 assumptions, the current Medicare program is not sustainable for the baby boom generation and the generations that follow. It seems inevitable that substantial new taxes, deep cuts in payments to health providers, or severe cutbacks in benefits will be needed to bring Medicare into financial balance.

Employer-sponsored health insurance for retirees. Another source of health insurance during retirement is employer-sponsored retiree health plans. Unlike Medicare, which is available only to those over 65, major employers often offer health insurance to early retirees, as well as those who retire at 65 or after.

Like Medicare, employer-sponsored health plans for retirees represent a large and growing future liability. Moreover, recent changes in accounting rules have sensitized major employers to these liabilities, which have not been prefunded and are not likely to be in the future.

When the recent FASB accounting rules were being developed in the late 1980s, there was some fear that employers would move swiftly to eliminate these benefits across the board.

As data from the Current Population Surveys (CPS) show, this fear was not realized. There has been little change in the percentage of Americans 65 or older who report receiving health insurance through employers since 1987. In that year, 34 percent reported being covered through employer plans. Eight years later, in 1995, 35 percent reported coverage.[43]

However, firm-level data indicate that employers have begun to institute major cutbacks for active workers once they reach retirement. In 1985, large and medium firms reported that a little over 75 percent of their full-time workers could continue health insurance coverage after retirement. By 1993, the proportion had dropped to 52 percent.[44]

Comparisons of data from 1988 and 1994 on early retirees show how employers' decisions are beginning to affect workers nearing retirement. In 1988, 84 percent of men age 55 to 64 who were fully retired had been covered by health insurance on their last job. Of these, 79 percent were offered health insurance when they retired, and 85 percent signed up (fig. 32). By 1994, the situation had change substantially. Seventy-six percent of early retirees had health insurance on their last job (an 8-percent decrease), 69 percent were offered employer-sponsored health insurance on any terms when they retired (a 10-percent decrease), and 73 percent opted to take the insurance (a 12-percent decrease).

Employers who have not yet eliminated health insurance for new retirees are frequently passing along more of the cost. In 1985, 41 percent of large and medium-sized firms that offered a plan to early retirees required them to pay all or part of the premium cost. By 1993, 75 percent of employers required full or partial payment.[45] Interestingly, of the early retirees surveyed in 1994 who turned down the insurance, 42 percent said it was too costly.[46]

Figure 32

Reported Availability of Pre- and Post-Retirement Employer-Sponsored Health Insurance among Early Retirees, 1988 and 1994

Percentage of Early Retirees Reporting:	1988	1994
Health insurance coverage on last job	84	76
Being covered and being offered health insurance at retirement	79	69
Being offered and accepting health insurance at retirement	85	73

Note: Early retirees were defined as those aged 55 to 64 who were fully retired. Those reported being retired but working full or part time were not included.

Source: Retiree Health Benefits: Availability from Employers and Participation by Employees, Pamela Loprest, The Urban Institute, Washington, D.C., October 1997, derived from Figure 2, p. 9a.

Figure 33

U.S. Population Age 85 and Older, 1990–2050

Year	Number in Millions	Percentage of Total Population
1990	3.7	1.4
2000	4.3	1.6
2010	5.7	1.9
2020	6.5	2.1
2030	8.5	2.4
2040	13.5	3.7
2050	18.2	4.6

Source: Population Projections of the U.S. by Age, Sex, Race, and Hispanic Origin, Current Population Reports, Series 25-1130, U.S. Bureau of the Census, February 1996. Numbers are from the middle-series projections.

The trend toward reduced retiree health benefits is likely to continue. For retirees 65 and older, the employers' costs are directly related to benefits provided through Medicare. Hence, any future cutback in Medicare benefits will likely increase the employers' costs. Also, prescription drugs, which Medicare covers only for inpatient care, are among the most rapidly rising medical costs. Since many employer plans cover prescriptions, their costs are rising more rapidly than Medicare and medical costs generally. This is a further disincentive to providing insurance for retirees and for retirees to accept an offer of insurance when they have to pay much of the cost. As baby boomers begin reaching retirement, these costs will skyrocket for employers that have not restructured their costs by eliminating the benefit entirely, reducing covered services, or passing on premium costs to retirees. Finally, any increase in the eligibility age for Medicare will dramatically increase employers' costs, since employers would be liable for total costs until Medicare payment begins.

Long-term care. One of the great unknowns for the baby boom generation is how extensive their need for long-term care will be. Most long-term care, whether at home or in a nursing facility, occurs near the end of life and, the longer one lives, the greater the likelihood that some form of long-term care will be needed. About 25 percent of those 85 and older are in nursing homes, compared with 5 percent of the general population over 65.[47]

As the baby boom generation reaches more advanced ages over the next half century, the number of people 85 and over is expected to increase by a factor of four, from 4.3 million in 2000 to over 18 million in 2050 (fig. 33). Moreover, nearly 75 percent of those over age 85 by the middle of the 21st century will be single, divorced, or widowed, the groups most likely to need extensive government assistance, including home health and nursing home care.[48]

In 1995, Medicaid, the largest third-party payer for nursing home care, financed 47 percent of the nation's $78 billion tab. In addition, public programs, mostly Medicare and Medicaid, financed 55 percent of the nearly $29 billion spent on home health care. The growth in such public expenditures has been substantial. Between 1990 and 1995, total spending on home health and nursing home care increased from $64 billion to a little over $106 billion, a 66 percent increase. Of this increase, private funds financed only 29 percent.[49]

Although the data do not permit segregating the long-term care costs for the aged alone, it is known that the aged consume a large share of the public funds for these services. For example, in 1995, although only 11 percent of Medicaid recipients were 65 or older, they consumed over 30 percent of the program's benefits.[50]

As the number reaching advanced ages soars, the government's obligation through existing programs is also likely to soar. Sheer numbers will likely lead to this result even if the health status of the aged improves with increased longevity. There will likely be strong pressure for greater government support of long-term care if some way is not found to insure and pre-fund at least a part of this expense privately.

Overall Prospects for Future Retirees

Americans believe they should not have to face drastically reduced living standards during retirement. Indeed, in one recent survey 70 percent of American workers said they expect to live a comfortable lifestyle during retirement.[51]

One way to measure the amount of retirement income necessary to fulfill these expectations is through the calculation of replacement ratios. These ratios indicate the percentage of preretirement income that will be needed to maintain the same standard of living after retirement. In general, most retired Americans will not have to replace their entire income to maintain their standard of living. Most will pay lower taxes because they will have no, or lower, earnings subject to payroll taxes, and certain work-related expenses will disappear.

Georgia State University, in collaboration with Aon Consulting, has done a number of replacement rate studies. According to their most recent study, workers retiring at 65 will need between 67 and 84 percent of their income before retirement to maintain the same living standard. The exact percentage depends upon whether one is single or married, and varies by level of preretirement income. The lower one's income, the higher the percentage that must be replaced. For example, a two-earner couple with a joint annual income of $20,000 needs to replace 84 percent of its income to maintain its preretirement standard of living. A similar couple with an income of $90,000 needs to replace only 67 percent (fig. 34).

Figure 34

Percentage of Final Earnings Needed to Maintain a Preretirement Standard of Living During the Early Years of Retirement

Preretirement Earnings in 1997 Dollars	Married Couples: One Earner	Married Couples: Two Earners	Unmarried Workers
20,000	84%	84%	79%
25,000	80	80	77
30,000	77	77	76
40,000	72	72	71
50,000	69	67	68
90,000	71	67	75

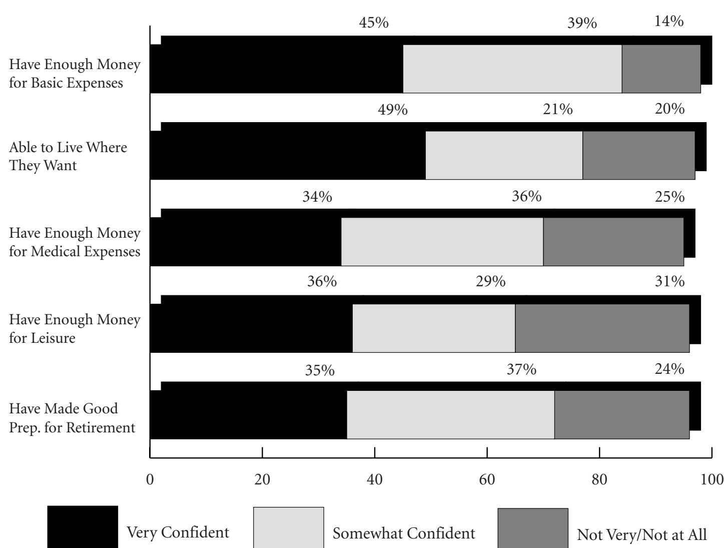
Source: Data presented by Fred Munzenmaier, Aon Consulting, at the Enrolled Actuaries Meeting, March 15, 1997, from a joint Georgia State University and Aon study, publication forthcoming through GSU.

Since there are almost no data that permit comparisons of income levels before and after retirement, there are no objective measures of the extent to which current retirees are, in fact, maintaining their preretirement standard of living. However, there is subjective information gathered through questions asked of retirees in national surveys.

