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A black and white photograph showing an elderly man and a young child walking away from the camera on a paved path. The man is on the left, wearing a dark jacket, light-colored pants, and a cap, and is using a cane. The child is on the right, wearing a striped shirt and pants, and is holding the man's hand. The path is surrounded by trees and bushes, and the scene is brightly lit, casting shadows on the ground.

Social Security:  
**A Primer**

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# Executive Summary

**T**his Congressional Budget Office primer on Social Security describes the elements of the program that are most relevant to the current debate about Social Security's future. The primer comes at a time when policymakers are grappling with the issue of how to deal with the looming retirement of the baby-boom generation. Over the next three decades, the number of people in the United States age 65 or older is projected to rise by more than 90 percent, while the number of adults under age 65 will increase by only about 15 percent. That demographic shift will pose new challenges for the Social Security program, the federal government, and the U.S. economy.

This primer examines the demographic patterns that are causing the graying of the U.S. population and looks at several strategies that have been proposed for preparing for that aging population. It emphasizes the economic and budgetary aspects of Social Security—particularly, how changes to the program might affect the nation's ability to deal with its impending demographic shift. Some of the key points of the primer are outlined below.

## The Challenges of an Aging Population

- Once the baby-boom generation retires, the amount of money that the federal government will spend on Social Security will grow substantially. That spending is projected to increase by more than 50 percent over the next three decades—from 4.2 percent of the nation's total output (gross domestic product, or GDP) this year to 6.5 percent in 2030—according to the intermediate projections of the Social Security Administration.
- Although policymakers have many goals, if they want to limit the growth of spending on the elderly as a share of GDP, they have only two options: slow the growth of total payments to the elderly or increase the growth of the economy.

- Issues about how to prepare for an aging population ultimately concern how many goods and services the economy will produce and how they will be distributed, not how much money is credited to Social Security's trust funds.
- Social Security is much more than a retirement program. Fewer than two-thirds of its beneficiaries are retired workers. The rest are disabled workers, survivors of deceased workers, and workers' spouses and minor children.

## **Strategies for Preparing the Nation**

This primer looks at three strategies that have been at the heart of the public debate about preparing for the nation's future needs. Those strategies are saving budget surpluses and paying down federal debt, using surpluses to create private retirement accounts, or changing the current Social Security program's benefits or revenues.

### **Saving Budget Surpluses**

- Saving surpluses and paying down federal debt could enlarge the economy, give policymakers more flexibility for dealing with unexpected developments, and ease the burden of an aging population on future workers.
- Current projections suggest that surpluses could be large enough to pay off all of the federal debt available for redemption by 2010. After that, the government could use surpluses to buy stocks and nonfederal bonds. However, such purchases would raise important questions. Would it be appropriate for the government to own shares in and possibly control private companies? And could the government's involvement distort market signals and corporate decisionmaking?

### **Using Budget Surpluses to Finance the Creation of Private Accounts**

- Using surpluses to pay for private retirement accounts might help protect those surpluses from being used for other purposes. It would also shift control of the surpluses from the government to the private sector and avoid the possible drawbacks of having the government own private assets. A system of private accounts that was based on 2 percent of workers' earnings could reduce the surplus by about \$1 trillion over 10 years.

- Some people argue that private accounts would offer higher rates of return than the traditional Social Security system does, but that argument can be misleading. Social Security has a low rate of return largely because initial generations received benefits far greater than the payroll taxes they paid; that difference would have to be made up even if the Social Security system was entirely replaced by private accounts. Moreover, investing in the stock market—through either private accounts or government purchases of stocks for the Social Security trust funds—is no panacea. Corporate stocks deliver a higher expected return than government bonds because they carry higher risks.
- A system of private accounts (even if it did not fully replace Social Security) would raise some practical questions. How much would the system cost to administer? Would it provide insurance against downturns in the stock market? At retirement, would people have to convert the assets in their private account into an annuity (a series of regular payments that continues until the person and his or her spouse dies), and if so, under what conditions? How would the system handle benefits for workers' families, for survivors of deceased workers, and for disabled workers? Would it provide subsidies for people with low income and intermittent work histories, as Social Security does now?

## **Modifying the Current Social Security Program**

- Many types of reductions in Social Security benefits could increase GDP in the long run. However, the effect on the economy in the near term would be uncertain, and the long-term gains could take a couple of decades to materialize fully. GDP could increase in the long run because reducing Social Security benefits might encourage some people to save more. Reductions in benefits would probably reduce the lifetime resources of some transitional generations, but later generations would be likely to earn higher wages and pay lower taxes, on average.
- Raising taxes to pay for Social Security would have an uncertain effect on GDP. If the additional revenues were not used for other purposes, national saving could increase. However, raising the rate of the Social Security payroll tax could reduce some people's incentives to work. For that reason, cutting benefits might be more likely to expand the economy in the long run than raising payroll tax rates would.
- If policymakers intended to alter the Social Security program, announcing the changes well in advance would give people time to respond by adjusting their plans for saving and retirement.



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# Introduction and Summary

*We can never insure one hundred percent of the population against one hundred percent of the hazards and vicissitudes of life, but we have tried to frame a law which will give some measure of protection to the average citizen and to his family against the loss of a job and against poverty-ridden old age.*

Statement of Franklin Delano Roosevelt upon signing  
the Social Security Act, August 14, 1935<sup>1</sup>

The Social Security Act of 1935, enacted in the midst of the Depression, is widely seen as one of the most important legislative accomplishments in U.S. history. The law created a program to provide lifetime payments to retired workers beginning at age 65, laying the foundation for today's Social Security program. The legislation also set up the federal system of unemployment insurance and authorized federal grants to the states for various purposes.

Since then, Social Security has grown to become by far the largest federal program. Coverage has expanded, benefits have increased, and the program has been broadened to include benefits for workers' spouses and minor children, for the survivors of deceased workers, and for disabled workers. The federal government currently pays monthly Social Security benefits to more than 45 million retired or disabled workers, their families, and their survivors (see Box 1). Those benefits will cost the government a total of about \$430 billion this year—roughly one-quarter of the entire federal budget.

Over the next 30 years, the retirement of the baby-boom generation (the large group born between 1946 and 1964) will pose new challenges for the Social Security program, the federal government, and the U.S. economy. The Social Security Administration projects that the number of people age 65 or older will rise by more than 90

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1. Quoted in Project on the Federal Social Role, *The Report of the Committee on Economic Security of 1935*, 50th Anniversary Edition (Washington, D.C.: National Conference on Social Welfare, 1985), p. 145.

**Box 1.**  
**Recent Statistics About Social Security**

The numbers below present a portrait of the Social Security program in December 2000 (except the numbers for the payroll tax, which are for 2001). They are based on data from the Social Security Administration.

**Number of Social Security Beneficiaries**

Retired Workers	28.5 million
Disabled Workers	5.0 million
Spouses of Deceased Workers	5.1 million
Spouses of Retired or Disabled Workers	3.0 million
Children of Retired, Disabled, or Deceased Workers <sup>1</sup>	3.8 million
 Total Number of Beneficiaries	 45.4 million

**Average Monthly Social Security Benefit**

Retired Workers	\$845
Disabled Workers	\$787
Spouses of Deceased Workers	\$790
Spouses of Retired or Disabled Workers	\$417
Children of Retired, Disabled, or Deceased Workers <sup>1</sup>	\$406

**Workers**

Numbers of Workers in Employment Covered by Social Security	152.9 million
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**Social Security Payroll Tax<sup>2</sup>**

Tax Rate (Paid half by employer and half by employee)	12.4 percent
Limit on Worker's Annual Earnings Subject to the Tax	\$80,400
Maximum Tax Owed (Paid half by employer and half by employee)	\$9,970

- 
1. Minor children and some adults disabled before age 22.
  2. Besides the Social Security payroll tax, workers are also subject to a 2.9 percent payroll tax (paid half by them and half by their employers) on covered earnings for the Medicare program. There is no limit on the annual earnings subject to that tax.

percent in the next three decades (from about 36 million now to 69 million in 2030), according to its intermediate assumptions (see Figure 1). During the same period, the number of adults under age 65—who will largely be the ones paying the taxes to support their elders—will grow by only about 15 percent (from 170 million to 195 million). Moreover, the number of elderly people is expected to keep rising at a faster rate than the number of nonelderly people as life spans continue to lengthen.

On May 2, 2001, President Bush established a 16-member commission “to study and report . . . specific recommendations to preserve Social Security for seniors while building wealth for younger Americans.” The President instructed the commission to issue a report by this fall. The Congress is likely to review the commission’s recommendations as it determines what, if any, Social Security legislation it will send to the President for his signature.

This report provides background information for the Congress as it considers how to prepare for the retirement of the baby-boom generation and beyond. The report emphasizes the economic and budgetary aspects of Social Security—particularly, how changes to the program might affect the nation’s ability to deal with its impending demographic shifts. This chapter highlights several of the report’s main points.

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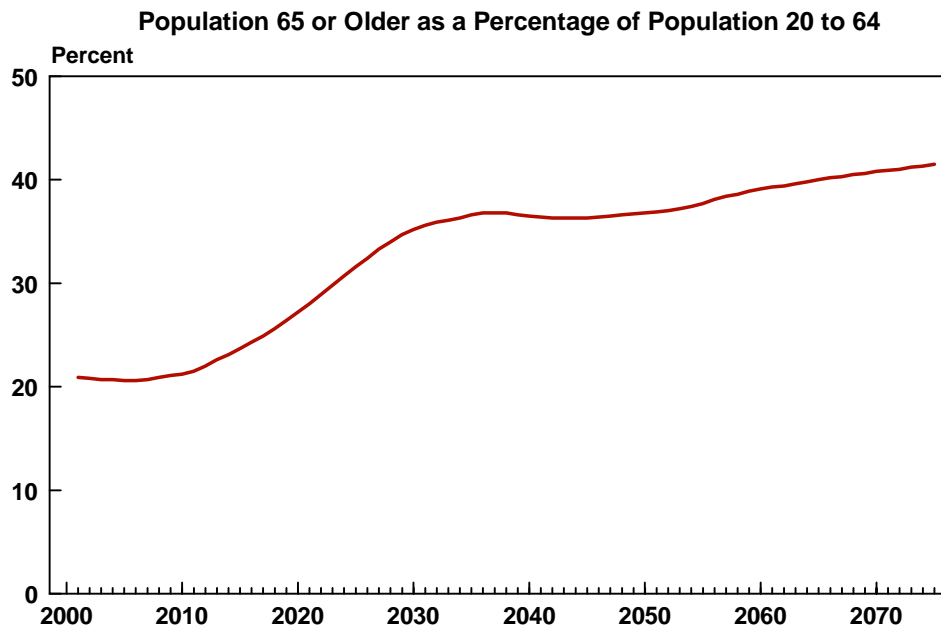
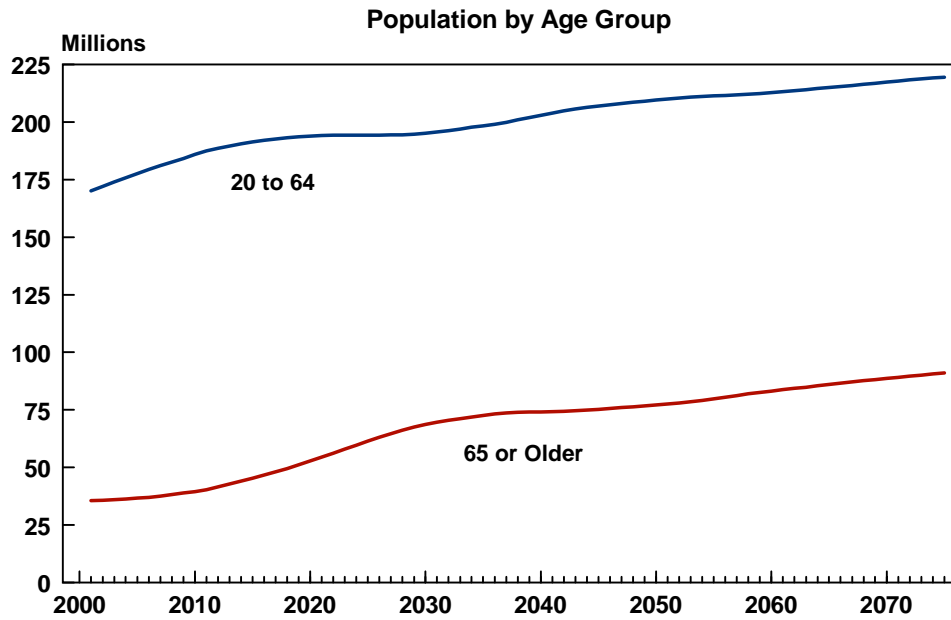
## The Challenges of an Aging Population

Observers can view the economic and budgetary consequences of the aging of the U.S. population from at least three perspectives: that of the trust fund framework used by the trustees of the Social Security program, that of the total federal budget, and that of the overall U.S. economy.

The most common perspective is that of Social Security’s own financial structure. The program is financed largely by a tax on workers’ wages (a payroll tax). The revenues from that tax are credited to two accounts (“trust funds”) in the federal budget, one for each of the program’s two parts: Old-Age and Survivors Insurance, and Disability Insurance. Those trust funds, which are maintained in the U.S. Treasury, function mainly as accounting mechanisms to track Social Security’s revenues and spending and to monitor whether the program’s designated sources of revenue are producing enough money to cover expected benefits. The program’s benefits, administrative costs, and other authorized expenditures are paid from those funds. Balances in the funds are held in the form of special interest-bearing Treasury securities.

A broader perspective takes into account the pressures on the total federal budget, not just the part of the budget specific to Social Security. In particular, as the population ages, spending on federal health care programs for the elderly and disabled

**Figure 1.**  
**Projected Growth in the Adult Population, 2001-2075**



SOURCE: Social Security Administration, *The 2001 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (March 19, 2001), Table V.A2 (intermediate assumptions).

**Table 1.**  
**Projected Federal Spending for Social Security, Medicare,**  
**and Medicaid in 2001**

	In Billions of Dollars	As a Percentage of Total Federal Spending
Social Security	429	26.0
Medicare	238	14.4
Medicaid	<u>131</u>	<u>7.9</u>
Subtotal	798	48.3
Rest of Government	<u>852</u>	<u>51.6</u>
Total (Excluding net interest)	1,651	100.0

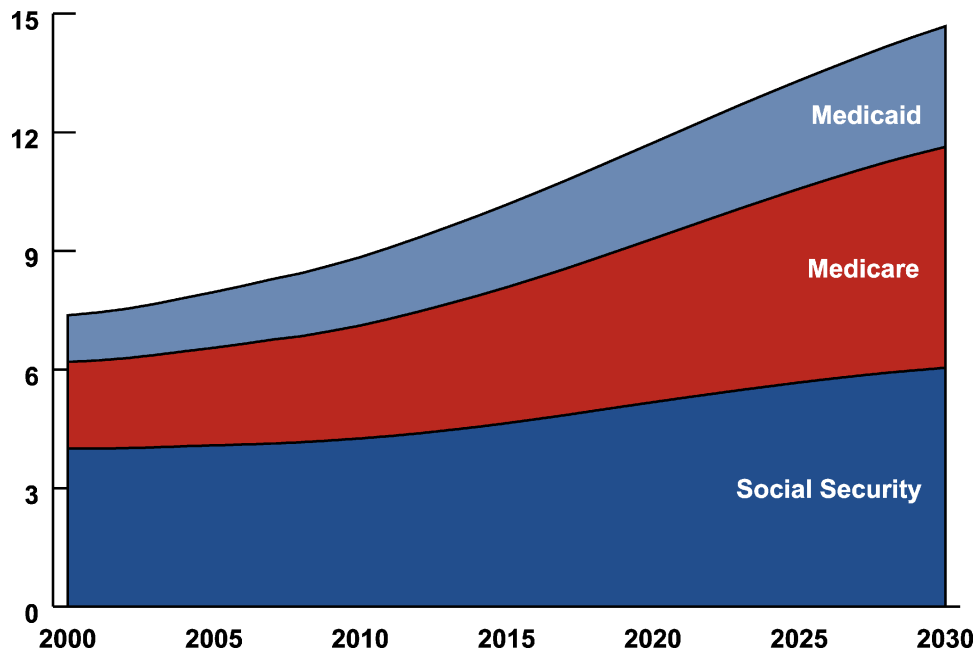
SOURCE: Congressional Budget Office, *The Budget and Economic Outlook: An Update* (August 2001).

will probably rise rapidly because of increases in federal costs per beneficiary as well as in the percentage of the population eligible for benefits (unless major changes are made in those programs). The Medicare program provides health insurance to most U.S. residents age 65 or older and to eligible disabled people. Most of its participants also receive Social Security benefits. Medicaid is a joint federal/state program that provides medical assistance to low-income people; in recent years, a large share of its payments have gone to provide long-term care for elderly and disabled people in nursing facilities. The federal government will spend a total of about \$370 billion on Medicare and Medicaid this year. Those programs, together with Social Security, already account for nearly half of all federal spending, excluding interest payments on federal debt (see Table 1). If the programs are not changed, by 2030 they could consume two-thirds of the federal budget.<sup>2</sup>

The broadest perspective—and the one emphasized in this report—takes into account what might happen to the overall U.S. economy, not just to the federal budget. As the population ages, total consumption of goods and services by the elderly will increase, whether that consumption is financed through public programs or privately. The Congressional Budget Office (CBO) projects that federal spending for Social Security, Medicare, and Medicaid will account for roughly 15 percent of the nation's total output (gross domestic product) in 2030—double the current share (see Figure 2). Large increases in spending on those programs, combined with any taxes or federal debt needed to finance them, could have significant effects on the economy. Examining how changes to those programs could alter the future size of the economy is im-

2. Congressional Budget Office, *The Long-Term Budget Outlook* (October 2000), p. 15.

**Figure 2.**  
**Projected Federal Spending for Social Security, Medicare,**  
**and Medicaid, 2000-2030 (As a percentage of gross domestic product)**



SOURCE: Congressional Budget Office (October 2000 estimates).

portant because the goods and services that baby boomers will consume in their retirement will largely be produced by future workers.

## Issues to Consider in Reforming Social Security

Several aspects of the Social Security program and its outlook as the population ages are especially important in considering changes to the program. First, throughout its long history, Social Security has had multiple goals—some related to redistributing income among or within generations, others related to providing insurance to offset lost earnings. Policymakers will need to decide whether those goals are still appropriate and, if so, how changes to Social Security would aid or hinder the achievement of those goals and would affect various types of beneficiaries and taxpayers. Those decisions will also need to take into account the dramatic increase in the elderly population that is expected in coming decades.



Second, issues about how to prepare for an aging population ultimately concern the amount of goods and services the economy will produce and how they will be distributed, not how much money is credited to the Social Security trust funds. In that sense, the projected depletion of those funds—which is the focus of much of the popular debate about Social Security’s future—is irrelevant. The challenge of adjusting to an aging population would need to be faced even if the trust funds never existed.

Third, deciding how to prepare for an aging population is likely to require weighing the interests of today’s workers and Social Security beneficiaries against the interests of future workers and beneficiaries. No matter how it is packaged, any plan to increase national saving today means that the U.S. population will consume fewer goods and services now so that consumption can be greater in the future, when a larger share of the population is retired. Gone are the days when expansion of the labor force could pay for the growth of Social Security benefits. As the Congress looks at policy changes, one consideration is that future workers and Social Security beneficiaries are likely to have higher standards of living, on average, than current workers and beneficiaries do, because of future increases in productivity.

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## Strategies for Preparing the Nation

The 107th Congress has inherited Social Security reform as a major item on its agenda. Like previous Congresses, it faces projections that payments from the government to the elderly will rise sharply as a share of the economy over the next 30 years. Spending more on the elderly may be appropriate given the large increase in the older population, but questions can be raised about how much that spending should rise. Policymakers have many goals, but if they want to limit the growth of spending on the elderly as a share of the economy, they can do so in only two ways: either by slowing the growth of total payments to the elderly or by increasing the rate of growth of the economy.

Different options for reform would have different effects on economic growth. To the extent that they boosted the future size of the economy and increased the nation’s accumulation of assets, they could lessen the burden on future workers of government programs that serve the elderly. In essence, the accumulation of assets “prefunds” the future spending of retired baby boomers (as explained in Box 2). That action would reduce the relative costs of an aging population to future generations by reducing payments to retirees as a share of the economy.

Policymakers could attempt to increase the size of the economy in several ways: by running budget surpluses or promoting private saving (which can make more funds available for investment in business equipment, structures, and other types of capital);

**Box 2.**  
**Prefunding Future Consumption**

Saving is one of the major ways that workers can prepare for retirement. By spending less than they earn, they can build up assets to pay for the consumption of goods and services in their retirement. Nations can prepare for an aging population in the same way. Through saving, nations can finance the construction of new business plants and equipment at home and the acquisition of financial and physical assets in other countries. Those domestic investments enable the economy to produce more goods and services in the future, and the income from the foreign investments supplements the income produced at home. Together, those investments provide the resources to finance future consumption by workers and retirees alike. That process of saving and accumulating assets for future needs is called prefunding because it sets aside current resources for future use.<sup>1</sup>

The word prefunding is sometimes also used to describe policy actions that finance future spending by a government program, such as Social Security. However, that usage can be misleading. For example, payments of future Social Security benefits could be financed on paper simply by making transfers from the rest of the budget to the Social Security trust funds. Although such transfers improve the actuarial balances of the trust funds, they do not directly change the government's total spending or revenues and hence do not increase national saving as a whole. Moreover, unless such transfers alter policymakers' future decisions about the budget, they will have no effect on the economy. Thus, they do not prefund future consumption in any meaningful way.<sup>2</sup>

Although asset accumulation is a central feature of prefunding, that does not mean the government could prefund future consumption by investing the balances of the Social Security trust funds in corporate stocks. Changing the mix of securities held by those trust funds would not increase the resources available for future consumption. To buy stocks, the government would have to give private sellers an asset of equal value. Unless government policy increased national saving, the investments in stocks would simply involve an exchange of assets between the government and the private sector, not an increase in assets for the nation as a whole. (The economic effects of government investments in stocks are discussed in more detail in Appendix A of this report.)

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1. Nations may also be able to prepare for the future by investing in public infrastructure, education, and research and development; however, many of those federal investments appear to have lower returns than private investments do. See Congressional Budget Office, *The Economic Effects of Federal Spending on Infrastructure and Other Investments* (June 1988).
  2. Some analysts distinguish between broad prefunding and narrow prefunding. Broad prefunding raises national saving, accumulates assets, and sets aside resources for future use. Narrow prefunding—which refers to actions taken with respect to a particular government program—does not necessarily imply that resources have been set aside for future use. For more details, see Joseph Stiglitz, “Rethinking Pension Reform: Ten Myths About Social Security Systems” (paper presented at the World Bank Conference on New Ideas About Old Age Security, Washington, D.C., September 14-15, 1999).

by changing tax and regulatory policies to improve the efficiency of the economy or to boost people's incentives to work or improve their skills; or by spending money on government programs that are oriented toward investment rather than current consumption. In addition, some changes to the Social Security program could have positive effects on economic growth. For example, cutting future benefits might create incentives for workers to save more.

Chapter 4 of this report focuses on three strategies that have generated a lot of public attention: saving budget surpluses and using them to pay down federal debt; using those surpluses to create private retirement accounts; and making changes to the benefits or revenues of the current Social Security program. Those various approaches are not mutually exclusive; they could be combined in any number of ways.

## Save Budget Surpluses

One strategy for preparing for the needs of an aging population is to preserve the federal government's annual budget surpluses and pay down the federal debt. If the government continues to spend less than it receives in revenues, it can increase national saving (if private saving does not fall to offset the government's saving), boost the stock of private capital, and expand the future size of the economy. By saving the surpluses, policymakers would have more flexibility for dealing with unexpected developments, and future workers could be better prepared to bear the heightened burden of making payments to an aging population.

CBO projects that if current laws and policies do not change, surpluses would be large enough to pay off all of the federal debt available for redemption by 2010.<sup>3</sup> What would happen after that? If laws restricting the Treasury's current investment choices were modified, any further surpluses could be used to buy nonfederal assets, such as stocks and bonds. Although asset accumulation could increase the funds available for capital investment and boost economic growth, it would be unprecedented for the federal government to hold a large stock of private assets. The possibility of such holdings raises questions. Would it be appropriate for the government to own and possibly control private companies? Could the government's involvement distort market signals and corporate decisionmaking?<sup>4</sup>

Questions have also been raised about whether using surpluses to pay down debt and accumulate assets is politically realistic. Would policymakers refrain from spending more or cutting taxes further and allow the government to pay off its debt and build up private assets? Recent experience creates some doubts on that score. Al-

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3. Congressional Budget Office, *The Budget and Economic Outlook: An Update* (August 2001).

4. For more details, see Congressional Budget Office, *Budget Options* (February 2001), Chapter 1.

though the government has paid down debt over the past few years, federal spending has also been growing faster than inflation. This year, the President and the Congress enacted the Economic Growth and Tax Relief Reconciliation Act of 2001—which will reduce tax revenues by a total of almost \$1.35 trillion between 2001 and 2011—and policymakers are considering other proposals that would further reduce projected surpluses.

## Create Private Accounts

A second strategy is to use part of the budget surpluses to pay for the creation of private retirement accounts. Proposals for private accounts differ in many ways, but they share a common feature: the income from an account that would be available to a worker at retirement would depend on the payments made into the account and the rate of return on the account's assets during the person's working life. Many types of accounts are possible, and their effects would vary widely.

Supporters argue that using budget surpluses to finance the creation of private accounts could provide many of the same economic benefits as saving the surpluses, without the potential problems of having the government own shares in private companies. In essence, proponents would shift control of part of the surpluses from the government to individuals.

How much of those surpluses would a system of private accounts absorb? The answer would depend on the details of the proposal, but the amount could be large. For example, creating a system of private accounts that was based on contributions of 2 percent of workers' earnings could cost about \$1 trillion over 10 years.<sup>5</sup>

Some people argue that private accounts would offer higher rates of return than the traditional Social Security system does, but that argument can be misleading. Social Security has a low rate of return largely because initial generations received benefits far greater than the payroll taxes they paid. That difference would have to be made up even if the Social Security system was entirely replaced by private accounts. Moreover, investing in the stock market (either through private accounts or through government purchases of stock for the Social Security trust funds) is no panacea. Simply raising the average rate of return on assets by taking on more risk would not change the economic fundamentals. Only if the accounts increased national saving and enlarged the economy would they reduce future burdens. Their impact on national saving would depend on how the accounts affected both government and private saving.

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5. That estimate excludes interest on the federal debt, which would rise if the accounts were financed by increasing that debt.

In setting up a system of private accounts, policymakers would have to address many practical issues. How much would the system cost to administer? Would it provide insurance against downturns in the stock market? How would it handle benefits for workers' families, for survivors of deceased workers, and for disabled workers? Would the system give subsidies to people with low income and intermittent work histories? How would the system be regulated and investors informed?

Some of the answers to those questions could have implications for the economy. For example, government guarantees that people would receive a minimum level of retirement income in the event of a market downturn would probably reduce national saving below what it would be without those guarantees. And subsidies to low-income workers that were phased out as wages rose could impose implicit taxes on work and could discourage some people from working more.

### **Make Programmatic Changes**

A third approach is to modify the current Social Security program. Changes that have been proposed include reducing benefits (for example, by raising the retirement age, lengthening the period over which benefits are computed, or reducing annual cost-of-living adjustments) or increasing payroll taxes. The effect on the economy would depend on the particular type of change. Other things being equal, reducing benefits might be more likely to increase the size of the economy than raising payroll tax rates, which could lessen people's incentives to work.

Economic models suggest that many types of benefit reductions could increase the size of the economy in the long run because they could encourage some people to save more. However, those long-term gains could take a couple of decades to materialize fully. How the benefit cuts would affect the economy in the near term is uncertain.

Slowing the growth of Social Security benefits would most likely reduce the lifetime resources of some transitional generations. However, it could also raise the wages of later generations and reduce their tax burdens. If benefits are to be cut, changing the law now rather than later would give workers time to adjust their plans for saving and retirement.



# An Overview of the Social Security Program

Over the years, lawmakers have tried to make Social Security serve various purposes and categories of people. In the process, they have created a complicated set of rules that determine the eligibility and benefit amounts of different types of beneficiaries. And they have crafted a special financial structure for the program. This chapter describes the key elements of the history, benefit structure, and financing of Social Security that are most relevant to the current debate over the program's future.

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## Social Security's Objectives

From the beginning of Social Security, its developers sought to achieve multiple, sometimes conflicting, goals. Later expansions of the program added other goals, and amendments designed to curb the program's rapidly growing costs did not limit its objectives.

Today's Social Security program is a hybrid—part redistribution program (which transfers resources within and among generations) and part insurance program (which provides insurance to workers and their families for losses resulting from a worker's death or disability). Unlike the case with private insurance, however, participation in Social Security is mandatory. And unlike private insurers, the federal government has the power to tax and thus does not need to charge current participants for the full amount of the expected payouts. Moreover, as with other federal programs, new laws can be enacted to change the terms of the insurance, making it more or less generous for its participants.