The majority of current retirees seem to have achieved something approaching the goal of preretirement income replacement. Nearly three-quarters of retirees report that they are confident they will have enough money to live comfortably throughout retirement. They also report that they have enough money to live where they want, support their leisure, and pay for their medical expenses. Finally, three-quarters reported that they were able to live as well or better during the previous year as they did in their first year of retirement, and 70 percent expect their lifestyle to be the same or better over the next several years (fig. 35).

Figure 35

Confidence Expressed by Retirees in Specific Aspects of Retirement, 1996



Source: Annual Retirement Confidence Survey, Matthew Greenwald and Associates, October 1996.

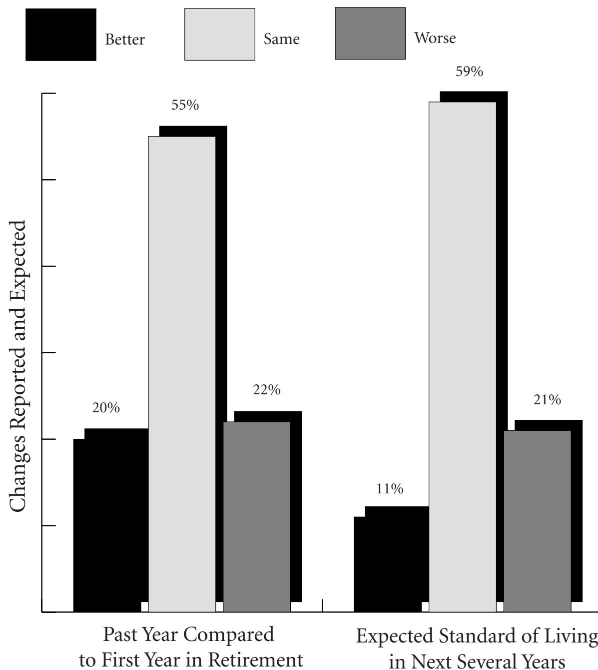
But retirement has not worked out well for everyone. More than one in five said their lifestyle is worse than when they first retired. Similar numbers expect their living standard to worsen soon (fig. 36).

Current workers, like current retirees, have a high level of confidence. Three-quarters are confident about their retirement income prospects. Among these, however, 30 percent have nothing saved for retirement. Most workers have not developed a saving plan based on a target, and nearly two-thirds have not even tried to calculate how much they will need for retirement.

The confidence of current workers may not be fully warranted. As most members of the baby boom generation know, Social Security may not be able to provide the same level of support as it does today. For many, the impact of those reductions would have a dramatic effect on how much they need to save. For Social Security, a worst-case scenario would reduce benefits to levels supportable by current payroll tax rates. Under this assumption, the oldest baby boomers, who are now turning 52, would not be seriously affected. Their benefits would be only 4 to 7 percent lower than otherwise. Those born

Figure 36

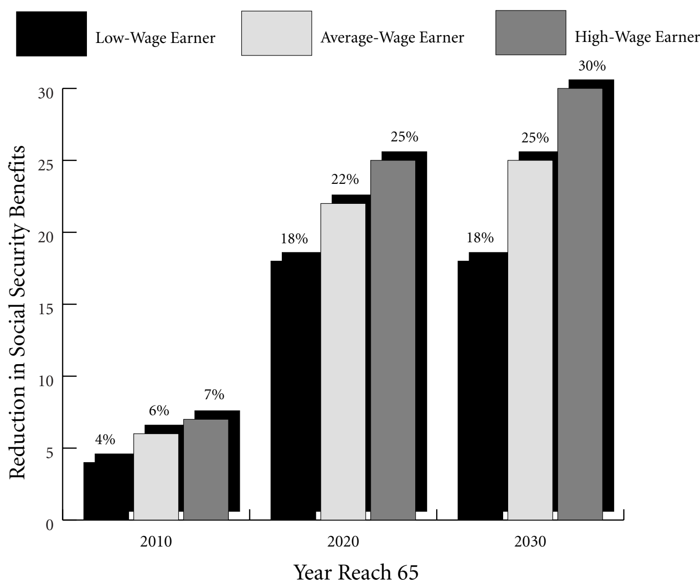
Changes Reported by Retirees in Living Standards and Future Expectations, 1996



Source: Annual Retirement Confidence Survey, Matthew Greenwald and Associates, October 1996.

Figure 37

The Effect of Retaining Current Social Security Tax Rates, and Receiving Benefits Accordingly, for Workers of Different Ages



Source: Social Security Reform: Implications of Individual Accounts on the Distribution of Benefits, Gordon Goodfellow and Sylvester Schieber, Draft prepared for the 1997 Pension Research Council Symposium, May 12, 1997. Derived from Table 11, p. 43.

at the height of the baby boom, in 1955, would suffer much greater losses. Their reductions would vary from 18 to 25 percent, depending upon their lifetime earning levels. Losses would continue to increase over time, and workers now in their early thirties, who will turn 65 in 2030, would experience Social Security benefit losses from 18 to 30 percent (fig. 37).

Reductions in Social Security benefits, however, may only be the tip of the iceberg. Paying for health care may be a much bigger threat to the security of future retirees. As has been shown, Medicare costs are increasing at an unsustainable rate. Unless some way can be found to deliver health care more cost effectively, severe cutbacks in benefits may be necessary. Cutbacks in Medicare benefits will directly impact employer-sponsored retiree health insurance, and may reduce or eliminate this benefit for the minority who are fortunate enough to have it. Medicare cutbacks will also increase the cost of private health insurance policies, which are currently purchased by a little over a third of those over age 65. Because there will be more elderly, long-term care will also be a bigger-ticket item. It is also possible that a larger percentage of the aged population will require long-term care at some point. Overall, it would not be unreasonable to assume that cash replacement rates might have to rise several percentage points to compensate for increases in out-of-pocket expenditures on health care.

If future retirees want to maintain their preretirement standards of living, it seems clear that more of their earnings will need to be replaced through employer pensions and private savings. However, before this can happen on as wide a scale as needed, it will be necessary for many more employers to adopt pension plans and for workers to make more serious efforts to save through them.

Personal savings will also need to increase. The task force takes little comfort from studies that indicate the baby boom generation is saving as much or more than its parents. These findings are based on averages that mask important underlying differences in the income distribution of the baby boom generation and are likely to generate greater income inequality as the baby boom reaches retirement age.

Between 1947 and 1973, median family income after inflation more than doubled. Over the past two decades, median income after inflation has been stagnant. This stagnation, like the stagnation in overall pension coverage, masks dramatic underlying changes. Between 1973 and 1993, the real incomes of those in the top 20 percent of the income distribution grew by 25 percent. For those in the middle 20 percent of the income distribution, incomes were constant, and those in the lower 20 percent actually experienced a 15 percent decline in real income.[52]

The growing bifurcation in income seems almost certain to lead to greater income inequality in retirement in the future. Moreover, cutting benefits under public retirement programs will likely exacerbate such inequalities, as will the high rates of return that investors are currently experiencing. Baby boomers who are fortunate enough to have financial assets in 401(k) plans or other savings will have profited greatly from the high real returns of the past decade. Younger

baby boom members and those in the bottom half of income distribution, however, are likely to be little or no better off when investment returns moderate in the future.

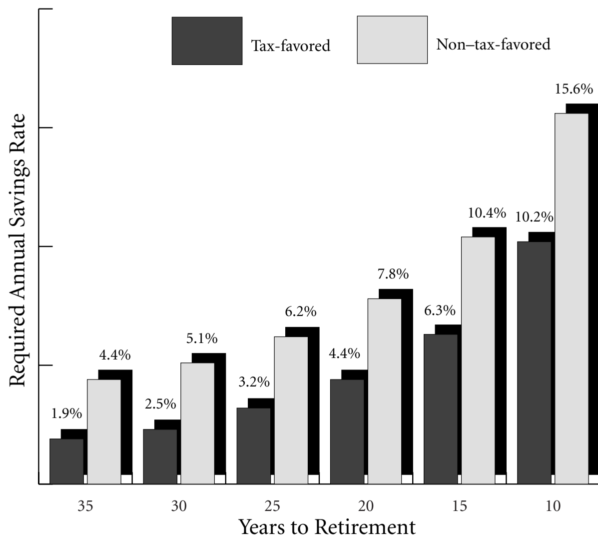
To avoid making the situation worse for future generations, it is important that those who have saved retain their savings and that those who have not saved begin to do so. Even with current high rates of investment return, baby boomers and those who follow are unlikely to have the financial good fortune of their parents. And, more important, even if the baby boom generation is for some unforeseen reason lucky, such optimism is not a proper basis for developing financially viable public policy.

Few in the public are aware of the number of years and saving rates that are necessary to make up for the magnitude of declines that could occur in public programs, and the increases in cash income that might be needed for health care. In order to replace 20 percent of preretirement income, a worker with 30 years until age 65 would need to save 5 percent of income each year. If the worker had 20 years until retiring at 65, the required savings rate would be nearly 9 percent of earnings. At 10 years, 20 percent of earnings would be needed.

These savings rates assume that the worker saves through a tax-favored pension arrangement. If the worker simply invests the money on his own in a non–tax-favored vehicle, the savings rates would need to be 50 to 100 percent higher depending upon the number of years until retirement (fig. 38).

Figure 38

Savings Needed to Finance a Retirement Income Equal to10 Percent of Earnings at Retirement



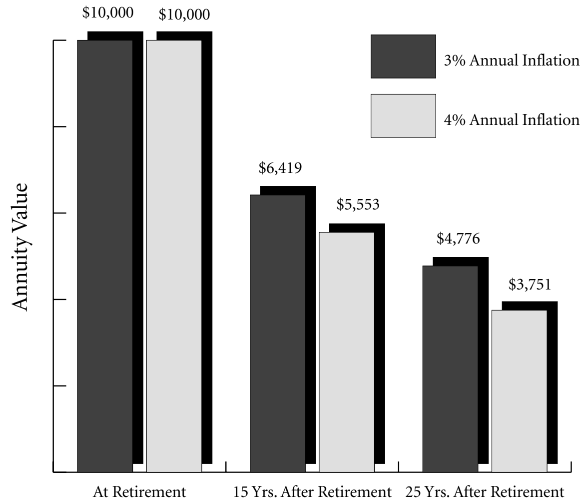
Note 1: The figure can be used to calculate savings rates for higher retirement incomes by multiplying by multiples of ten. For example, if one wants to save enough though a pension plan to replace 20 percent of earnings, the required savings rate would be 8.8 percent a year (4.4 times 2) if one were 20 years from retirement. If one were 30 years from retirement, the required savings rate would be 5 percent. If the savings is non–tax-favored, the required savings rates are considerably higher, although deferring capital gains could reduce them.

Note 2: The calculations are based on a married couple (wife younger by three years), a rate of return of 7.5 percent for tax-favored pension savings, an after-tax return of 4.5 percent for non–tax-favored savings, inflation rate of 3.5 percent, annual career salary increases of 4.4 percent, a retirement age of 65, a level monthly payment at retirement that continues as long as either spouse is alive, and the 1994 GAR mortality table.

Source: Ronald Gebhardtsbauer, Senior Pension Fellow, American Academy of Actuaries.

Figure 39

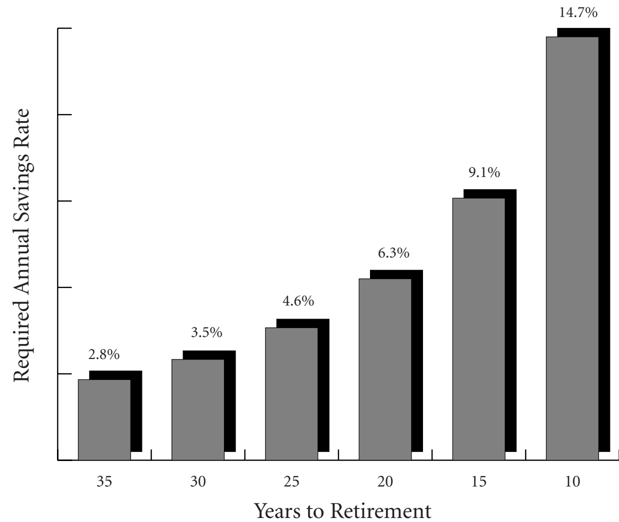
Decline in Purchasing Power, Due to Inflation, of a Fixed $10,000 Annuity



Source: *The Big Lie*, A. Haeworth Robertson, Retirement Policy Institute, Washington, D.C., 1997, Chart 6.3, p. 51.

Figure 40

Savings Needed to Fund an Indexed Pension Equal to 10 Percent of Earnings at Retirement



Note 1: The figure can be used to calculate savings rates for higher retirement incomes by multiplying by multiples of ten. Thus, if one wants to save enough for an indexed pension that replaces 20 percent of earnings, the required savings rate would be 12.6 percent a year (6.3 times 2) if one were 20 years from retirement. If one were 30 years from retirement, the required savings rate would be 7 percent.

Note 2: The assumptions are the same as for Figure 38, except the monthly payment at retirement increases by 3.5 percent a year, which is the assumed rate of inflation. The figure assumes savings is through an employer pension plan or some other tax-favored retirement vehicle.

Source: Ronald Gebhardtsbauer, Senior Pension Fellow, American Academy of Actuaries.

In addition, these rates are adequate only to meet a fixed target. They do not take into account the erosion over time of real purchasing power due to inflation. Even low rates of inflation like the current ones can greatly erode the value of a fixed-income stream over a lengthy retirement period. A 3 percent inflation rate reduces the real value of a $10,000 fixed annual payment to $6,419 over 15 years, and to $4,776 over 25 years (fig. 39).

As longevity increases, workers will need to set aside even more to offset inflation during retirement, especially if they intend to continue retiring at ages as young as 62 to 65. In addition, savings designed to offset inflation will be especially important if Social Security and Medicare benefits, both of which are fully indexed for inflation, are reduced.

In order to save enough over 20 years to replace 40 percent of income during retirement, a worker would have to save about 18 percent a year in the absence of inflation. If inflation were 3.5 percent, to provide an indexed annuity equal to 40 percent of income, the worker would have to save 25 percent of his income each year. These numbers assume retirement at 65 and that all taxes on amounts saved and investment returns would be deferred until after age 65 (fig. 40).

If workers are to be given incentives to save and the time to do it, new public policies must be put into place very soon. These adjustments could take the form of one or two very major policy changes or a larger number of small changes. Available options, and some of their pros and cons, are addressed below.

Policy Options

When taken together, the pieces of the retirement income puzzle form a potentially bleak picture for the baby boom generation and those who follow. The growth in real Social Security benefits is unlikely to be sustained at current levels. Some reductions have already been enacted. Others are likely to be needed. There appears to be little hope that either employer-sponsored pensions or private savings will be able to fill the gap left by the required reductions. And the baby boom generation's increasing health and long-term-care needs, coupled with diminished public and private programs to finance these expenditures, will increase their need for retirement income. To avert much or all of this impending crisis, substantial and sustained increases in productivity will be needed over a period exceeding 30 years. However, such sustained growth seems unlikely based on the experience of the past two decades. Creating the retirement savings that will be necessary seems unlikely without effective government action.

The public, through its elected officials, must make a choice about how much in taxes future generations of workers will be expected to pay, and what individuals will have to save through their own efforts or those of their employers. The longer action is delayed, the more serious the crisis will be. But solutions are possible, and will be less painful if action is taken now. Some of the options are discussed below.

Reforming Social Security

Among the first actions Congress needs to take is to bring Social Security and Medicare into long-term fiscal balance. The need to deal with Medicare is dire. But changes in Social Security are equally critical. The longer Congress waits to act, the less time employers and individuals will have to adjust their behaviors and to compensate for both reductions in public benefits and, in all probability, increases in taxes.

The first task for Social Security is to determine whether to make fundamental changes in the underlying philosophy of the program or to preserve the system in its current form. In the context of the current debate, fundamental reform means providing all or part of benefits through individual accounts that are pre-funded through the use of market-based securities. Two such approaches are addressed in detail in *Report of the 1994–1996 Advisory Council on Social Security*. One of these would establish a flat benefit that would be received by all workers. This benefit might, or might not, be related to lifetime-covered wages. On top of this base benefit, workers would have individual accounts that would be invested in some type of market-based securities. Part of the workers' payroll tax would be used to finance base-level, pay-as-you-go benefits for current retirees. The rest of the payroll taxes would be credited to individual accounts and invested in market-based securities. Hence, the individual account portion of the workers' benefits would be pre-funded.

There are many variations of this basic idea, and many pros and cons to adopting a funded approach through individual accounts. One of the major advantages is that workers in the future would receive investment returns on a portion of their Social Security contributions that reflect returns in the private investment market. A major downside of these options is that workers would be exposed to investment risks and, depending upon market conditions during their working lives and at retirement, successive generations could fare much differently.[53] In addition, these alternatives usually require a significant infusion of general revenue or a higher payroll tax rate to be paid during a long transition period.

If privatization through individual accounts is to be an option, it must be debated and a decision reached in the near future. Each year a decision is delayed, the greater will be the transition costs and the less likely it will be that fundamental change could actually be achieved.

Another alternative is to change investment procedures to permit all or part of the current Social Security surplus to be invested in corporate bond and equity markets. If current returns remained high after the added investment, they would help the program in the short run by deferring the date at which the surplus would be exhausted. However, since the surplus that would be available for investing would still be exhausted, though at a later date, this would only postpone the exhaustion date. Increased revenues or benefit cuts would still be needed to restore the program's financial viability in its current defined benefit form.

What is most important to understand is that merely changing the fundamental structure of the system does not solve the problem of maintaining the current levels of benefits. For most of the baby boom generation, benefits at current levels will still not be affordable at current payroll tax rates. Privatization, or investment of current surpluses in the market, would be aimed at protecting the benefits of generations following the baby boomers.