## The Original Program

As its 1935 report to President Roosevelt indicates, the committee charged with developing Social Security legislation wanted to help all workers prepare for retirement, but it was particularly concerned about helping retired workers who had low incomes:

[I]t should not be overlooked that old-age annuities are designed to prevent destitution and dependency. Destitution and dependency are enormously expensive, not only in the initial cost of necessary assistance but in the disastrous psychological effect of relief upon the recipients, which, in turn, breeds more dependency.<sup>1</sup>

The design of the Social Security system involves a trade-off between ensuring a sufficient level of benefits to even the poorest recipients (the “adequacy” objective) and distributing benefits so that workers who have paid more taxes for Social Security receive more benefits (the “equity” objective). The progressive benefit structure of the program, described below, reflects the attempt to balance those two objectives. Although the specific formulas for calculating benefits have changed since Social Security began, retired workers with a history of low wages have always received a higher percentage of their preretirement earnings in monthly benefits than other retired workers do. Nonetheless, workers who earned higher wages receive a higher level of monthly benefits.<sup>2</sup>

Social Security’s main revenue source has always been a payroll tax imposed on workers and their employers. Benefits are calculated according to the earnings on which the tax was paid, even though the revenues from taxing a particular worker’s earnings are not set aside to pay for that worker’s future benefits.

One purpose of using payroll taxes rather than income taxes or other sources of revenue was so that elderly beneficiaries would feel they had earned their benefits, whether or not they had really done so. The program’s developers were eager that Social Security not be seen as a welfare program but rather as “a self-respecting method through which workers make their own provision for old age.”<sup>3</sup> Moreover, President Roosevelt believed that such an approach would help ensure that future policymakers would not be able to repeal the program.<sup>4</sup> Undoubtedly, the perception that beneficiaries were simply getting back what they had paid in—even though most

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1. Project on the Federal Social Role, *The Report of the Committee on Economic Security of 1935*, 50th Anniversary Edition (Washington, D.C.: National Conference on Social Welfare, 1985), p. 53.
  2. Even though the formula for calculating monthly benefits is progressive (in that it favors retired workers with low lifetime earnings), some people have questioned whether the overall benefit structure of Social Security is progressive. They point out that men with low lifetime earnings have shorter life spans, on average, than other men. Other people, however, observe that Social Security also provides benefits to the survivors of deceased workers and to disabled workers; both of those features contribute to the program’s progressivity.
  3. Project on the Federal Social Role, *The Report of the Committee on Economic Security*, p. 53.
  4. “We put those payroll contributions there so as to give the contributors a legal, moral, and political right to collect their pensions. . . . With those taxes in there, no damn politician can ever scrap my social security program.” President Roosevelt, quoted on the Social Security Administration’s “History Page,” at [www.ssa.gov/history/quotes.html](http://www.ssa.gov/history/quotes.html).



retired workers have received much more in benefits than they have paid in Social Security taxes—has been a deterrent to changing the program.

## Later Developments

Later legislation greatly expanded the scope and complexity of Social Security, as new purposes were added to the original ones.

- Legislation enacted in 1939—before the program had paid any monthly benefits—added payments for spouses of retired workers and for survivors of deceased workers. Those provisions changed Social Security from a strictly worker-based retirement program to one in which workers’ families could also receive benefits.<sup>5</sup>
- Legislation enacted in 1956 created the Disability Insurance (DI) part of the program, explicitly adding a new purpose to Social Security: providing insurance for earnings lost because of disability.
- Legislation enacted in 1972 required Social Security to automatically adjust benefits each year for inflation. The creation of automatic cost-of-living adjustments (COLAs) explicitly moved Social Security into the business of providing annuities that are fully indexed for inflation. Previously, each across-the-board increase in benefits had required an act of Congress.

Not all amendments to the Social Security Act have expanded the program. Many of the changes made since the mid-1970s were designed to slow the growth of benefits, as policymakers responded to perceived short-term and long-term financial problems with Social Security.

- Amendments enacted in 1977 revised the indexing provisions established in 1972 to make them less sensitive to inflation. The procedure used to determine initial benefits was separated (“decoupled”) from the procedure used to adjust benefits later for inflation. Each worker’s earnings history, which is used to determine his or her initial benefit, is indexed to reflect the growth in average wages throughout the economy; later adjustments to that benefit are based on changes in consumer prices rather than in average wages. In addition, the 1977 amendments increased revenues by raising the

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5. Other changes included eliminating a provision in the 1935 law for lump-sum payments (of 3.5 percent of workers’ accumulated wages) for workers who were ineligible for benefits at age 65 or who died before then, establishing a minimum benefit, and providing a lump-sum death benefit of six times the deceased worker’s monthly benefit if the worker left no survivors eligible for monthly survivor benefits.

amount of a worker's earnings that is subject to the payroll tax, indexing that amount to growth in average wages, and increasing the tax rate.<sup>6</sup>

- Amendments in 1980 and 1981 further reduced projected spending for Social Security. The 1980 amendments were designed to limit the growth in the cost of the DI program. The Omnibus Budget Reconciliation Act of 1981 cut benefits further, largely by eliminating benefits for postsecondary students.
- The Social Security Amendments of 1983 made some of the most significant changes in the program's history.<sup>7</sup> Those changes came in response to projections that the Social Security trust funds would soon be exhausted and that the program faced a large, long-term deficit. Spending was cut in the short run by delaying a scheduled COLA for six months. The biggest reduction in long-run costs came from gradually raising the age at which retired workers could receive full benefits from 65 to 67 (for workers born in 1960 or later). In addition, lawmakers increased Social Security revenues by moving up the dates on which scheduled increases in the payroll tax were to take effect, making some Social Security benefits subject to income taxes, and including new federal workers and all employees of nonprofit organizations in the program.

## Related Federal Programs

Three separate government programs are closely related to Social Security in their objectives and in the populations they serve. Each one was established by amending the Social Security Act.

**Supplemental Security Income.** Under the Supplemental Security Income (SSI) program, enacted in 1972, the federal government provides monthly cash payments to low-income people who are 65 or older or disabled. SSI replaced previous state-administered programs that had been jointly funded by the federal government and the states with a single program that uses uniform, nationwide rules for eligibility. Because SSI is a means-tested program, people must have income and assets below specified amounts to be eligible for benefits. (The eligibility criteria based on disability are similar to those used to determine eligibility for DI benefits.) The maximum

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6. For more details of the 1977 amendments, as well as each of the other major changes in the Social Security program, see Geoffrey Kollmann, *Social Security: Summary of Major Changes in the Cash Benefits Program*, CRS Report for Congress RL30565 (Congressional Research Service, May 18, 2000).

7. For more-detailed information about the 1983 legislation, see John A. Svahn and Mary Ross, "Social Security Amendments of 1983: Legislative History and Summary of Provisions," *Social Security Bulletin*, vol. 46, no. 7 (July 1983), pp. 3-48.

SSI benefit in 2001 for an individual with no other income is \$531 a month; for a couple, it is \$796 a month.<sup>8</sup> This year, the federal government will spend nearly \$30 billion on SSI, the Congressional Budget Office estimates.

People who receive Social Security benefits and who have assets below the specified level (\$2,000 for an individual or \$3,000 for a couple) can also receive SSI benefits. However, any unearned income of more than \$20 a month that they receive (including Social Security) reduces their SSI benefit by an equal amount.

In effect, SSI serves as a backstop to Social Security to ensure that elderly and disabled people have a minimum level of income if they do not qualify for Social Security or if their Social Security benefits are very low. At the end of 2000, about 60 percent of the 1.3 million elderly recipients of SSI and 30 percent of the 5.3 million disabled recipients were also receiving Social Security benefits.<sup>9</sup>

The links between SSI and Social Security are important to consider when examining the potential effects of changing the Social Security program. If Social Security benefits were reduced, some of the government's savings would be offset by increased spending for SSI. Likewise, if Social Security's minimum benefit was increased, some of the additional cost would be offset by lower spending for SSI.

**Medicare.** The second-largest entitlement program after Social Security, Medicare provides health insurance coverage to elderly or disabled people. Most Medicare beneficiaries also receive Social Security. Medicare, which was enacted in 1965, comprises two programs—Hospital Insurance (HI) and Supplementary Medical Insurance (SMI). The HI program pays for inpatient care in hospitals, some stays in skilled nursing facilities, some home health care, and hospice services. The SMI program pays for services from physicians, medical suppliers, and outpatient care facilities as well as for some home health care.

This year, Medicare will spend about \$240 billion on health care for 40 million beneficiaries, CBO estimates. The HI part of the program is financed largely by a payroll tax levied on workers and their employers. The SMI part of the program is financed in two ways: roughly one-quarter of its funding comes from monthly premiums paid by enrollees, and the rest comes from the government's general revenues. In all, beneficiaries pay for less than 15 percent of current Medicare outlays.

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8. In addition, most states provide supplemental payments. The history of the SSI program and its current operations are described in Social Security Administration, *The Supplemental Security Income Program at the Millennium* (November 2000), available at [www.ssa.gov/policy/programs/SSI/millennium/index.html](http://www.ssa.gov/policy/programs/SSI/millennium/index.html).

9. Social Security Administration, *SSI Annual Report, 2000* (May 2001), Table 7, available at [www.ssa.gov/statistics/ssi\\_annual\\_stat/2000/table7.html](http://www.ssa.gov/statistics/ssi_annual_stat/2000/table7.html).

**Medicaid.** The Medicaid program, also enacted in 1965, is a joint federal/state program that provides medical assistance to many of the nation's poor people. Payments for long-term care (mainly for the elderly and disabled) account for about one-third of total Medicaid spending. The federal government and the states pay for the program jointly, with the federal government's share ranging from 50 percent to 83 percent (depending on a state's per capita income). Federal spending for Medicaid will total about \$130 billion this year, CBO estimates.

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## How Social Security Works

The Social Security program will pay monthly benefits to about 45 million people this year—more than 28 million retired workers, 5 million disabled workers, and 12 million family members of retired, disabled, or deceased workers. In general, workers are eligible for retirement benefits if they are at least age 62 and have had sufficient earnings on which they paid Social Security taxes in at least 10 years.<sup>10</sup> Workers whose employment has been limited because of a physical or mental disability can become eligible at an earlier age with a shorter employment history. Various rules apply to family members of retired, disabled, or deceased workers.<sup>11</sup>

Although Social Security is often characterized as a retirement program, only about 63 percent of its beneficiaries receive their payments as retired workers (see Figure 3). As of last year, 15 percent of beneficiaries were survivors of deceased workers. Most of those survivors were widows—either widows age 60 or older (who composed about 10 percent of all beneficiaries) or younger widows who were caring for a minor child or who were disabled.

The Disability Insurance program is an important but often overlooked part of Social Security. Workers under age 65 who had qualified for DI accounted for 11 percent of the people receiving Social Security benefits at the end of 2000; members of their families accounted for another 4 percent. Those percentages actually understate the role of Disability Insurance because DI recipients move into the retired-worker category when they reach the normal retirement age. (Although many of them would have qualified for retirement benefits at age 62 anyway, the amount they received by having their benefits calculated as disabled workers is typically much higher

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10. Most workers need to earn 40 credits (known as quarters) to be eligible for retirement benefits. Workers can earn up to four credits each year on the basis of the amount they earned in employment covered by Social Security. In 2001, one credit is earned for each \$830 in wages. Thus, a worker earning at least \$3,320 this year will receive four credits. The amount of earnings required for a credit is indexed to average earnings for the labor force as a whole.

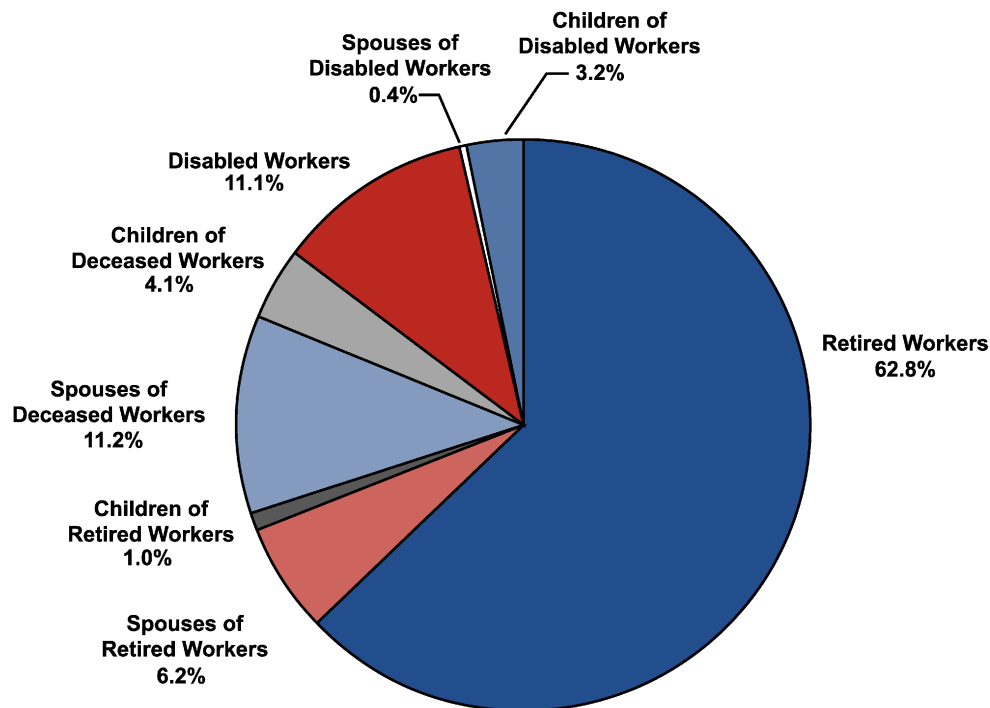
11. For more detailed information about determining eligibility and benefit amounts, see the Social Security Administration's Web site ([www.ssa.gov](http://www.ssa.gov)). Users can estimate their own future benefits at that site as well.

than it would have been if they had received benefits as retired workers.) More than 10 percent of the people who began receiving Social Security retirement benefits in 1999 had been getting DI benefits. Likewise, survivors of deceased DI beneficiaries are not counted in the DI category.

## Rules for Determining Retirement and Disability Benefits

Benefits for retired or disabled workers are based on those workers' past taxable earnings, expressed as an average level of earnings over their working lifetime (their average indexed monthly earnings, or AIME). For retired workers, the AIME is now based on the highest 35 years of earnings on which they paid Social Security taxes (up to the taxable maximum), with some adjustments. Earnings before age 60 are indexed to compensate both for past inflation and for real (after-inflation) growth in wages.