Although fundamental changes may be determined to be desirable, they are not required. The system, as currently structured, could be brought into actuarial balance through one or a series of adjustments in taxes, benefit levels, or a combination of both.[54]

On the tax side, there are only four basic options if the current program structure is to be maintained—increasing the payroll tax, increasing the limit on taxable earnings, increasing the taxation of benefits, and extending coverage to currently noncovered workers (some state and local governments and religious organizations). Of these, increasing payroll taxes is the only significant option. Increasing payroll taxes can solve as much of the long-run problem as elected officials choose, and can be timed so that the flow of newly generated revenues matches the program's income needs. The other options for tax increases either do not raise very much new revenue or produce revenue that is poorly timed relative to the program's income needs. However, using a combination of tax increases could ameliorate somewhat an increase in payroll taxes.

On the benefits side, saving can be achieved by changing the initial benefit formula, raising the normal retirement age

(the age at which workers can begin to receive full retirement benefits), raising the early eligibility age, and reducing cost-of-living adjustments. Like payroll-tax increases, changing the benefit formula can produce almost any desired amount of savings, and changes can be timed to coincide with the program's revenue needs. The normal retirement age is already scheduled to increase gradually to 67 after the turn of the century. The timing of these increases could be accelerated, or the age could be raised. Raising the normal retirement age to 70 for those reaching that age in 2037 and later would solve about half of Social Security's long-range problem. Moreover, such changes track the program's financial needs quite well. The reductions are substantial and occur just when they are needed. It has also been suggested that, once adjusted, the normal retirement age could be indexed to life expectancy. This would tend to depoliticize retirement age adjustments in the future. The earliest entitlement age (currently 62) could also be raised. This would save additional income, and would be reasonable if health status improves along with increases in longevity.

Reducing cost-of-living adjustments would bring considerable savings. For example, a reduction of 1 percentage point would eliminate about one-half to two-thirds of the long-range deficit depending on the interaction with other economic variables. The timing of savings, however, would not track the program's revenue needs very well.

Other options include financing Social Security from general revenues and means testing. General revenue financing, like increases in payroll taxes, could solve as much of the problem as elected officials determine is needed. However, this would compromise the principle of a self-supporting program. Means testing could also generate substantial savings (in theory, as much as one wanted). Using this approach to reduce higher income groups' benefits would tend to erode the principle of an "earned right" to benefits and make the program seem more like welfare. Moreover, means testing could have counterproductive consequences. Those near the threshold of eligibility would have an incentive to save less, consume more, or otherwise manipulate income and assets to gain access to the means-tested benefits.

Reforming Medicare

Adjustments and restructuring will also be required to avoid a succession of Medicare crises, and to bring the program into financial equilibrium over the longer haul. As with Social Security, a range of options exists. However, in addition to raising revenues or curtailing benefits, the options include improving efficiency by changes in the delivery of health care, and doing a better job of targeting tax dollars to needed services.

Options for raising revenues are fewer than for Social Security. For SMI, which is supported partly from general revenues and partly from beneficiaries' premiums, only the premiums can be raised. The premiums, currently 25 percent of program costs, could be increased or, at a minimum, indexed to maintain the current percentage. Raising the SMI premium would, of course, absorb retirement income from other sources and, thus, reduce retirement income security overall. This is one among many possible examples of how programs to support retirement are so closely interrelated that they can no longer be considered in isolation from each other.

General revenues to support SMI are automatically adjusted to pay what is not covered by premiums. The only other revenue-raising possibility for SMI is to impose a new earmarked tax, such as a payroll tax.

For HI, the average value of benefits could be taxed, since that value really does constitute income. This would raise significant revenue. Many beneficiaries would pay the tax out of their Social Security income, just as they do their SMI premiums. In the absence of other changes, this proposal would likely be highly controversial. For example, workers are not currently taxed on the portion of their health insurance paid by their employers.

Another option would be to raise the HI payroll tax rate. An immediate increase of 0.7 percent on both employees and employers (a combined tax rate of 4.3 percent, compared with today's 2.9 percent) would fund the program for the next 25 years. At the end of that time, rates would have to be increased again. Unlike taxing benefits, this option places the burden on younger workers, who will pay the higher tax for the entire 25 years.

There is a wider range of options for reducing benefit payments, several of which would not require reducing covered services. The eligibility age could be increased to 67, in the same manner as is already scheduled for Social Security. This would eliminate a small amount of the deficit. Increasing the age to 70 would eliminate a significant portion of the shortfall.[55] It could also lead to precipitous declines in employer-provided retiree health insurance. To accommodate those who retired before the higher eligibility age, either out of necessity or desire, Medicare buy-ins could be permitted beginning at a set age.

Beneficiaries could be asked to pay a greater portion of the cost by increasing their deductibles. However, under current law, that would likely raise the cost of Medigap policies, which would pick up the extra deductibles and co-payments. As a result, this would have little impact on utilization for the over 80 percent of Medicare eligibles with Medigap coverage.

Congress could continue to reduce payment rates to providers, as has been done in the past. These would have to be carefully structured to ensure that providers could not largely avoid the reduction through unbundling of services and other practices that have limited the effectiveness of such changes in the past. Permitting hospital reimbursement to grow at only 1 percent a year (less than inflation) for the next 25 years would be sufficient to keep the HI program solvent for that period.[56] Such a change would probably be consistent with the practices of other payers, who are using their market power to reduce their hospital reimbursements. However, unlike other payers, the government might be accused of forcing lower-quality care on the Medicare population.

There is also the possibility of cutting back some covered services. This could solve a significant part of the cost problem, if services of a long-term-care nature and SMI payments for durable medical equipment were reduced. However, in eliminating covered services, as well as in making other types of changes, it is important to consider the effect on other sources of payment. In the case of long-term-care services, eliminating

that portion now covered under Medicare could ultimately constitute little more than a cost shift from one government program to another, in this case from Medicare to the Medicaid program, which already pays a much larger share of these costs.

Increasing recoveries from other insurance (employer-sponsored insurance, auto liability insurance, and workers compensation) would also help, as would expansion of the circumstances under which Medicare is considered the secondary payer. As in other areas, caution would be required. Were employer-sponsored retiree health insurance made a primary payer, employers could merely eliminate it. This was not the case when employers were made the primary payers for Medicare-eligible active workers. Unlike retirees, active workers are protected under the Age Discrimination in Employment Act (ADEA).

An avenue that is already being considered but could be explored further is managed care alternatives. Properly designed, these programs can reduce utilization by eliminating unnecessary care and encouraging efficient service delivery. Such programs need to be competitive, and must take advantage of market incentives for minimizing cost while monitoring quality of care.

With the 1997 addition of Medicare Part C (Medicare+ Choice), Congress took a major step toward increasing managed care options. Experience over the next three years should add greatly to the information needed to evaluate the probable success of managed care programs in reducing the growth in Medicare costs. Congress will also have to determine whether Medicare Part C will require major modification to operate effectively or only minor refinement through more effective risk adjustment and other mechanisms for controlling adverse selection and encouraging greater private-sector competition. Along with evaluating the 1997 restructuring, Congress should continue its consideration of a voucher-type approach and the use of medical savings account-type plans.

As with Social Security, eligibility for Medicare could also be means-tested. This would be similar to taxing the average value of benefits but could be targeted at particular groups somewhat more precisely than a tax.

Encouraging Employer-Sponsored Pensions

Employer-sponsored pension plans are the most effective way to save privately for retirement. If retirees had more income from private pensions, they would not have to rely as heavily on Social Security. They could thus absorb reductions in Social Security benefits and, perhaps, some increases in health care costs as well. To accomplish this, it is necessary first to ensure that every worker who would like to save for retirement can do so on a tax-favored basis. Second, it is necessary to create an environment that is not burdened by overcomplex regulation. Third, it is necessary to retain retirement savings for retirement.

The first and foremost option to encourage the creation of private pension plans is to reduce the complexity of regulations. This means that Congress should consider very carefully the imposition of any new regulation and, when changes are made, employers should be given as much time as possible to adjust. Imposing new requirements, or revising existing ones, should also involve as little disruption of plans as possible, even if this means permitting old practices to continue along with the new ones for quite extensive periods. Another approach, which might prove fruitful, is for Congress to provide plans that adopt certain provisions with relief from particular costly or complex regulatory requirements. This would encourage plans to adopt provisions Congress considers desirable by offering them a reward in the form of some other regulatory relief. For example, in exchange for a plan offering shorter vesting, partial indexing, or enhanced portability, Congress could permit less costly methods of discrimination testing.

However Congress chooses to proceed, new regulations should move in the direction of simplification and greater flexibility. In cases where complexity results from the regulations, rather than the law per se, Congress should advise the relevant agencies to reconsider their regulatory approaches.

Among existing regulations, those that require elaborate tests to ensure that plans do not discriminate in favor of more highly compensated workers are most in need of simplification.

Second, Congress should consider removing current unnecessary restraints on defined benefit plan funding. Impeding the level funding of these plans over workers' careers may well result in freezing the benefits in many defined benefit plans, or their termination altogether, near the end of many baby boomers' careers—exactly the time when continued accruals will be most important.

To encourage coverage, Congress should permit greater flexibility within prescribed simplified plans that are now available to employers. For example, since turnover can be high in smaller firms, allowing some flexibility through participation and vesting requirements might give small employers a greater incentive to adopt simplified plans. In addition, Congress should consider changes in the law to accommodate hybrid plans that include features of both defined benefit and defined contribution plans. These seem more in harmony with the current preferences of both workers and employers. Creation of a simplified defined benefit plan exempted from most complex rules would also be an option.

The most direct way to encourage employers to adopt pension plans is to mandate them. Congress could consider requiring all employers above a certain very small size to offer their workers at least a contributory defined contribution plan. Participation in the plan and minimum contributions could be required for workers above some age and income level. This would not only alleviate some of the pressure on Social Security, but might be especially helpful to women.

More plans would mean more retirement savings, but to the extent possible Congress should also encourage larger individual contributions to plans. For upper-middle-and-higher-income workers, this could be done by raising the 40l(k) contribution limit to some fixed percentage, say 50 percent, of the defined contribution plan limit. Another option would be making simple plans with higher contribution limits available to smaller employers, as well as raising the limits on the simpler, legislatively prescribed plans that already exist. It would even be possible to permit workers, and employers, to vary their contributions. For example, when workers receive large sums of money from, say, income tax returns, they

might be permitted to immediately contribute these sums to plans sponsored through their employers. Contribution limits could also be varied by age to accommodate the greater savings required at older ages to reach any given retirement income. Making it easier to contribute to plans may well lead to greater coverage, as workers in smaller firms press their employers to establish simplified contributory plans for them.

Elected officials should also consider developing rules that would retain for retirement more of the dollars contributed to defined contribution plans in general, and 401(k)-type plans in particular. To do this, it is not necessary to raise tax penalties to confiscatory levels or to make withdrawals totally disallowed. For example, the tax penalty for withdrawals from defined contribution plans could be graduated, so that the more a worker withdraws, the higher the penalty. Alternatively, preretirement distributions could be limited to a specific dollar maximum, or to a maximum percentage of the account balance. These changes might also be combined with fewer restrictions on the amounts workers can contribute to their plans.

Greater tax-deferred retirement savings will mean that income tax revenues will fall in the short run. It is important that Congress reconsider how it measures tax expenditures for pension programs. Over time, many of these incentives will pay for themselves through increased productivity, higher real wages, and higher pensions that generate higher tax revenue. It is important that policy makers not be short-sighted when estimating the budget impacts of long-term savings programs. Methodologies should be considered that would measure the value of future tax flows and other benefits to the economy when making decisions that affect short-term revenue.

The American Academy of Actuaries Pension Practice Council has compiled a list of over 100 options for reducing complexity in the tax code and encouraging coverage.

Increasing Opportunities for Personal Savings

Because Americans save only if there are convenient vehicles that are widely marketed and subsidized, Congress needs to explore options that fit this profile. The most obvious are increased IRA opportunities. Already, banks and other financial institutions are aggressively marketing the recently enacted Roth IRAs.

However, the changes made as part of the Taxpayer Relief Act of 1997 are probably not nearly bold enough to add perceptibly to personal savings. There is no increase in the $2,000 limit on contributions, and pretax contributions remain strictly limited. It is clear from experience that IRAs are not likely to be used widely enough to increase savings unless they have higher contribution limits and can be used by all workers, regardless of other pension coverage. To be most effective, the rules must be simple and apply generally. To encourage greater savings among lower-middle-income workers, tax credits might be considered in lieu of pretax contributions. Also, greater restrictions could be placed on withdrawals for mortgages, college, unemployment, and major medical expenses. If the objective is to assist the baby boom generation to prepare for retirement and to increase savings and productivity, limitations on retirement savings withdrawals should be stricter, not more lenient.

A significant asset of many retirees is their owner-occupied homes. Targeted programs to assist groups that might otherwise not be able to own a home could be considered as an element in any comprehensive strategy for increasing retirement savings. Initiatives in this area could increase savings and assist these diverse groups by adding to their retirement assets. Congress may want to at least consider increasing tax incentives to financial institutions and to organizations that help nontraditional homeowners purchase homes.

Moreover, since home ownership is such a substantial part of many families' assets, policy initiatives that contribute to making housing equity accessible to retirees are well worth exploring. Since 1987, taxpayers over 55 have had some tax-free access to the capital gains portion of their home equity. Those over age 55 were entitled to a one-time exclusion of up to $125,000 of capital gains on the sale of an owner-occupied house. The Taxpayer Relief Act of 1997 liberalized this provision. Under the revised law, homeowners of any age can exclude from taxable income up to $250,000 for a single individual and $500,000 for a married couple in capital gains from the sale of a principal residence. Moreover, unlike under the old rules, the capital gains exclusion is available not just once in a lifetime, but once every two years.

A second way of gaining access to the savings invested in one's home is through a home equity loan. Although these have become popular, they may not be a very suitable way for retirees to gain access to the portion of their savings invested in their home. Lenders often impose monthly payment-to-income ratios on these loans and may be reluctant to make these types of loans to retirees for other reasons as well. Moreover, retirees are not really seeking a loan. At their stage in life, they want to permanently withdraw the equity for other forms of consumption.

Yet a third way to access home equity is through reverse mortgages. These mortgages pay a monthly sum or set up an open line of credit to the homeowner in return for the bank's taking possession of the property when the owners die. Lenders in 43 states provide FHA-insured reverse mortgages.[57] It is not clear how popular this type of loan will become. Lenders cannot as a rule enforce proper maintenance of the property, and the life expectancies of the borrowers may be difficult for a lender to predict. The government might want to consider ways to encourage reverse mortgages. Perhaps this could be done through insurance arrangements, since repayment is in the form of property whose date of possession for the lender/insurer is uncertain due to mortality risk. Encouraging reverse mortgages could add substantially to the cash income of many of the elderly, and might be especially helpful to widows.

Finally, broader changes to the tax code that discourage current consumption could be considered. Congress has recently begun to review consumption, flat wage, and value-added tax proposals that would tax consumption rather than savings. While such fundamental change may not be feasible or wise, portions of the proposals might be brought into play to encourage greater savings.

Summary and Conclusions

There are three fundamental misconceptions in the debate over reforms to ensure Americans that a secure retirement is plausible. First, the discussion too often focuses solely on the impact of the baby boom generation. It is not the baby boom generation alone that is at the heart of the economic quandary. Even more important is longevity, the ramifications of which will continue beyond the baby boom. Americans are living longer and staying healthier. Since few seem willing to postpone their retirement much beyond 65, these life expectancies, which only increase with each medical advance, mean that Americans need more retirement assets than expected even 20 years ago.

The second misconception is that reform can proceed, as it traditionally has, by adjusting each program on an ad hoc basis as each has problems. The time has come when fixing one program, while ignoring the impacts on other public and private programs, no longer seems reasonable. Decreasing benefits under Medicare may often do little more than shift costs to the private insurance of the elderly and, in the process, may even increase, rather than reduce, overall costs. Switching from income-based taxation to consumption taxes will encourage greater individual saving. However, if employer-sponsored pensions disappear, there may actually be less total savings for retirement. Even small changes in Social Security, Medicare, pension policy, or savings-related tax policy must be carefully examined for unintended impacts on the other components of our retirement security systems.

The third misconception is that any major crisis is far in the future and things could change before a crisis occurs. In less than 14 years, payroll taxes are not expected to cover the full cost of Social Security benefits, and repaying the federal debt the program holds will become an increasing fiscal drain. Meanwhile, Medicare remains in a state of financial crisis in spite of recent legislation to defer actual bankruptcy for a few additional years. Things may change, but not nearly enough or quickly enough to avoid major government action.

The Fundamental Issue and Its Underpinnings

Simply stated, the issue facing our nation is that significant economic and demographic changes require that major changes be made in our retirement income policies.

The demographic underpinnings of the problem are, by now, well known. In 10 years, the retirement of the first wave of baby boomers will usher in the beginning of a demographic shift that will shape our nation's future over the next half century. The baby boom will become the elder boom.

The baby boom generation is more than 50 percent larger than the retired generation it now supports. By contrast, the generations that will bear the burden of supporting the baby boomers will be relatively smaller. Whereas there are nearly five working-age people to support each American over age 65 today, there will be fewer than three by 2029, when the last baby boomer turns 65. As the baby boom moves through retirement, the situation will not improve. Because of improvement in longevity, the financial burden is likely to worsen.

Social Security and Medicare

The combination of the aging of the population and increasing life expectancies will profoundly affect the financing of major public programs designed to support the aged.

In 2008, the first baby boomers will turn 62, and four years later Social Security outlays are expected to exceed tax collections. Interest payments from general revenues, or issuance of new government debt, can protect the Social Security trust funds until about 2018. Thereafter, the trust funds will begin to decline. By 2029, the year the last baby boomer turns 65, the OASDI trust funds are projected to be exhausted, and currently legislated taxes will be sufficient to pay only 75 percent of promised benefits. To keep the system solvent at that point, benefits would need to be reduced 25 percent, payroll taxes would need to be raised 33 percent, or some combination of benefit reductions and tax increases would be required. Consistent with improvements in longevity, the situation will worsen, though at a slower rate, after the entire baby boom generation has reached 65.