**Figure 3.**  
**Distribution of Social Security Beneficiaries, by Type of Benefit Received, December 2000**



SOURCE: Social Security Administration, *Annual Statistical Supplement, 2001* (draft), Table 5.A1 (available at [www.ssa.gov/statistics/Supplement/2001/index.html](http://www.ssa.gov/statistics/Supplement/2001/index.html)).

(When benefits are calculated for disabled workers and for the survivors of deceased workers, the AIME can be based on a shorter period. Moreover, DI benefits are not subject to any reduction for beginning to receive them before the age at which a retired worker is eligible for full benefits.)

**Benefit Formula.** The Social Security Administration (SSA) applies a progressive formula to a worker's average indexed monthly earnings to calculate his or her primary insurance amount (PIA). The PIA is the monthly amount payable to a worker who begins receiving Social Security retirement benefits at the age at which he or she is eligible for full benefits or payable to a disabled worker who has never received a retirement benefit reduced for age. (The age of eligibility is discussed in the next section.)

The formula is designed to ensure that initial Social Security benefits replace a larger proportion of preretirement earnings for people with low average earnings than for those with higher earnings. For workers who turn 62 this year, the formula is:

$$\text{PIA} = (90 \text{ percent of the first } \$561 \text{ of the AIME}) + (32 \text{ percent of the AIME between } \$561 \text{ and } \$3,381) + (15 \text{ percent of the AIME over } \$3,381)$$

Those thresholds at which the percentage of the AIME replaced by the PIA changes are known as "bend points" (see the top panel of Figure 4). They change along with changes in the average annual earnings for the labor force as a whole. Consequently, as wages rise over time, initial benefits increase at a similar pace.

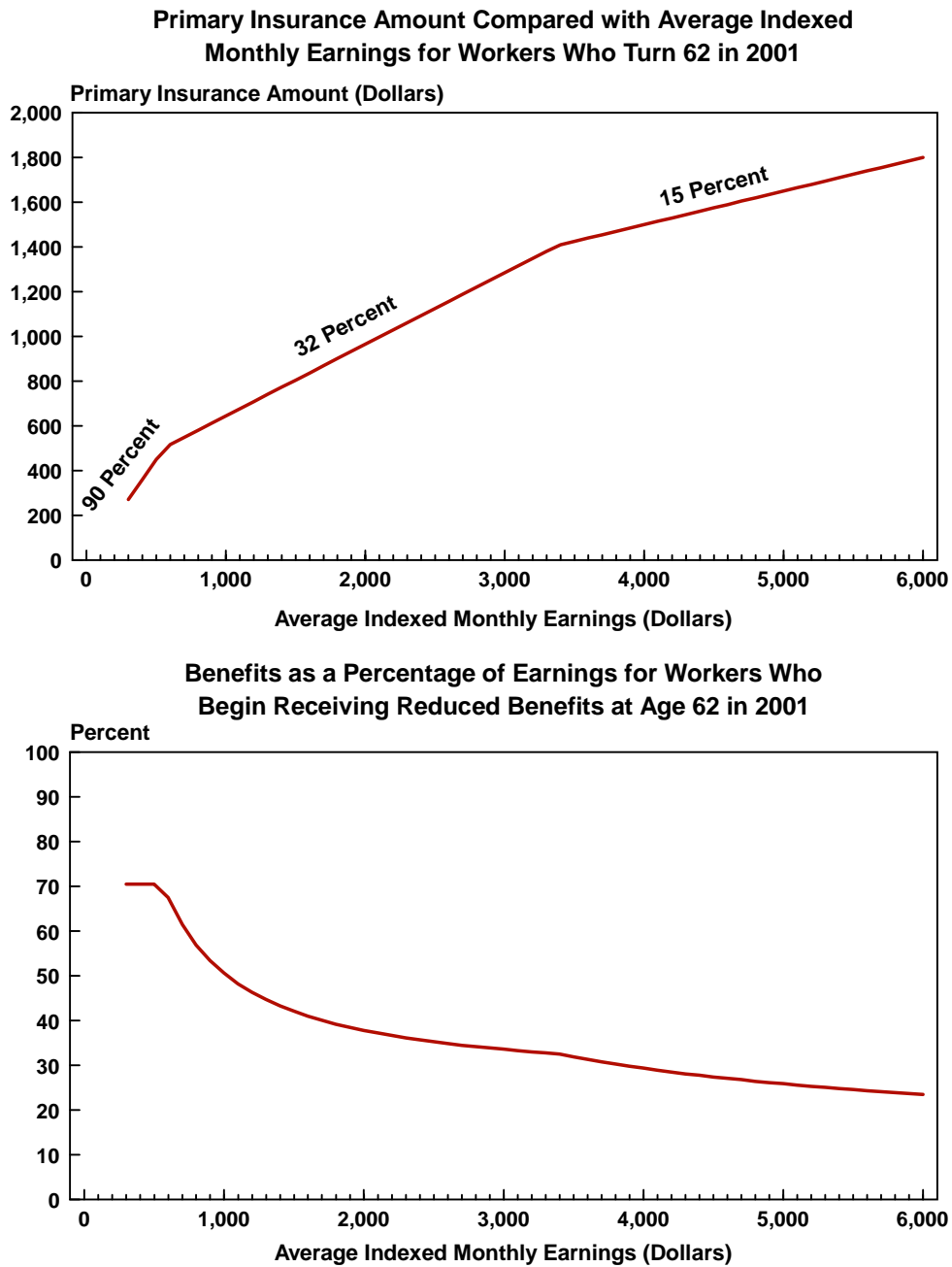
Workers who are 62 now, who had average earnings throughout their career, and who wait to retire until they reach the age at which they will be eligible for full benefits (65 and four months for this group) will receive a monthly benefit of about \$1,150. That payment will replace about 41 percent of their earnings in the year before they retired. If, instead, they retire this year soon after their 62nd birthday, they will be eligible for a permanently reduced benefit of almost \$900 a month. That amount will replace about 35 percent of their pretax earnings last year.<sup>12</sup> (Most beneficiaries' after-tax replacement rates are higher than their pretax replacement rates.)

The replacement rate is inversely related to past earnings (see the bottom panel of Figure 4). For example, workers who earned half of the average wage each year are eligible for a monthly benefit at age 62 of \$575, replacing about 45 percent of their past earnings (compared with 35 percent for workers with average earnings). By working longer and waiting to claim benefits, those workers would receive higher

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12. Their average indexed monthly earnings would be about \$2,540, or about \$30,500 per year. Applying the formula for workers turning 62 this year, their PIA would be \$1,150, or about \$13,800 per year. If they stopped working and began receiving benefits shortly after their 62nd birthday, that amount would be permanently reduced by about 22 percent. (All of those amounts are in 2001 dollars.)

**Figure 4.**  
**The Extent to Which Social Security Replaces Workers’**  
**Preretirement Earnings**



SOURCE: Congressional Budget Office.

annual benefits (replacing a higher percentage of their earnings), but the progressive pattern shown in Figure 4 would not change.

The Social Security Administration makes various adjustments to the PIA, such as reductions for early retirement and credits for later retirement. In addition, at the end of each year, SSA adjusts benefits by the amount of any increase in the consumer price index (CPI). For example, the 3.5 percent cost-of-living adjustment that took effect in December 2000 reflected the increase in the CPI for urban wage earners and clerical workers that occurred between the third quarter of 1999 and the third quarter of 2000.

Because of Social Security's indexing rules, the payments received by newly eligible beneficiaries reflect both increases in prices and real growth in earnings throughout the economy during the years that those beneficiaries worked.<sup>13</sup> Later increases in their payments—through annual COLAs—reflect only increases in prices after the beneficiaries became eligible for benefits. Thus, as long as real wages continue to rise, new beneficiaries will receive more than older beneficiaries, on average.

Another method for calculating benefits, known as the “special minimum PIA,” is used to help people who worked for many years but had low earnings. Essentially, that alternative calculation is based on the number of years worked rather than on the amount earned. The few people who receive benefits based on that calculation—150,000 beneficiaries at the end of 1999—are chiefly retired female workers. Their average benefit was less than \$600 per month in 1999, or about \$100 more than the maximum SSI benefit for eligible individuals at that time. Initial benefits based on the special minimum method are indexed to prices rather than to wages, so even fewer new Social Security recipients will gain from having their benefits calculated that way in the future.<sup>14</sup>

**Early Retirement.** Under current law, the age at which a worker becomes eligible for full Social Security retirement benefits—the normal retirement age (NRA)—depends on the worker's year of birth. For people born before 1938, the NRA is 65. For slightly younger workers, it increases by two months per birth year, reaching 66 for people born in 1943. The NRA remains at 66 for workers born between 1944 and 1954 and then begins to increase in two-month increments again, reaching 67 for workers born in 1960 or later. For workers whose 62nd birthday falls this year, the NRA is 65 years and four months.

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13. Specifically, earnings before the year that the worker turned 60 are indexed to reflect the growth in average earnings between the years in which the wages were earned and the year that the worker turned 60. Later earnings are not indexed. Benefits are indexed to the CPI for years after the worker turned 62 (regardless of when the worker begins receiving benefits).

14. Craig A. Feinstein, *Projected Demise of the Special Minimum PIA*, Actuarial Note No. 143 (Social Security Administration, Office of the Chief Actuary, October 2000), available at [www.ssa.gov/OACT/NOTES/note143.html](http://www.ssa.gov/OACT/NOTES/note143.html).



Workers can begin receiving permanently reduced monthly retirement benefits as early as age 62.<sup>15</sup> People who start collecting retirement benefits at age 62 this year will incur a permanent 22 percent reduction in their monthly benefits. As the normal retirement age rises to 67 for future groups of workers, that maximum reduction will also increase. (Once the NRA is 67, the permanent reduction will be 30 percent.) Similarly, workers who delay collecting benefits beyond their normal retirement age receive a delayed-retirement credit to compensate them for the reduction in the length of time they will receive benefits.<sup>16</sup>

The size of the early-retirement reduction for workers is intended to be “actuarially fair”—in the sense that the total value of the reduced monthly benefits that an average worker could expect to receive between age 62 and death is similar to the total value of the full monthly benefits that the worker could expect to receive over that time by waiting until he or she was eligible for full benefits. For example, a single male worker who retired this year at age 62 and expected to live about 18 more years (to age 80) would be almost equally well off receiving reduced benefits of \$780 per month for 18 years or unreduced benefits of \$1,000 per month for 14 years and eight months (starting at his full-benefit age of 65 years and four months).<sup>17</sup>

Because a typical 62-year-old woman could expect to live longer than 18 years, she would theoretically accrue greater total benefits by waiting until normal retirement age to begin collecting them. But many women might not incur the full reduction for early-retirement benefits because they can switch from receiving reduced retired-worker benefits to full survivor benefits upon the death of their husband. If a widow is at least the normal retirement age when her husband dies, she becomes eligible for a full survivor benefit (equal to his benefit) if that benefit is higher than the one she had been receiving on the basis of her own earnings record.

The size of the early-retirement reduction may encourage some workers to collect early benefits and may discourage others. For example, workers who believe that their life span will be well short of the average might see the reduction as a good deal and apply for benefits at age 62. Conversely, workers who expect to live into

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15. The characteristics, circumstances, and financial resources of men and women who received reduced benefits in the early 1990s are examined in Congressional Budget Office, *Raising the Earliest Eligibility Age for Social Security Benefits*, CBO Paper (January 1999).

16. Starting with beneficiaries born in 1943, each year delayed beyond the normal retirement age (which will be 66 for that group) will add 8 percent to their retired-worker benefits. The delayed-retirement credit for workers reaching the normal retirement age this year is 6 percent.

17. If he began collecting retirement benefits as soon as he was eligible and lived to age 80, the worker would receive 216 monthly payments of \$780 (adjusted for inflation), for a total of about \$168,500. By waiting until his normal retirement age, he would receive 176 monthly payments of \$1,000, for a total of \$176,000. Although he would receive more money in total by waiting, he would not have access to that money until later. What economists call the present value of the two streams of future monthly payments would be equivalent if the worker considered \$1 received now to be worth about the same as \$1.03 (adjusted for inflation) received one year later.

their 80s might regard the reduction as unacceptably high and wait until later to receive benefits.

More than two-thirds of the workers who began receiving Social Security retirement benefits in the past decade implicitly decided that the reduction in their monthly check was a price worth paying to start collecting benefits before age 65. The majority of those early recipients began collecting benefits at age 62.<sup>18</sup>

**Earnings Test.** A complicated set of rules requires that Social Security benefits be reduced if recipients earn more than a certain exempt amount. Those rules, known as the retirement earnings test, apply to wages but not to income from dividends, pensions, or interest. This year, the benefits of Social Security recipients who have not yet reached normal retirement age will be reduced by \$1 for each \$2 they earn above \$10,680. That earnings threshold automatically rises each year to match the increase in a national index of average wages.

Workers whose benefits are reduced because of the retirement earnings test will receive higher monthly benefits later—about 7 percent or 8 percent higher for each year in which their benefits are entirely withheld because of the earnings test. In many cases, the increase in benefits will be even more than 8 percent because the additional earnings can raise the earnings base from which benefits are calculated. In short, although the retirement earnings test is often portrayed as a tax on work, it is more accurately described as a means of deferring benefits until workers no longer have substantial earnings.

Until last year, a separate earnings test applied to workers ages 65 through 69. The Senior Citizens Freedom to Work Act of 2000 repealed that earnings test for beneficiaries at or above the NRA, but it left in place the test for younger beneficiaries. As the NRA rises to 67 over the next two decades, the size of the group subject to the remaining earnings test will expand greatly.

## Rules for Determining Family Benefits

More than one-quarter of Social Security beneficiaries receive payments as the spouse, child, or survivor of a worker. The rules for determining their benefits are important in the context of reforming Social Security, both because so many people receive those benefits and because several reform proposals address specific concerns raised about those benefits, such as the treatment of one-earner versus two-earner couples.

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18. Social Security Administration, *Annual Statistical Supplement, 2000*, p. 240. In 1999, 1.1 million of the 1.5 million people who SSA determined were entitled to new retirement benefits were ages 62 through 64. About 850,000 of those people were 62-year-olds. (Those estimates exclude the 200,000 Disability Insurance beneficiaries who automatically became retired-worker beneficiaries when they reached 65.)

The benefits that a spouse, child, or survivor of a worker receives are based on the worker's PIA. The rules determining eligibility and benefit amounts are complicated, particularly in situations in which the family members are also eligible for benefits on the basis of their own work history or in which benefits are reduced because of the age of the beneficiary. The key concepts are outlined below.<sup>19</sup>

An eligible wife or husband of a retired or disabled worker can receive a spousal benefit equal to 50 percent of the spouse's PIA. To be eligible, the wife or husband of the worker must be at least age 62 or caring for an eligible child. A widow or widower can receive 100 percent of the amount to which the deceased worker would have been entitled. Minor children can also receive benefits. However, the total amount of benefits that a family can receive on the basis of a worker's earnings record is limited by a family cap (which is generally between 150 percent and 188 percent of the worker's PIA).