Even more drastic challenges face Medicare. Under current provisions, the Medicare Hospital Insurance (HI) Trust Fund is projected to be exhausted by 2011, the same year the first baby boomers will meet the age-65 eligibility requirement. Had Congress not changed the provisions in 1997, the fund was projected to become insolvent just three years from now, in 2001.

Although the 1997 legislation postponed an immediate crisis, it did not address the program's longer-term problems. In fact, a part of the "solution" was to transfer benefits currently paid by the HI part of Medicare, which is financed through payroll taxes, to the Supplementary Medical Insurance (SMI) part of the program, which receives 25 percent of its financing from beneficiary premiums and 75 percent through general tax revenues.

Medicare expenditures, being driven by escalating health care costs as well as demographics, will increase even more rapidly than Social Security costs. In 1996, HI disbursements equaled 1.38 percent of payroll. The $70 billion in SMI disbursements, though not paid through payroll taxes, represented 1.90 percent of payroll. In 2030, when the last of the baby boom will have reached age 65, HI costs are estimated to rise nearly sixfold, to 8.3 percent of payroll. Combined HI and SMI costs would then represent 14.5 percent of taxable payroll, a far cry from today's 3.28 percent. Adding in projected Social Security costs would bring the total cost to 32.3 percent of payroll.

In the short run, medical prices outpacing general inflation is the problem. But, even after medical inflation is brought under control, the increasing number of elderly will continue to drive up Medicare costs. Even if older people stay healthier longer, there will be many more of them, and the fastest-growing age groups will be the oldest ones.

Without severe cutbacks in benefits or major infusions of new tax revenue, the federal government will need to devote its entire budget to financing Social Security and Medicare. While that is unthinkable, the numbers illustrate the seriousness of the problem. Unless policy changes are made now that address the long-term increasing costs of Social Security and Medicare, these programs will be increasingly unaffordable by the end of the next decade.

Reliance on Public Programs

Scaling back public programs has serious implications for Americans at all income levels, but especially for the middle- and lower-income groups. Two-thirds of the aged rely on Social Security for half or more of their income, and nearly one-third count on Social Security for 90 percent of their income. In the area of health insurance, Medicare is also paramount.

Workers, including the baby boom, are aware of the problems confronting our major public programs. For example, in 1996, only 10 percent said that they expected Social Security to be their most important source of retirement income. Over 50 percent expect employer-sponsored pension plans to be their most important source of retirement income. Eighty percent understand that Social Security will provide relatively lower benefits in the future than today.

Workers are also optimistic about their retirement. About 90 percent want to retire at or before age 65. Seventy percent expect to be able to live comfortably, and two-thirds or more are at least fairly confident that they will be able to live where they want and have enough money for medical expenses and leisure activities. Yet two-thirds have not figured out how much money they may need to retire, and more than four out of ten do not save regularly for retirement.

Realistically, what are the prospects when viewed against current trends in private programs? Can the private resources currently available to workers fill the gaps in retirement income that are likely to develop as part of the fiscal realignment of public programs?

Private Pension Plans and Personal Savings

Current trends show that private pensions will help but will fall far short of replacing potential reductions in Social Security and Medicare benefits. Although nearly half of American workers are covered by private pensions, this percentage is not expected to increase. Traditional defined benefit pension plans, which provide comprehensive coverage but typically replace no more than a third of preretirement income, are becoming an increasingly smaller portion of private pension plans. Defined contribution pension plans, which usually provide lower employer contributions (and thus lower employer-provided benefits), now account for about half the coverage under private pension plans. As the system continues to mature under ERISA, private pension benefits are expected to become much more common among the baby boom generation, growing from 30 percent for current retirees to over 80 percent when the younger baby boomers retire. However, real benefit levels are not expected to increase, so many retirees will receive only small benefits.

Personal savings, if they continue at current rates, are unlikely to compensate for even moderate reductions in benefits from public programs. One recent study indicated that in 1989, those in the baby boom generation had accumulated greater real wealth and had higher real incomes than their parents at similar ages. But, higher real incomes translate into greater retirement income needs and higher expectations later. The important question is: Given the baby boom's higher living standards now and expectations for higher living standards in retirement, is the difference in saving enough? In all likelihood, the difference is not enough to compensate for potential cutbacks in public programs. The personal savings rate has not recovered since it began dropping in 1985. In each successive five-year period, the rate has been lower, and the trend appears to be continuing. In 1997, the personal savings rate decline again, suggesting that during the last half of the 1990s the personal savings rate will sink to yet another post-World War II low.

Trends Do Not Favor the Baby Boom Generation

The baby boom generation will also not experience the favorable trends that helped their parents. In fact, most of these trends are already being reversed or likely will be.

Baby boomers will not see the rapid increases in real Social Security benefits their parents experienced. Medicare will likely be paying a lower share of health care expenses, perhaps substantially lower. Companies are unlikely to be enriching their pension programs in a competitive global environment. And, finally, the baby boom generation is unlikely to benefit from historically high rates of return as it approaches retirement. In fact, demographics could drive down house values and may reduce real rates of return on other assets.

Even the relatively large pool of potential inheritance money—estimated by one study to total $10.4 trillion—will not do much to alleviate the baby boomers' retirement problem. The inheritances will occur over a period of 40 years or more, so that any remaining wealth transferred to the baby boomers may not reach them until they are well into retirement themselves. Furthermore, inheritance wealth will be concentrated among the offspring of parents in the top 10 percent of the income distribution. While this will be an important source of retirement income for some, it will not change the broad picture.

Assessing the Need for Saving Through Private Programs

How much of their preretirement income baby boomers will have to replace through pensions and personal savings will be almost impossible to predict until it is known to what extent public programs will be scaled back. However, future generations, except at the lowest income levels, could need to replace

at least 20 percent more of their incomes than current retirees have had to replace. Moreover, since Social Security and Medicare benefits are indexed for inflation, any reduction in those benefits will require an even greater level of savings to protect against inflation. Finally, in the health area workers are likely to face much higher private-sector costs through higher premiums for comparable coverage, increased deductibles and co-payments, and reduced subsidization by employers and the government. Costs for private Medigap insurance will be driven up by Medicare reductions, and those employers that currently offer health insurance to their retirees are likely to continue cutting these programs or requiring greater contributions from the retiree group.

The savings rates required to achieve these savings levels can be substantial, even if tax-favored savings vehicles, such as employer-sponsored pension plans, are used. The amount a worker would need to save to last through a retirement beginning at age 65 depends upon when the worker begins saving and the rate of return. At current rates of return, if a worker began saving 20 years before retirement, then 13 percent of wages would need to be saved each year to have enough to replace 20 percent of final earnings, indexed for inflation at 3.5 percent a year. If the worker deferred beginning saving until 10 years before retirement, the percentage would increase to 29 percent. In 1997, the "average" baby boomer is age 40 to 45, so the extra amounts needed to be saved must be started now. Unfortunately, there is no evidence that this is taking place.

This example can be translated into dollars. A worker earning $40,000 at final salary (about 60 percent of the Social Security maximum taxable wage) would have to replace about 72 percent ($28,000) of his income at retirement to maintain his preretirement standard of living. If the worker wanted to save 20 percent of this amount through an employer pension plan and began saving at age 45, he would have to save 8.9 percent of pay ($3,571 in the first year) to have enough in a tax-sheltered pension program to provide $5,760 a year (about $480 a month) at retirement. The $5,760 was calculated to include a 3.5 percent annual increase to help keep pace with inflation. If the worker began saving 10 years earlier, at age 35, he would have to save only 5.0 percent of pay ($2,016 in the first year) to have $5,760 a year at retirement. Clearly, saving at younger ages is desirable, and delaying saving until after one is 20 years from retirement is very expensive. At age 50, the worker would have to save 13.1 percent of pay ($5,242 a year) to provide the $5,760 annuity for himself and his spouse.

Urgency of the Need for Action

As the above examples indicate, many in the baby boom generation have already reached an age where it would be difficult to substantially increase their potential retirement income from private sources. And, if those who follow the baby boom are to provide more for their retirement, they too will need to begin saving soon.

Although the situation is urgent, it is far from hopeless if action is taken now. The task force has enumerated a long list of options and potential approaches for addressing the current imbalance in public programs and the shortcomings of private ones. The need to select among these options is urgent because many of the most attractive ones are long term in nature. If not acted upon soon, they will become too costly or less feasible for other reasons.

One reason for long lead times is that it takes many years to substantially increase accumulations of private funds and personal assets. If public programs are to be rebalanced by reducing benefits, as well as increasing funding, it is only fair that workers and their families have a long time to adjust their private asset levels to compensate for the decrease. To encourage higher rates of private savings, then, action should taken soon so that the baby boom generation will have a better idea of what to expect from Social Security and Medicare. Even if the baby boom and generation X ignore this information or do not respond quickly, their employers may, for instance, give workers additional opportunities to save through existing or new pension arrangements.

The second reason that long lead times are required is that, without long phase-ins, many reforms would create large differences in benefits between successive generations of retirees. This was the case for the "notch baby" problem caused by the 1977 Social Security amendments. It would also be the case for initiatives like substantially raising the eligibility age for full benefits or switching from an unfunded to a funded system.

If reforms are not made well in advance, the only avenue open will be legislation that focuses on cash-flow fixes that increase funding or reduce benefits quickly, like increasing tax rates or cutting back cost-of-living adjustments. The 1997 Medicare revisions are a good example of legislation that focuses on cash-flow fixes rather than long-term structural reform.

Increasing Financial Literacy

As part of bringing public programs into fiscal balance and encouraging expansion of private savings options, the task force believes the government should consider placing greater emphasis on public education about retirement-related issues. Tax policy, the traditional tool for influencing private savings, may not by itself be sufficient to address current low savings rates. To be fully effective, tax policy may need to be coupled with educational campaigns on how savings translate into retirement income. Tragically, even though many Americans expect less from public programs in the future, far fewer understand the level of assets needed to support a given retirement income, how much must be saved to achieve that level, and how to factor investment return and time into asset accumulation. Congress's recent enactment of the Savings Are Vital to Everyone's Retirement (SAVER) Act is a welcome development, but much more may be needed to improve the financial literacy of American families.

Improving the Policy-Making Environment

In the course of its research, the task force noted three changes that might possibly expedite policy making in the area of retirement income policy.

First, policy makers should consider requiring better and more complete information for their own deliberations. The policy makers might benefit significantly if the government developed a coordinated research and modeling effort to study and track retirement income trends, as well as to project future ones. For example, there is nothing comparable to the Social Security and Medicare trustees' reports for either private or public pensions. Should Congress request such a report today, important elements of the necessary data would be lacking.

Second, Congress should consider adopting a consistent basis for evaluating proposals related to retirement income. For Social Security, all proposals should be subject to tests of basic actuarial viability. These could include determining whether 75-year actuarial balance is restored, whether the trust funds are positive at all points in time, and whether the funds remain stable over the last several years of the projection. In addition, to help the public and policy makers understand individual impacts, there should be standardized illustrations of replacement rate and "money's worth" analysis at different income levels and perhaps by type of family unit (single individual, married couple, etc.). Consistent analyses of this type could add clarity to the debate and contribute to everyone's understanding.

Congress should also consider adopting guidelines for evaluating regulatory changes. The American Academy of Actuaries has developed a set of guidelines for Congress to consider in evaluating changes to ERISA and related tax provisions (Appendix A). The guidelines include eight criteria that the Academy uses to evaluate legislative and regulatory proposals in the pension arena. The guidelines, which are simple in nature, vary from whether a change would encourage growth in both defined benefit and defined contribution plans, to whether it is based on sound actuarial principles.

Third, Congress and the executive branch should reexamine how tax expenditures are calculated as they apply to pensions. Under current budget rules, changes to the tax code and rules governing other private and public programs are "scored." The Congressional Budget Office calculates probable changes in revenue that would result from any changes in rules governing public or private programs. However, the revenue changes are calculated over a budget cycle of five to, at most, ten years. Changes further into the future are not considered. Calculating revenue gains and losses over such a short time frame for pensions—which take decades to fund and from which income will be received for a decade or more—makes little fiscal sense. The fundamental fault of such an accounting system was strikingly demonstrated during the 1997 round of proposed Medicare changes. The changes would have reduced the cost of the program within the current budget cycle, but shortly thereafter would have caused costs to increase much more than would otherwise have been the case. The same situation is likely to happen repeatedly for pensions unless Congress takes a longer view of its taxation policies. At best, the current system of calculating so-called tax expenditures is incompatible with a private pension system. At worst, Congress may unintentionally reduce support for private retirement plans in the future and pass on greater tax burdens to future workers.

Appendix A

Criteria for Retirement Plan Legislation and Regulation

Retirement Plans:

Encourage Savings

Allow older workers to retire with economic security, thus providing job opportunities for younger workers

Reduce dependency on Social Security and welfare programs

The following guidelines will help create a favorable environment for the establishment and growth of retirement plans:

• Pension legislation should encourage the formation and growth of both defined benefit and defined contribution plans. Additionally, neither plan should be placed at a disadvantage to the other.

•Pension legislation should be developed in the context of a national retirement income policy, including Social Security.

• Changes in pension law should be made as infrequently as possible: When such changes are necessary but would impose additional burdens on plan sponsors, their effective dates should be optional until a suitable period after pertinent regulations have been issued.

• Pension funding rules should be structured to provide benefit security, including security for benefit levels that can reasonably be anticipated within the plan's current benefit structure (e.g., cost-of-living adjustments to IRC §415 benefit limits and collective bargaining agreement increases). In addition, the rules should be sufficiently flexible so as to create predictable, stable contribution requirements.

• Regulations should not impose requirements beyond those anticipated by law, and they should be formulated to allow the greatest possible flexibility and administrative simplicity consistent with the law.

• Pension legislation or regulations designed to restrict perceived abuses should be carefully evaluated on a cost-benefit basis:

These restrictions should be applicable only to situations where abuse is likely to occur or has occurred.

If additional information is required by law or regulation, it should be required only in situations where abuse is likely to occur or has occurred.

• The principles supporting any federal pension program or agency should be based on sound actuarial principles.

Prepared by the Pension Committee of the American Academy of Actuaries

Endnotes

1. All the information in this section is from the most recent Social Security Administration analyses, which appear in *Income of the Population 55 or Older, 1994*, Susan Grad, Publication No. 13-11871, Social Security Administration, January 1996, and *Income of the Aged Chartbook, 1994*, Social Security Administration, June 1996 (rev.).

2. *Summary of the Provisions of the Old-Age, Survivors, and Disability Insurance System, the Hospital Insurance System, and the Supplementary Medical Insurance System*, Robert J. Myers, January 1997, Table 7b, p. 52.

3. *1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, April 24, 1997, Table II.F17, p. 122.

4. *1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, April 24, 1997, Table II.H2, p. 160. The number of beneficiaries would double by 2050 under the report's intermediate assumptions and by 2035 under the high cost assumptions.

5. *1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, April 24, 1997, Table II.F19, p. 124.

6. "Touching the Third Rail: Alternative Solutions for Bringing the Social Security Retirement System into Long-term Balance," Richard V. Burkehauser, paper presented at the Bowles Symposium, Georgia State University, September 26, 1996, Table 1.

7. "Will America Grow Up before It Grows Old?" Peter G. Peterson, *The Atlantic Monthly*, May 1996, p. 70.

8. For a discussion of the immigration assumptions, see *1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, April 24, 1997, pp. 137-38. The fourfold estimated increase in net immigration is a very rough estimate. If the number of immigrants actually increased to a level of 3.6 million a year, the impact on the Social Security actuarial balance would likely differ from the simple linear extrapolation used here. As the immigrant population aged, it too would become eligible for benefits and add to the cost of the system as well as to income through greater payroll taxes. In addition, there would be secondary impacts that would depend upon the total fertility rates of the immigrant population and expected longevity relative to native-born citizens.

9. *1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, April 24, 1997. The 75 percent of benefits, which current tax rates can support immediately after the trust funds are exhausted in 2029 (p. 28), will continue to deteriorate. By the end of the projection period (2071), the current tax rate will support only about two-thirds of annual expenditures (p. 6). The ultimate payroll tax needed to support the current benefit structure would be 19.2 percent (p. 21). This is in stark contrast to OASDI payroll tax rates of the past, which were 2.0 percent in 1937, 4.5 percent in 1957, 7.8 percent in 1967, 9.9 percent in 1977, 11.4 percent in 1987, and 12.4 percent in 1997.

10. "Prospects for Social Security Reform," Edward Gramlich, Pension Research Council Working Paper 95-10, August 1995, p. 6.

11. *Pension and Health Benefits of American Workers*, U.S. Department of Labor, May 1994, Tables B1, B5, and B11, pp. B-1, B-6, and B-16.

12. There are two basic types of pension plans which operate very differently. Traditional plans are of the defined benefit type. These plans award benefits based on a fixed formula, usually based on the worker's years of service and final pay. A typical plan provides one-third of preretirement income to workers who have been with the employer during most of their career. In the United States tax-favored private-sector defined benefit plans are required to be pre-funded, so that money is put aside before the employee retires. The employer is responsible, within tax guidelines, for determining the correct amount of pre-funding and agrees to provide sufficient funds, within legal constraints, to pay all benefits promised under the plan when the benefits are due.

The second type of plan is defined contribution. These plans do not include a benefit formula. Dollars are set aside on a predetermined basis, and benefits at retirement are based on the amounts saved plus the investment income. These plans are frequently called individual account plans, since contributions are made to an account in the employee's name and investment returns are credited to that account. Unlike defined benefit plans, which are generally funded totally through employer contributions, individual account plans often depend wholly or in part upon employee contributions. The employer is responsible only for making its promised, initial contributions. Thereafter, the employer bears none of the investment risk.

13. *Survey of Defined Benefit Plan Terminations*, American Academy of Actuaries, Washington, D.C., June 24, 1992, p. 1. The numbers cited in the Academy study were compiled by Watson Wyatt Worldwide from determination letter data supplied by the Internal Revenue Service.