Special eligibility rules apply to former spouses. In general, if their marriage lasted at least 10 years, ex-husbands and ex-wives are entitled to the same benefits based on their former spouse's earnings as they would be if they had remained married. Otherwise, they are ineligible for family-based benefits.<sup>20</sup>

The rules governing cases in which a person is eligible for benefits as a retired or disabled worker and as the spouse or widow of a worker are especially important because an increasing percentage of wives have worked long enough to qualify for benefits based on their own careers. The general rule is that someone eligible for two benefits receives the higher one, not both.

For example, suppose a husband and wife are the same age, both work until they become eligible for full retirement benefits, the husband is eligible for a monthly benefit of \$1,000, and the wife is eligible for a retirement benefit of only \$300. In that situation, because the wife's benefit as a spouse (\$500 a month) is higher than her benefit as a retired worker, she will receive the spousal benefit. Likewise, if she outlives her husband, she will receive a survivor benefit of \$1,000 per month (adjusted for inflation).<sup>21</sup> If, instead, the wife's earnings history is the same as her husband's, she will receive her benefit as a retired worker.

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19. The Social Security Administration's Web site ([www.ssa.gov](http://www.ssa.gov)) contains several publications that provide more-detailed information about each type of benefit. A particularly useful one is *Understanding the Benefits* (February 2001).

20. Benefits received by a divorced spouse do not reduce the amount payable to a current spouse or other family members.

21. Strictly speaking, as the Social Security Administration records the benefits, she will receive her own benefit as a retired worker plus the difference between that amount and the benefit to which she would be entitled as a spouse or widow.

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## Financing and the Trust Funds

The Social Security program has two sources of dedicated tax revenues. The main one is a 12.4 percent tax on earnings, split evenly between workers and their employers. The second, much smaller source is income taxes on some people's Social Security benefits.

Only earnings up to a maximum annual amount are subject to the Social Security payroll tax. That amount, the taxable earnings base, is adjusted each year for changes in average earnings in the U.S. economy. This year, the taxable base is \$80,400. Thus, workers earning at least that amount and their employers will each pay a tax of almost \$5,000.

Since 1984, some Social Security recipients have also been required to pay income taxes on part of their benefits. Beneficiaries pay those taxes only if the sum of their adjusted gross income, their nontaxable interest income, and one-half of their Social Security benefits exceeds a fixed threshold. If that total is more than \$25,000 for taxpayers filing individually, or \$32,000 for taxpayers filing joint returns, up to half of the benefits are subject to taxation.<sup>22</sup> Last year, about one-third of Social Security recipients paid an estimated total of \$12 billion in income taxes on their benefits. That amount represents about 3 percent of total Social Security spending. The income thresholds for determining whether benefits are subject to taxation are not indexed for inflation, so a larger share of recipients and benefits will be affected each year.

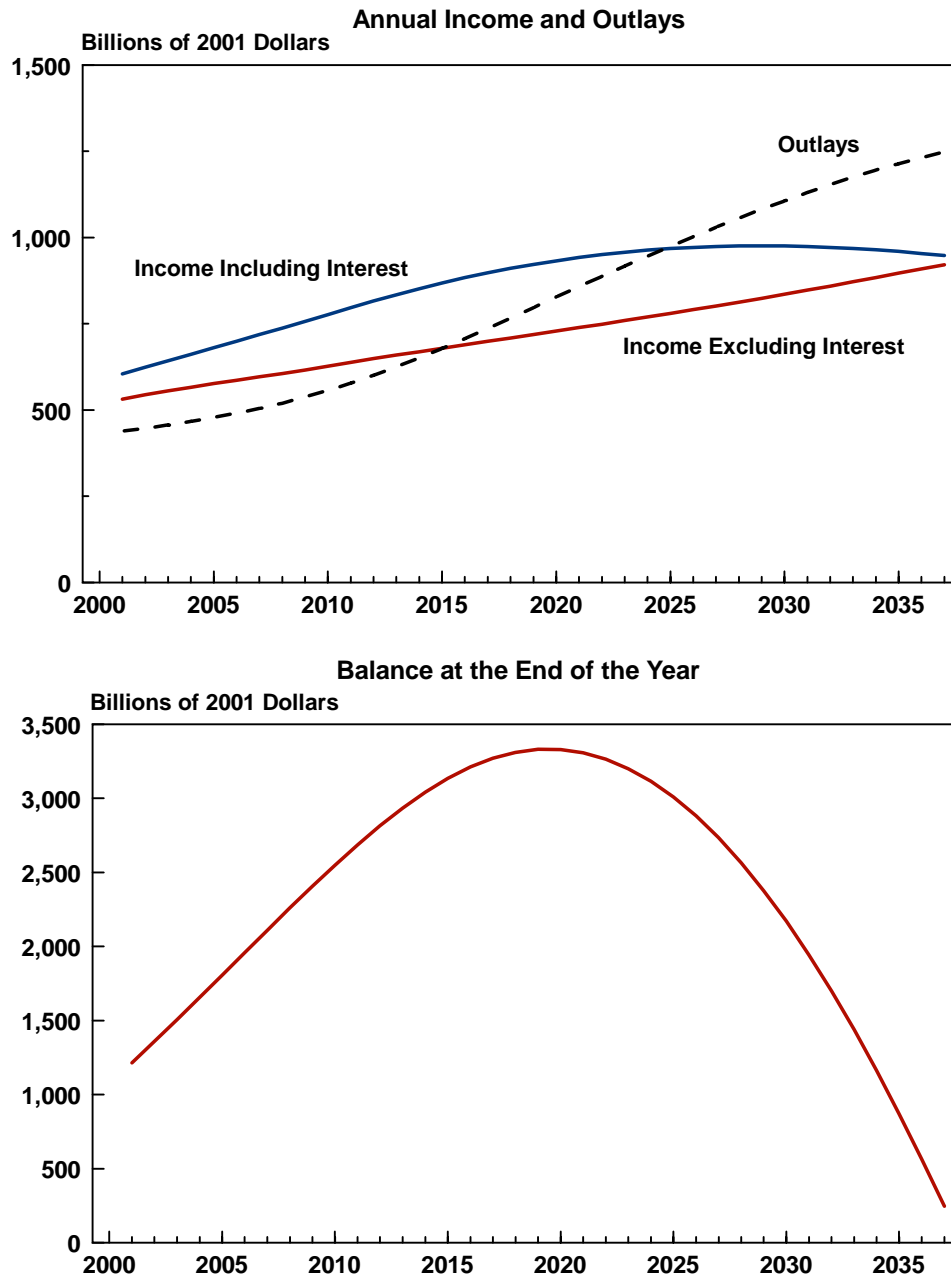
All of the revenues from the Social Security payroll tax and part of the revenues from taxing some Social Security benefits are credited to the trust funds for the Old-Age and Survivors Insurance and Disability Insurance programs. Social Security benefits, the program's administrative costs, and other authorized expenditures are paid from those funds.

The trust funds serve mainly as accounting mechanisms to track revenues and spending for Social Security. They also help government officials monitor whether taxes are producing enough revenues to pay for expected benefits. The two trust funds are running a combined surplus of more than \$150 billion a year. They are projected to show accumulated balances of more than \$1 trillion at the end of 2001 (see the bottom panel of Figure 5). However (as discussed in the next chapter), the size of

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22. Above a second set of thresholds—\$34,000 for single returns and \$44,000 for joint returns—up to 85 percent of Social Security benefits are subject to taxation as a result of legislation enacted later. However, the revenues from that additional tax are credited to Medicare's Hospital Insurance Trust Fund rather than to the Social Security trust funds.

**Figure 5.**  
**Income, Outlays, and Balances of the Social Security Trust Funds, 2001-2037**



SOURCE: Social Security Administration, *The 2001 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (March 19, 2001), Table VI.E8 (intermediate assumptions).

those trust fund balances does not necessarily bear any relationship to Social Security's obligations to its beneficiaries or the country's ability to pay for benefits. Although the Social Security Administration keeps track of the amount of payroll taxes paid by each worker, those amounts do not signify ownership by the worker in the way that the balance statement for a bank account denotes ownership. Ultimately, the worker's eligibility for benefits and the amount that he or she will receive are determined by Social Security rules set in law.

In 2016, projected outlays for Social Security will begin to exceed the tax revenues earmarked for the program (see the top panel of Figure 5). Once that happens, the federal government will need to draw on other resources to fund Social Security, even though the trust funds will continue to be credited with interest on the balances in the funds. The economic and budgetary effects of having outlays exceed tax revenues are the same with or without trust funds.

The financial structure of the Social Security program has resulted in a redistribution of resources between generations: each generation of workers pays taxes that are largely used to make payments to the people already eligible for benefits. From Social Security's earliest days, a contentious issue was whether the benefits that workers and their families received should be prefunded using the taxes that those workers paid, rather than the taxes paid by current workers. As the program was enacted in 1935, revenues dedicated to Social Security would have exceeded outlays by enough to build up very large surpluses. In effect, those excess revenues would have helped fund, in advance, the benefits that the same workers would receive later. Opponents of prefunding argued that such an arrangement would result either in pressure to increase spending or in federal government ownership of private assets. Later expansions to the program, along with postponement of increases in the payroll tax rate that were originally scheduled to occur during the 1940s, essentially moved Social Security to a pay-as-you-go basis.<sup>23</sup>

That pay-as-you-go structure has worked, although with many changes in taxes and benefits along the way. But it has worked largely because the labor force has grown rapidly during much of the program's history. That situation is about to change, as the number of Social Security beneficiaries begins to increase much faster than the number of workers.

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23. The debate over the extent to which workers should pay for their own benefits is discussed in Project on the Federal Social Role, *The Report of the Committee on Economic Security*; and in Herman B. Leonard, *Checks Unbalanced: The Quiet Side of Public Spending* (New York: Basic Books, 1986), Chapter 2.

# The Challenges of an Aging Population

**S**ocial Security may well be the nation's most popular government program. It is widely credited with raising the living standards of the elderly and with providing valuable insurance to workers and their families to cushion the economic losses associated with disability and death.

Why would anyone want to change such a popular program? Different people have different reasons, but most of those reasons relate to one fundamental fact: the age composition of the U.S. population is about to change in ways that will make it harder to continue Social Security as the program operates today. This chapter looks at the demographic patterns that are generating the much-anticipated graying of the U.S. population and the implications of those patterns for Social Security.

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## The Demographic Outlook

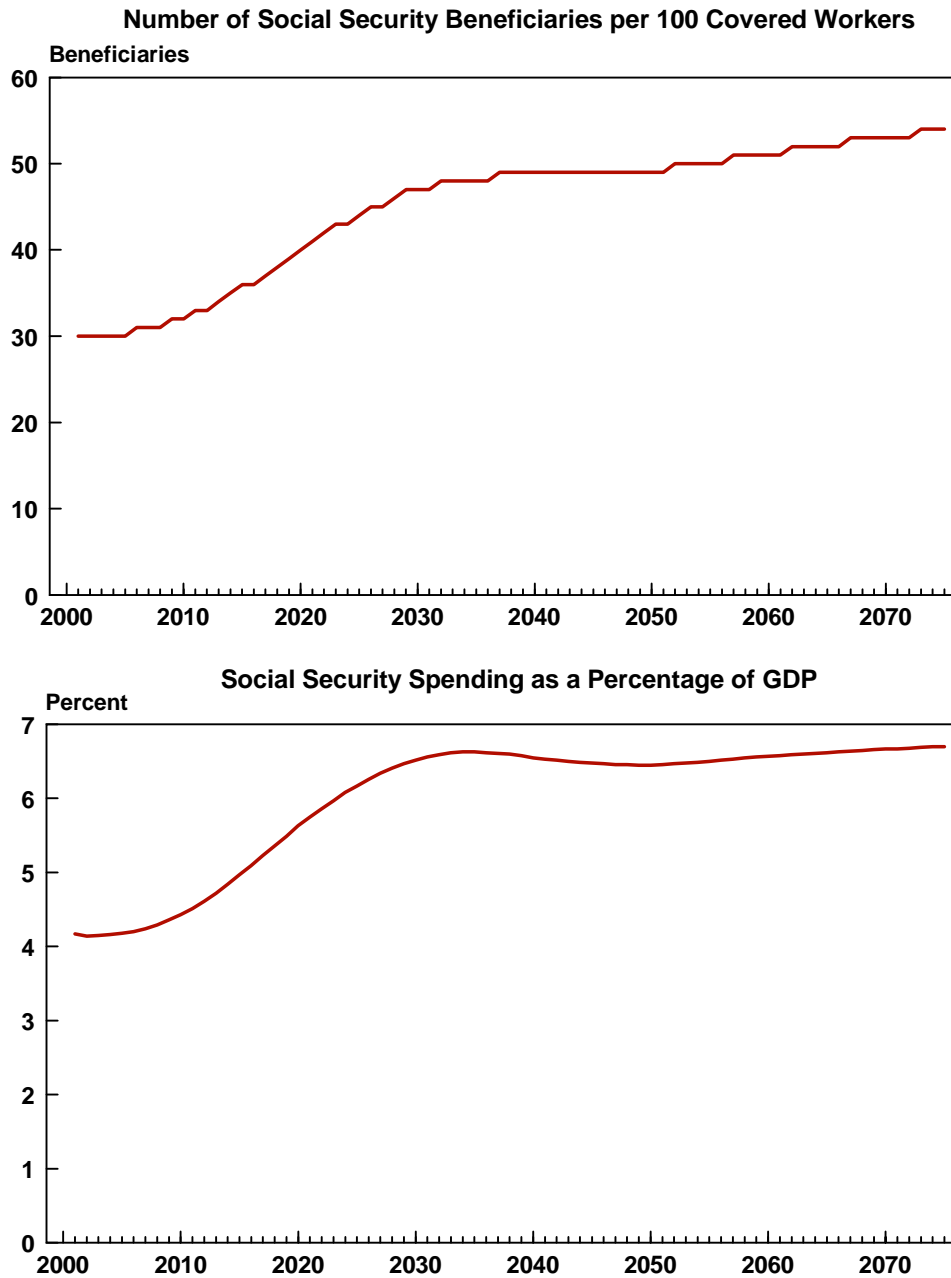
Social Security's rules for eligibility and benefits, together with favorable demographics, have kept spending for the program stable in recent years, with total outlays growing at about the same rate as the economy. But that relationship will change once the number of beneficiaries begins to increase much faster than the number of workers.

Since 1985, spending for Social Security has accounted for 4.1 percent to 4.6 percent of the nation's gross domestic product (GDP). The Social Security Administration projects that if the laws governing the program do not change, Social Security outlays will remain in that range from now until the first wave of baby boomers becomes eligible for retirement benefits (see the bottom panel of Figure 6). After that, from 2010 to 2030, projected outlays will climb to 6.5 percent of GDP.<sup>1</sup> Social

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1. An increase of that size would not be unprecedented. Expansions in Social Security benefits and other changes to the program described in Chapter 2, together with increases in the proportion of adults age 65 and over, have already caused substantial growth in Social Security spending as a percentage of gross domestic product. Spending on Social Security did not reach 1 percent of GDP until 1955; after that, it rose to 2.5 percent in the following 10 years and then nearly doubled (to 4.9 percent) by 1983.

**Figure 6.**  
**The Outlook for Social Security Demographics and Spending, 2001-2075**



SOURCE: Social Security Administration, *The 2001 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (March 19, 2001), Tables IV.B2 and VI.E5 (intermediate assumptions).

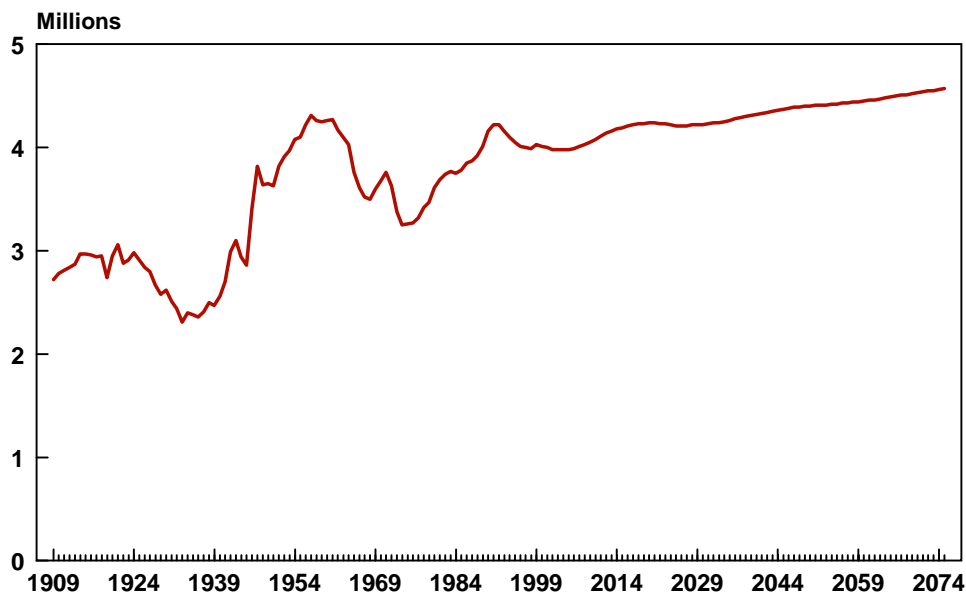


Security's share of GDP will then increase at a much slower pace—to 6.7 percent in 2075.

The source of the projected increase in Social Security spending is the demographic outlook. Since the mid-1970s, the United States has had roughly one Social Security beneficiary for every three workers paying payroll taxes. That ratio is projected to rise to nearly one beneficiary for every two workers by 2030 with the retirement of most baby boomers. After that, the combination of a low birth rate and longer life expectancy will keep raising the ratio. Given the government's commitments to provide Social Security benefits under current law, those increases in the ratio of beneficiaries to workers translate directly into increases in spending as a percentage of GDP.

Three facts are key to understanding why the number of Social Security beneficiaries will rise at a faster rate than the number of workers over the next 30 years. First, the inflow of newly eligible beneficiaries will soon include the huge baby-boom generation born between 1946 and 1964. At the peak of that postwar period, births exceeded 4 million per year—a level not reached again until those babies grew up and had children of their own (see Figure 7).

**Figure 7.**  
**Births in the United States, 1909-2075**



SOURCE: Congressional Budget Office based on data from the Social Security Administration (intermediate assumptions) and from Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970, Part 1* (1975), p. 49.

The oldest baby boomers (those born in 1946) will turn 65 in 2011. For nearly two decades thereafter, the number of people reaching 65 will surge (see the top panel of Figure 8). That rush will be in stark contrast to the slow inflow in recent years, which reflects the low number of births during the Depression of the 1930s.<sup>2</sup>

Second, life spans are expected to continue to lengthen. In 1940 (the first year that Social Security paid monthly benefits), the average 65-year-old man was expected to live another 12.7 years, and the average woman another 14.7 years. Social Security's actuaries estimate that today the life expectancy of 65-year-olds is 16.3 years for men and 19.6 years for women (see the middle panel of Figure 8).<sup>3</sup> The actuaries predict that life spans will continue to increase throughout their 75-year projection period. Some analysts argue that people will live even longer during that period than the actuaries are projecting.

Thus, even after all of the baby boomers have retired, the number of beneficiaries per worker will increase simply because the number of years in which Social Security recipients are collecting benefits will rise. That pattern could be altered, however, if people worked to a later age and delayed applying for benefits. That fact is important because there is considerable uncertainty about whether people in the future will work to later ages (see Box 3).

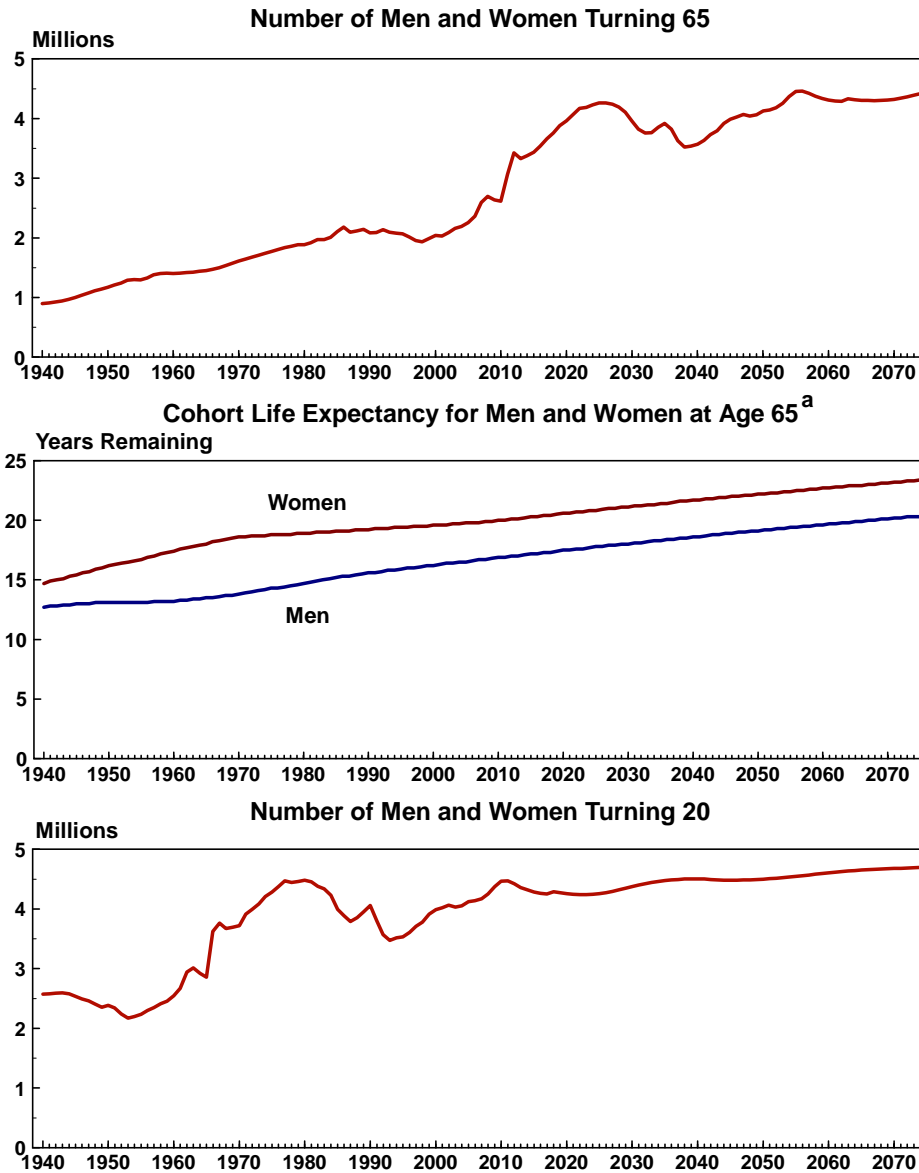
Third, the number of workers is likely to grow at a much slower rate both because of the exit of the baby boomers from the labor force and because of the small size of the cohorts that immediately follow them (see the bottom panel of Figure 8). Unless immigrants add to the population at a much greater pace than SSA projects (net immigration of just under 1 million per year), the size of the adult population under age 65 will not rise very much. During most of the second half of the 20th century, women moved into the paid labor force in large numbers, which helped maintain a high ratio of workers to beneficiaries. Most observers believe that further increases of that size are unlikely to occur. Without a large rise in the percentage of people working, slow growth in the size of the population translates directly into slow growth in the size of the labor force.

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2. Of course, the number of people turning 65 reflects more than simply the number of births 65 years earlier. It is also affected by immigration to and emigration from the United States and deaths before age 65.

3. Those estimates are "cohort life expectancies," meaning that they represent the average number of years of life remaining if a group of people at that age were to experience the mortality rates for the series of years in which they reach each succeeding age. For example, the estimated life expectancy for a 65-year-old man in 2001 reflects, among other things, projected reductions in the mortality rates of 75-year-old men 10 years from now. (The more commonly reported "period life expectancies" represent the average number of years of life remaining at a given age for a given year if a group at that age were to experience the mortality rates for that year over the remaining course of their lives. Period life expectancies are generally lower than cohort life expectancies.)

**Figure 8.**  
**Key Demographic Indicators for Social Security, 1940-2075**



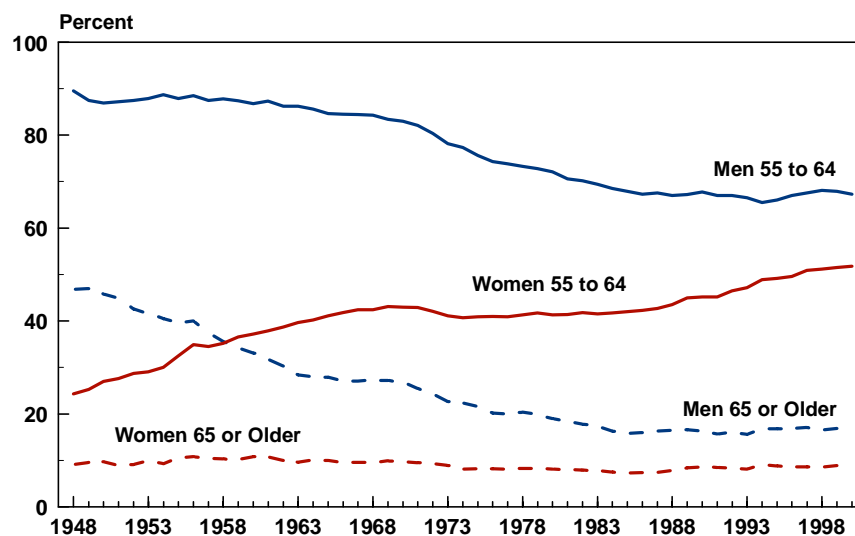
SOURCE: Congressional Budget Office based on data from the Social Security Administration (intermediate assumptions) and from Social Security Administration, *The 2001 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (March 19, 2001), Table V.A4 (intermediate assumptions).

- a. The cohort life expectancy for a given year represents the average number of years of life remaining if a group of people at that age were to experience the mortality rates for the series of years in which they reach each succeeding year.

**Box 3.**  
**Will Workers in the Future Retire Later?**

Lengthy periods of postemployment leisure for men are a relatively recent phenomenon. A century ago, men generally worked as long as they were healthy enough to do so. Even as late as 1950, nearly half of U.S. men age 65 or older were still in the labor force, compared with just one in six today (see the figure below). The labor force participation rates of older men have been near the current level since the mid-1980s. The story is more complicated for women because of their rapid movement into the paid labor force. As more women developed careers during the past half century, their participation rates at all ages increased. But, like men, their participation drops sharply well before age 65.

**Labor Force Participation Rates of Men and Women,  
by Age Group, 1948-2000**



## The Outlook for Incomes

Most proposals for reforming Social Security are intended to help prepare for future challenges rather than immediate ones; thus, projections of people's future incomes are important. Such projections are inherently imprecise. Even so, two outcomes seem clear. First, future workers and Social Security beneficiaries are likely to have higher earnings and standards of living, on average, than their predecessors did. Sec-

### **Box 3. Continued**

It is not clear whether the recent stability in labor force participation rates of older men represents a temporary pause in the long-term downward trend—perhaps resulting from the exceptionally strong labor market of recent years—or whether people’s attitudes toward work and retirement are beginning to change.

Researchers have linked the long-term decline in men’s retirement ages to the growth in the nation’s overall affluence, which is expected to continue.<sup>1</sup> Social Security, pensions, and private savings have enabled workers to look forward to a time when they could afford to live without working and without being financially dependent on their children. Whole industries have developed to cater to the needs and desires of retired people.

Other researchers argue that the downward trend in retirement ages has ended and that, in the future, more workers may well decide to retire later.<sup>2</sup> They argue that increases in life expectancy, the elimination of mandatory retirement, and the growth of less physically demanding jobs may cause more workers to want to maintain some attachment to the labor force later in life. Moreover, the fact that people at or above the normal retirement age no longer have their Social Security benefits reduced for earning outside income, and the decline in employers’ use of defined-benefit pension plans, could make working longer a more attractive option.