14. Data in this and the previous paragraph are from *Survey of Defined Benefit Plan Terminations*, American Academy of Actuaries, Washington, D.C., June 24, 1992, Table 3, p. 6 and Table 6, p. 12.

15. *Abstract of 1993 Form 5500 Annual Reports*, Private Pension Bulletin Number 6, Pension and Welfare Benefits Administration, U.S. Department of Labor, Winter 1997, Table F1, p. 73.

16. "Employment-Based Retirement Income Benefits," Issue Brief Number 153, Employee Benefit Research Institute, September 1994, Table 26, p. 59.

17. "The Growth of 401(k) Plans," James M. Poterba, National Bureau of Economic Research, September 1993, Table 3.2, p. 31.

18. "Can Your Employees Afford to Direct Their Own Retirement Plan Investments?" Richard Joss, *Wyatt Insider*, Watson Wyatt International, October 1994, p. 8, and two follow-up articles with the same title and author in *Watson Wyatt Insider*, August 1995 and *Watson Wyatt Insider*, June 1996. See also "Performance Debate," Randy Myers, *Plan Sponsor Magazine*, February 1996, which describes data from a wide array of sources including surveys of benefit firms and associations.

19. *Employee Benefits in Medium and Large Private Establishments*, 1993, Bulletin 2456, Bureau of Labor Statistics, November 1994, Table 182, p. 148, Table 187, p. 150, and Table 191, p. 153.

20. "Baby Boomers in Retirement: What Are Their Prospects?" Paul Yakoboski and Celia Silverman in *Retirement in the 21st Century*, Employee Benefits Research Institute, 1994, pp. 37–38.

21. *Employee Benefits in Medium and Large Private Establishments, 1993*, Bulletin 2456, Bureau of Labor Statistics, November 1994, Table 172, p. 145 and Table 176, p. 146.

22. *Pension and Health Benefits of American Workers,* U.S. Department of Labor, 1994, Table D4, p. D-4.

23. *Abstract of 1993 Form 5500 Annual Reports*, Private Pension Plan Bulletin Number 6, Pension and Welfare Benefit Administration, U.S. Department of Labor, Winter 1997, Table A1, p. 4. The Department of Labor data, which are only for private pension plans, indicated that total assets for defined benefit plans in 1993 were $1.2 trillion and for defined contribution plans, $1.1 trillion. When the assets of state, local, and federal plans are added, an even larger proportion back defined benefit plan promises.

24. *The Aging of the Baby Boom Generation*, Sylvester Schieber and John Shoven for the American Council for Capital Formation, Center for Policy Research, January 1997 (rev.), p. 17.

25. For data on vesting provisions, see *Employee Benefits in Medium and Large Private Establishments*, 1993, Bulletin 2456, Bureau of Labor Statistics, November 1994, Table 153, p. 128, 182, p. 148, Table 187, p. 150, and Table 191, p. 153.

26. The Needs of the Elderly in the 21st Century, Sheila Zedlewski, et al., Urban Institute Report 90-5, 1990, and Baby Boomer Pension Benefits, Lewin-VHI, Inc. for American Association of Retired Persons, Washington, D.C., 1994.

27. *Baby Boomer Pension Benefits*, Lewin-VHI, Inc. for the American Association of Retired Persons, Washington, D.C., 1994.

28. "Will America Grow Up before It Grows Old?" Peter G. Peterson, *The Atlantic Monthly*, May 1996, p. 67.

29. *Return on Investment: Pensions Are How Americans Save*, John B. Shoven for the Association of Private Pension and Welfare Plans, September 1991. In his analysis, Shoven demonstrates that, without the growth in pension assets, the real value of national wealth would actually have fallen during the 1980s. See especially pp. 26–30.

30. "The Decline in Savings: Evidence from Household Surveys," Barry Bosworth, Gary Burtless, and John Sabelhaus, *Brookings Papers on Economic Activity*, No. 1, 1991, Table 3, p. 199.

31. "Understanding the Postwar Decline in United States Saving: A Cohort Analysis," Laurence Kotlikoff and John Sabelhaus, *Brookings Papers on Economic Activity*, No. 1, p. 338.

32. Derived from *Pamphlet of Analysis of Tax Proposals Relating to Savings and Investments (Capital Gains, IRAs, and Estate and Gift Tax)*, Joint Committee on Taxation, JCS 597, March 18, 1997, Table 4, p. 101 and Table 8, p. 113.

33. *Return on Investment: Pensions Are How Americans Save*, John B. Shoven for the Association of Private Pension and Welfare Plans, September 1991. Pages 30–44 summarize the major findings on substitutions between Social Security, private pensions, and individual savings.

34. "How Does Pension Coverage Affect Household Saving?" John Sabelhaus, *Pensions, Savings and Capital Markets*, U.S. Department of Labor, Pension and Welfare Benefits Administration, 1996, pp. 47–48.

35. "The Adequacy of Saving for Retirement and the Role of Economic Literacy," B. Douglas Bernheim, *Retirement in the 21st Century*, Employee Benefit Research Institute, 1994, p. 75.

36. "The Adequacy of Saving for Retirement and the Role of Economic Literacy," B. Douglas Bernheim, *Retirement in the 21st Century*, Employee Benefit Research Institute, 1994, p. 80.

37. *Promises to Keep*, Steve Farkas and Jean Johnson, Public Agenda in collaboration with the Employee Benefit Research Institute, December 1994, p. 6.

38. "Retirement Trends and Patterns in the 1990s," Joseph F. Quinn, *The Public Policy and Aging Report,* Volume 8, No. 3, National Academy on Aging, Summer 1997, pp. 12–13.

39. "Work After Early Retirement," Diane E. Herz, *Monthly Labor Review*, April 1995, pp. 13–20. The data on labor force participation of early pensioners, as well as the suggested factors motivating greater work effort, are from Herz.

40. *EBRI Databook on Employee Benefits*, Employee Benefit Research Institute, Fourth Edition, 1997, Table 36.1, p. 302 .

41. *Summary of the Provisions of the Old-Age, Survivors, and Disability Insurance System, the Hospital Insurance System, and the Supplementary Medical Insurance System*, Robert J. Myers, January 1997, Table 3b, p. 47 and pp. 42–43.

42. Total Medicare disbursements are from the intermediate estimates shown in the *1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, Table II.D1, p. 30 and the *1997 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund*, Table II.D1, p. 26. General revenue contributions to SMI are from the *1997 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund*, Table II.D2, p. 27.

43. *EBRI Databook on Employee Benefits, Employee Benefit Research Institute*, Fourth Edition, 1997, Table 36.1, p. 302. Data were compiled from the 1988–96 Current Population Surveys. Those covered by employer-sponsored plans include retired workers as well as active workers over age 65 and over-age-65 dependents. Having employer-sponsored coverage does not mean that the employer necessarily pays all or even part of the premiums for the health insurance.

44. *Employee Benefits in Medium and Large Private Establishments*, Bureau of Labor Statistics Bulletin 2262, 1986, p. 25 and Bulletin 2456, 1996, p. 85.

45. *Employee Benefits in Medium and Large Private Establishments*, Bureau of Labor Statistics Bulletin 2262, 1986, p. 33 and Bulletin 2456, 1996, p. 86.

46. *Retiree Health Benefits: Availability from Employers and Participation of Employees*, Pamela Loprest, The Urban Institute, Washington, D.C., October 1997, p. 10 and fig. 4.

47. "Medicaid Financing of Long-Term Care," *1996 Economic Report of the President*, February 1996, Chapter 3.

48. "Retirement Income for an Aging Population," Chapter VII in *Aging, Health and Medical Care*, joint Congressional Research Service and Congressional Budget Office Report for the Committee on Ways and Means, August 25, 1987, pp. 374–408.

49. The separate breakdowns for nursing home care and home health care expenditures are from the *Health Care Financing Review*, Vol. 18, No. 1, Fall 1996, pp. 188–190. Information on the growth in combined nursing home and home health care expenditures and the amount of the increase financed from private funds was derived from tabulations provided by the Office of National Health Statistics, Office of the Actuary, Health Care Financing Administration.

50. Annual Statistical Supplement to the Social Security Bulletin, 1996, Social Security Administration, Table 8.E2, p. 343.

51. "Executive Summary," 1996 Retirement Confidence Survey, Matthew Greenwald and Associates, October 1, 1996, p. 7.

52. *Report of the 1994-1996 Advisory Council on Social Security*, Volume II, September 29, 1995, p. 29.

53. A more complete discussion of the pros and cons appears in *Social Security Privatization: Individual Accounts, Issue Brief*, American Academy of Actuaries, Spring 1996.

54. The options that follow are outlined in more detail in *Solutions to Social Security's and Medicare's Financial Problems*, Public Policy Monograph, American Academy of Actuaries, Fall 1995.

55. *Solutions to Social Security's and Medicare's Financial Problems*, Public Policy Monograph, American Academy of Actuaries, Fall 1995, p. 6.

56. *Solutions to Social Security's and Medicare's Financial Problems*, Public Policy Monograph, American Academy of Actuaries, Fall 1995, p. 7.

57. *Baby Boomers in Retirement: An Early Perspective*, Congressional Budget Office, September 1993, p. 42.

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