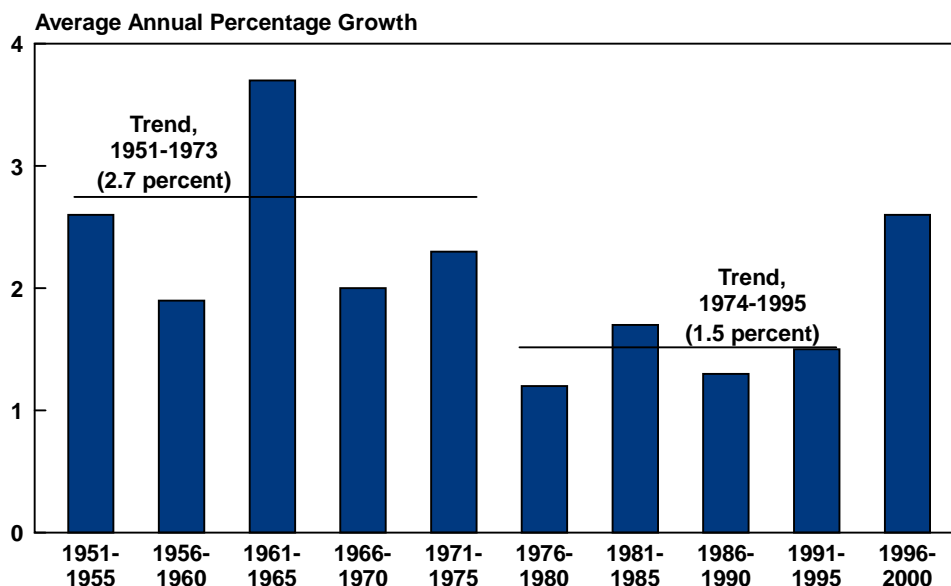
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1. See, for example, Dora L. Costa, *The Evolution of Retirement* (Chicago: University of Chicago Press, 1998).
  2. See, for example, Joseph F. Quinn, “Has the Early Retirement Trend Reversed?” (paper presented at the first joint conference of the Retirement Research Consortia, Washington, D.C., May 20-21, 1999); and Eugene Steuerle and Adam Carasso, *A Prediction: Older Individuals Will Work More in the Future*, Straight Talk on Social Security and Retirement Policy, No. 32 (Washington, D.C.: Urban Institute, March 30, 2001).

ond, not all groups of elderly people in the future will share equally in the overall increases in living standards.

## **Higher Productivity Results in Higher Average Income**

How rapidly will average income rise? The answer depends largely on the future growth in labor productivity—that is, the growth in the amount of goods and services produced by the average worker. Economists generally believe that, over the long run,

**Figure 9.**  
**Labor Productivity in the Nonfarm Business Sector, 1951-2000**



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

increases in labor compensation (wages and benefits) tend to track increases in productivity. During the past 50 years, output per hour worked in the nonfarm business sector rose by about 2 percent a year, though with considerable variation from one year to the next (see Figure 9). Average wages grew at a lower rate, as some of the increases in compensation went to pay for higher health insurance costs and other non-wage employment costs.

**Wages.** In the fall of 2000, the Congressional Budget Office projected that labor productivity would rise by more than 2 percent per year over the next three decades.<sup>4</sup> At that rate, output per worker in 2030 would be nearly double what it is today.

The Social Security trustees use less optimistic assumptions about the growth of productivity and wages than CBO does, but they still project large increases over the next several decades. Under their intermediate assumptions, productivity would rise by about 1.5 percent per year, and average earnings adjusted for inflation would rise

4. See Congressional Budget Office, *The Long-Term Budget Outlook* (October 2000).

by 1.0 percent per year. Thus, average annual earnings in 2030 would be about \$45,000 (in inflation-adjusted dollars), compared with about \$34,000 today.<sup>5</sup>

Even under those less optimistic projections, workers in 2030 would earn enough to pay much higher Social Security taxes and still be better off than today's workers. For example, the trustees project that under current law, Social Security spending will exceed revenues in 2030 by 4.2 percent of taxable payroll (or 1.6 percent of GDP). Suppose that workers in 2030 were required to have their earnings reduced by an additional 4.2 percent in order to close that gap. Workers earning about \$45,000 would need to pay an extra \$1,900 in taxes. That would still leave their wages well above the \$34,000 earned by today's average worker.

Whether future voters would be willing to accept higher taxes is unknowable. For the past three decades, federal taxes have remained relatively stable, at between 17.2 percent and 20.6 percent of GDP. During that period, average family income rose by more than 40 percent. This year, with federal taxes as a share of GDP at the high end of that range (20.6 percent) and a large budget surplus, the Congress and the President enacted a tax cut.

**Retirement Income.** In 1999, people age 65 or older received almost 40 percent of their cash income from Social Security (see Figure 10).<sup>6</sup> Wages, pensions, and income from assets accounted for most of the rest, in about equal shares. Reliance on Social Security was especially high among elderly people with relatively low cash income. In recent years, elderly families who had at least one member collecting Social Security benefits and who were in the lowest one-fifth of the income distribution received almost 90 percent of their income from Social Security, compared with only 25 percent for elderly families in the highest one-fifth of the income distribution.

How much better off will future Social Security beneficiaries be? As with the future course of wages, the answer depends in part on productivity. If workers continue to produce increasing amounts of goods and services, wages should continue to rise. Increases in wages should, in turn, result in higher Social Security benefits and pensions for those workers when they retire.

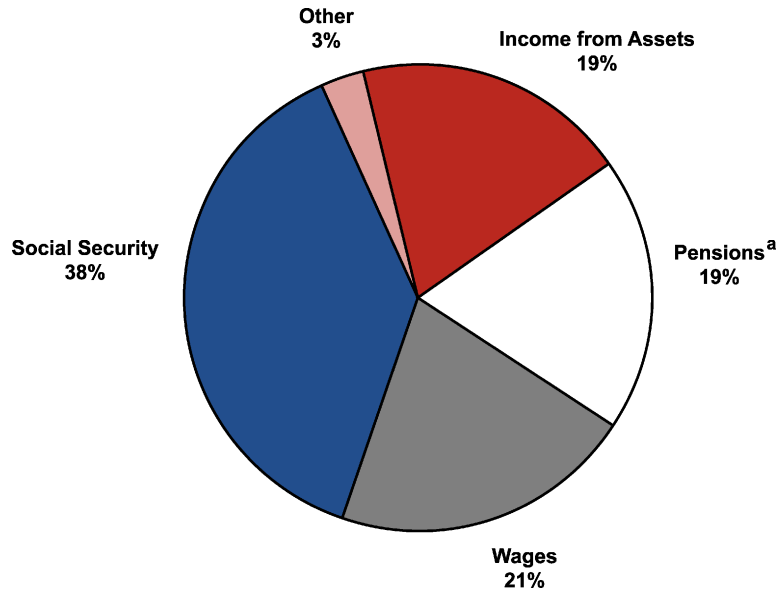
Under current law, Social Security benefits are directly related to a worker's earnings history. Because the age at which full benefits are paid is set to increase, average benefits will not grow as much as earnings while that change is phased in. Thus, Social Security will not provide the same fraction of preretirement income to future retired workers as to current beneficiaries unless future retirees work longer.

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5. Social Security Administration, *The 2001 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (March 19, 2001), pp. 83 and 155.

6. The measure of income used here includes cash income received by the individual and his or her family. It does not include capital gains or noncash benefits (such as the value of health care covered by Medicare).

**Figure 10.**  
**Sources of Family Income for People Age 65 or Older, 1999**



SOURCE: Social Security Administration, *Annual Statistical Supplement, 2000*, Chart 3.

- a. Includes private pensions and annuities, government-employee pensions, Railroad Retirement benefits, and payments from individual retirement accounts, Keogh plans, and 401(k) plans.

Nonetheless, a worker who steadily earns the average wage and retires in 2030 at age 65 is projected to be eligible for a Social Security benefit of about \$16,000 per year (in 2001 dollars)—25 percent more than a comparable worker retiring at age 65 today will receive.

Income from pensions and other retirement plans will probably also be higher, both because of the projected higher earnings of future retired workers and because many of those retirees will have worked in jobs that provided retirement benefits, especially tax-deferred defined-contribution plans.<sup>7</sup>

Another major source of income for retired workers is their assets, which produce income in the form of interest, dividends, rents, and so forth. Most elderly peo-

7. For data on trends in retirement plans and other benefits, see Dallas Salisbury, *EBRI Research Highlights: Retirement and Health Data*, Issue Brief 229 (Washington, D.C.: Employee Benefit Research Institute, January 2001).



ple have some financial assets, such as bank accounts and money market funds.<sup>8</sup> As workers' earnings increase in the future, their assets are likely to grow as well. However, many policymakers are concerned that today's workers are not saving enough. That is a complicated issue because there is no objective basis for determining how much workers should save. The answer depends to a large extent on when they plan to retire and what standard of living they wish to have in retirement.<sup>9</sup>

### **Some Elderly People Might Not Share in the Income Gains**

The decline in the poverty rate of the elderly population during the past half century has been a remarkable development. As late as 1967, 30 percent of people age 65 or older had income below the poverty line—triple the rate for adults under 65 (see Figure 11). In recent years, the poverty rate among the elderly has been about 10 percent, virtually the same as for younger adults and well below the rate for children.<sup>10</sup>

By some measures, the percentage of people living in poverty is much lower among the elderly than among other adults. The official measure of income used by the Census Bureau does not include capital gains and noncash benefits (such as health insurance subsidized by an employer or the government). Likewise, it does not reflect the value of owning a home. However, the bureau does provide alternative measures of poverty that take such factors into account. Because most elderly people are enrolled in Medicare and are more likely than younger adults to own a home, those alternative measures reduce the estimated poverty rate of the elderly by more than that of other adults. For example, using the bureau's most inclusive measure of income, the poverty rate for people age 65 or older would have been 5.2 percent in 1999 rather than 9.7 percent. By comparison, the poverty rate for people ages 45 to 64 would

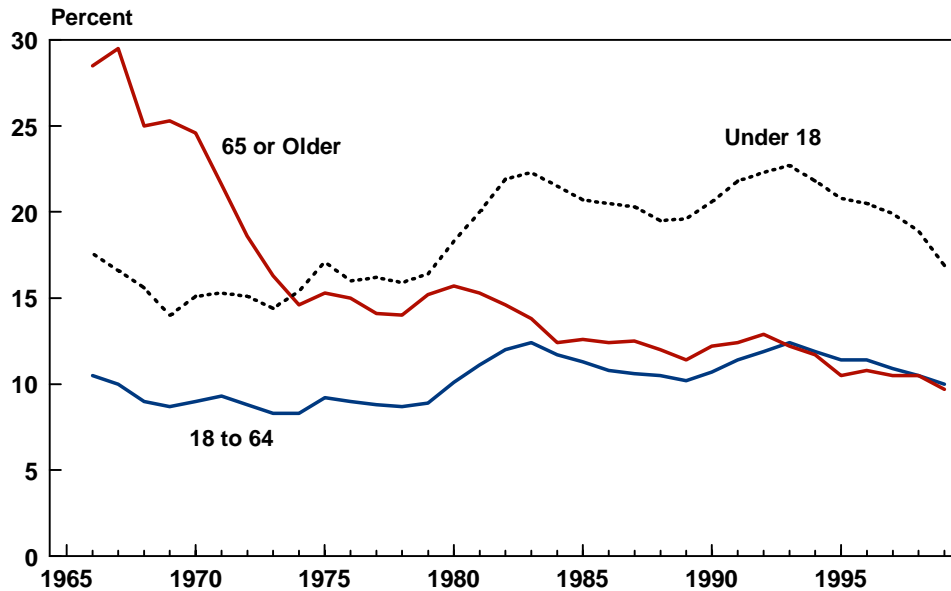
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8. According to data from the 1998 Survey of Consumer Finances, 96 percent of families headed by someone ages 65 to 74, and 92 percent of families headed by someone age 75 or older, owned at least one financial asset. Half of the asset-holders in the 65-74 age group had holdings of at least \$46,000. Half of the asset-holders in the older group had holdings of at least \$37,000. See Arthur B. Kennickell, Martha Starr-McCluer, and Brian J. Surette, "Recent Changes in U.S. Family Finances: Results from the 1998 Survey of Consumer Finances," *Federal Reserve Bulletin*, vol. 86, no. 1 (January 2000), pp. 1-29.

9. For a discussion of how much workers would need to save for their retirement and a presentation of recent empirical findings, see Olivia S. Mitchell, P. Brett Hammond, and Anna M. Rappaport, eds., *Forecasting Retirement Needs and Retirement Wealth* (Philadelphia: Pension Research Council, Wharton School, University of Pennsylvania, 2000).

10. Each year, the Bureau of the Census estimates the number of people who live in families whose cash income is below an income cutoff, known as a poverty threshold. The threshold varies according to such factors as family size, number of minor children, and age of the householder and is adjusted each year for inflation. The poverty threshold for an elderly individual in 1999 was about \$8,000; for an elderly couple, it was about \$10,000. Those thresholds are roughly 10 percent lower than the ones for nonelderly adults. The most recent estimates are reported in Bureau of the Census, *Poverty in the United States: 1999* (September 2000).

**Figure 11.**  
**Poverty Rates for Different Age Groups, 1966-1999**



SOURCE: Congressional Budget Office based on Bureau of the Census, *Poverty in the United States: 1999* (September 2000), Table B-2.

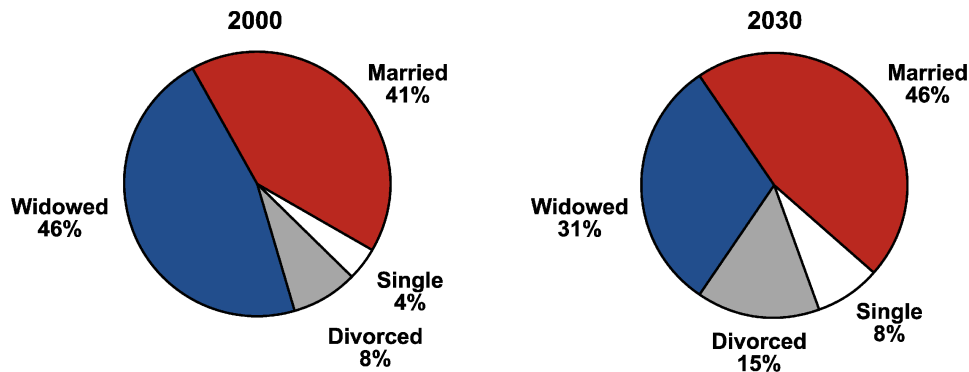
have been 5.5 percent using that measure, and the rate for people ages 25 to 44 would have been 6.7 percent.<sup>11</sup>

Social Security clearly played a major role in the decline of the poverty rate among elderly people (although exactly how big a role is uncertain). For example, from 1970 to 1972, their poverty rate declined by 6 percentage points, from 24.6 percent to 18.6 percent. That drop coincided with three increases in Social Security benefits that together raised the average payment by about 35 percent (adjusted for inflation).

Some observers fear that continued prosperity over the next several decades might not reduce the poverty rate of the elderly. Of particular concern is the economic outlook for elderly women who never married or who were divorced after marriages lasting less than 10 years. The Social Security Administration projects that in 2030, nearly 8 percent of women age 65 or older will have never married and 15 percent will have divorced and not remarried—almost double the percentages of last year (see Figure 12). Obviously, specific projections are very uncertain, but the pattern of lower

11. *Ibid.*, pp. 28-29.

**Figure 12.**  
**Marital Status of the Female Population Age 65 or Older, 2000 and 2030**



SOURCE: Congressional Budget Office based on data from the Social Security Administration (intermediate assumptions).

marriage rates and higher divorce rates among baby boomers—compared with rates among previous generations—seems unmistakable.

Less clear is how well those women will fare. Many of the never-married women will have pursued careers and, when they retire, will become eligible for Social Security benefits on the basis of a full earnings history. But others will have spent part of their lives rearing children by themselves and either not working outside the home or not earning very much. In recent years, about one-third of single women have had at least one child by the time they reach their early 40s.<sup>12</sup> Those women are ineligible for Social Security benefits based on a husband's earnings unless they later marry. And unless those women develop substantial earnings histories, many of them are likely to have low incomes when they reach their 60s.

## The Budgetary and Economic Perspective

Once the baby-boom generation retires, the amount of money that the federal government will spend on Social Security and other programs for the elderly will grow substantially (barring changes to those programs). SSA projects that under current law,

12. Amara Bachu and Martin O'Connell, *Fertility of American Women*, Current Population Report P20-526 (Bureau of the Census, September 2000), p. 6. Among all never-married women ages 21 to 44, the share with one or more children ranges from 9 percent of women with at least a bachelor's degree to 66 percent of women without a high school diploma.

spending on Social Security will rise from 4.2 percent of GDP this year to 6.5 percent by 2030—equivalent to an increase of about \$240 billion in today's economy.<sup>13</sup> Moreover, spending on federal health care programs for the elderly and disabled will probably rise at an even faster rate because of increases in the cost per beneficiary. In all, spending for Social Security, Medicare, and Medicaid is projected to grow from less than 8 percent of GDP this year to roughly 15 percent by 2030.<sup>14</sup>

The resources needed to finance the government's obligations under those programs—and, in turn, the goods and services that those benefits will pay for—are drawn from the overall economy when the payments are made. In other words, in 2030 (as in any year), pledges to the elderly as well as other federal priorities—such as national defense, aid to state and local education agencies, public health services, and transportation projects—will require the government to draw on economic resources available at that time.

One way to prepare for the demographic pressures expected later in this century would be to take actions that increase the size of the economy (as discussed in Chapter 4). Another approach would be to curtail the growth of benefits for the elderly. If those benefits are to be curtailed, however, it would be useful to announce the changes well in advance so that people who will be affected can alter their plans accordingly. In particular, they might try to save more money or retire later.

In addition, Social Security planners may want to pay special attention to how proposals to slow the growth of benefits would affect people with a history of low earnings, especially people who are not eligible for a spousal benefit because they never married or their marriage did not last for 10 years. Several proposals have tried to address the needs of such beneficiaries by expanding or replacing the minimum-benefit provisions in the current Social Security law. Another approach would be to help those people through the Supplemental Security Income program.

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## The Social Security Trust Fund Perspective

The Social Security trustees project that spending for the program will begin to exceed dedicated tax revenues in 2016 and that the Social Security trust funds will be de-

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13. According to the intermediate assumptions in the trustees' 2001 report, Social Security spending will increase by 2.35 percent of GDP between now and 2030. The Congressional Budget Office forecasts that GDP will total about \$10.3 trillion in 2001.

14. Congressional Budget Office, *The Long-Term Budget Outlook*.

pleted in 2038. Those events could easily occur sooner or later, depending on a host of economic and demographic variables that are difficult to predict accurately.<sup>15</sup>

The perspective of trust fund accounting provides, at best, only a partial view of the challenges posed by the aging of the population. Whether a program receives earmarked revenues and is accounted for through a government trust fund or relies on annual appropriations does not alter the fact that whatever resources the federal government is required to spend it must acquire through taxes, borrowing, sales of assets, or some combination of those actions. Ultimately, the government's ability to meet future commitments—whether Social Security benefits or some other payments—depends on the total financial resources of the economy and the willingness of citizens to fund those programs, not on the balances attributed to the trust funds.

Some approaches that would strengthen the government's ability to meet future commitments would contribute little to making the Social Security trust funds solvent. For example, approaches that would promote productivity would most likely increase real wages. But under the benefit formula established by the 1977 amendments, higher wages would eventually translate into higher Social Security benefits (although with a substantial lag).

Likewise, some approaches for making the Social Security trust funds solvent would, by themselves, do nothing to reduce the program's obligations or increase the nation's economic capacity to meet those obligations. For example, the Congress could pass a law transferring enough funds from the federal government's general fund to the Social Security trust funds to ensure that those funds always showed a positive balance. That would fix the solvency problem on paper. But such accounting devices—moving money from one part of the budget to another—would not directly affect either the size of the economy or the government's obligations to the elderly.

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15. Because the Social Security Act states that benefits are only payable from the trust funds, it is not clear how revenues would be distributed to beneficiaries after those funds were depleted. The trustees project that at that point, tax revenues dedicated to the Social Security program would be sufficient to pay only about 73 percent of projected benefits.



# Strategies for Preparing for an Aging Population

**A**ny strategy to prepare the United States for an aging population must deal with a key fact: the goods and services that retirees consume in the future will have to be produced at that time by the U.S. economy or imported from abroad. From that perspective, what matters is not the financial structure of the Social Security program but the capacity of the economy. Various options for reform will have different effects on the economy and on the division of resources between the elderly and other people. To the extent that those options boost the future size of the economy and increase the nation's accumulation of assets, they can lessen the burden on future workers of making payments to the elderly.

How can the federal government expand the economy? Possible ways include running budget surpluses or promoting private saving, which can provide more funds for investment in business equipment, structures, and other types of capital; changing tax and regulatory policies to make the economy more efficient or give people greater incentives to work or improve their skills; and increasing government spending on programs that are geared toward investment rather than current consumption. In addition, changing some of the rules of the Social Security program could promote economic growth. In most cases, increasing the size of the economy requires policy actions that cause people to consume less or work more. Thus, policymakers should weigh the benefits of a larger economy in the future against the costs of those policy actions today.

This chapter looks at three strategies that have been at the heart of the public debate about preparing for the nation's future needs. Those strategies are saving budget surpluses and using them to pay down federal debt, using the surpluses to create private retirement accounts, and changing the rules of the current Social Security program. Those options are not mutually exclusive; they could be combined in any number of ways.

## Preserving Budget Surpluses

With the federal government running a budget surplus each year, many people argue that those surpluses should be saved and used to pay down federal debt. Federal debt held by the public has already declined in recent years—from about 50 percent of the nation’s gross domestic product in 1995 to about 35 percent last year (see Figure 13).<sup>1</sup> Continuing to pay down that debt could provide economic and budgetary benefits. By expanding the nation’s saving, that policy could boost the stock of private capital and increase the size of GDP. As a result, future workers might be better prepared to bear the burden of making payments to an aging population. In addition, lower levels of debt would reduce the government’s interest payments on the debt, which could give future policymakers more flexibility for dealing with unexpected developments.

## The Mechanics of Federal Budget Surpluses

Whenever the federal government’s total yearly spending exceeds its total yearly revenues, the government runs a budget deficit. If the Treasury does not finance that deficit by drawing down its holdings of cash, gold, or other assets, the government has to borrow funds from the public by selling Treasury securities (bonds, notes, and bills). That additional borrowing increases the government’s debt held by the public.

The situation is not unlike what happens when a family borrows on a credit card. The balance on the card is a debt, which carries finance or interest charges as long as the debt is outstanding. The family can reduce its debt by paying off more than it spends (including finance charges) each month.

Since 1998, the government has been running budget surpluses and repaying debt. Looking forward, the Congressional Budget Office projects that if current policies do not change, budget surpluses will grow and, over the coming decade, provide enough money to pay off all of the publicly held debt available for redemption by 2010.<sup>2</sup>

CBO does not expect the Treasury to redeem (buy back) all of the outstanding debt. Many of the outstanding bonds will not mature for many years, and the government does not have the right to redeem them before maturity. Thus, the only way it could pay off those bonds early would be to buy them on the open market. But as the stock of debt dwindled, debt holders might demand a premium to surrender their

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1. Federal debt held by the public is debt issued by the federal government in the form of Treasury securities and held by nonfederal investors. In this chapter, “debt” refers to debt held by the public.

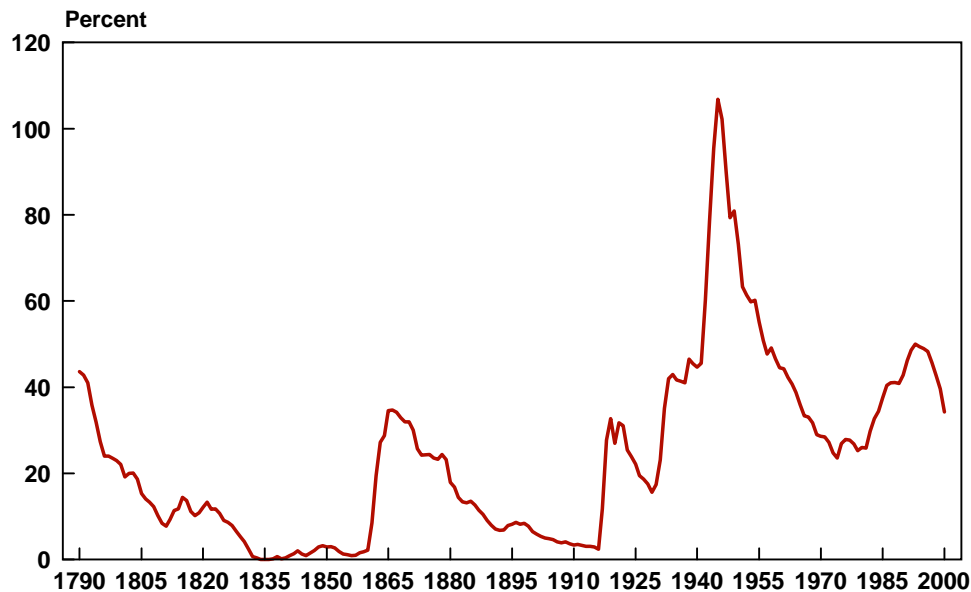
2. Congressional Budget Office, *The Budget and Economic Outlook: An Update* (August 2001).



bonds. At some point, that premium could grow so high as to make it impractical to pay off any more debt. Budget surpluses would then have to be invested in other assets. CBO calls those assets “uncommitted funds,” reflecting the fact that the Treasury does not now have the legal authority to invest in most types of nonfederal assets, such as stocks and bonds of private corporations. Under current law, the federal government would have to hold its uncommitted funds as cash, gold, or deposits at the Federal Reserve or commercial banks.

Managing those holdings within the constraints of current law would be difficult for the federal government; thus, the Treasury would probably seek authority to invest in other assets, including stocks and debt of U.S. or foreign companies and securities issued by foreign governments. However, government ownership of private assets would raise significant questions about the government’s role in the economy (discussed below). It would also raise questions about how such securities should be treated in the federal budget (see Box 4).

**Figure 13.**  
**Federal Debt Held by the Public as a Percentage of GNP, 1790-2000**



SOURCE: Congressional Budget Office.

NOTE: This figure compares debt with gross national product (GNP) rather than the more familiar gross domestic product (GDP) because GNP is the measure used in the historical data. GNP measures the total income of all U.S. residents (including net payments for capital and labor income earned in other countries). GDP measures the income produced on U.S. soil. The difference between the two was about \$12 billion in 2000.

**Box 4.**  
**The Budgetary Treatment of Government  
Purchases of Private Securities**

Several recent proposals envision having the government invest in private securities, such as corporate stocks and bonds. The possibility of such purchases raises the question of how they would be treated in the federal budget, which operates mainly on a cash basis.

The Office of Management and Budget's Circular A-11 on budget preparation says that purchases of private securities should be recorded as outlays when they are made and as offsets to outlays (offsetting receipts) when the securities are sold. Interest and dividend payments are also supposed to be classified as offsetting receipts. Under that treatment, the budget would not distinguish between using \$10 million to buy private securities and spending the same amount to buy office supplies or a building. Indeed, Circular A-11 directs that all federal purchases of assets, whether financial or physical, receive the same treatment and be shown as outlays. That approach is consistent with the practice of recording most government transactions on a cash basis.

Some people suggest, however, that the purchase of private securities should be treated differently because the securities would be bought as a means of financing future government obligations and would not constitute a use of budgetary resources. In their view, securities transactions between the government and the public, if they are carried out at fair market prices, should leave the budget balance (surplus or deficit) unaffected. That is how the budget treats the issuance of Treasury securities when the government borrows from the public.

Under that alternative treatment, purchases of securities would be reported as an increase in the government's assets, which would be exactly offset by a reduction in another asset (cash) or an increase in a liability (Treasury debt). Similarly, sales of securities would leave the budget balance unaffected because the reduced value of one asset held by the government (securities) would be exactly offset by an increase

## **The Economic Effects of Saving Surpluses**

Using budget surpluses to pay down debt would probably raise national saving and expand the pool of funds available for investing at home and abroad. Over time, the U.S. capital stock could grow larger, and the nation could accumulate more net assets in other countries. As investment in businesses' structures and equipment increased, workers would become more productive, real wages would rise, and the United States could produce more goods and services. In addition, the income from the extra net foreign assets could supplement the income produced domestically. In October 2000,

**Box 4.**  
**Continued**

in another asset (cash). Investing in private securities is risky, however, and changes in the market prices of securities would result in gains and losses to the government. Under this alternative budgetary accounting, those gains and losses would be reported as positive or negative outlays in each reporting period. That way, such purchases would be treated like transactions of the financing accounts for credit programs, profits from the government's sale of its gold reserves, or seigniorage on the coins that the government issues.<sup>1</sup>

Proposals for private retirement accounts also envision having people invest in private securities, such as stocks and bonds.<sup>2</sup> If all of the benefits and risks of private accounts accrued to the individual owners, those accounts would be private and outside the federal budget. However, the federal government (and thus taxpayers) would retain a large interest in the accounts if people's annual Social Security benefits were reduced dollar for dollar by the amount of annual income they received from their account. In that case, many account holders would receive no net gain from having such a private account; in effect, they would merely be acting as investing agents for the federal government. Because the federal government would have a substantial interest in the holdings of the private accounts, those accounts might appropriately be treated as governmental rather than private, with cash flows to and from them included in the federal budget.

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1. Seigniorage is the profit that the government makes from putting new currency in circulation. It results when the face value of the currency is greater than the cost of producing it. Seigniorage and the other items listed above are not recorded in the budget (in other words, they do not contribute to deficits or surpluses). However, they are regarded as "means of financing" because they increase or decrease the amount that the government needs to borrow.
  2. See Congressional Budget Office, *The Budgetary Treatment of Personal Retirement Accounts*, CBO Paper (March 2000).

CBO estimated that real income per person could be about 10 percent higher in 2040 if the off-budget surpluses projected through 2010 were saved rather than used for more government spending that consumed goods and services (see Figure 14).<sup>3</sup>

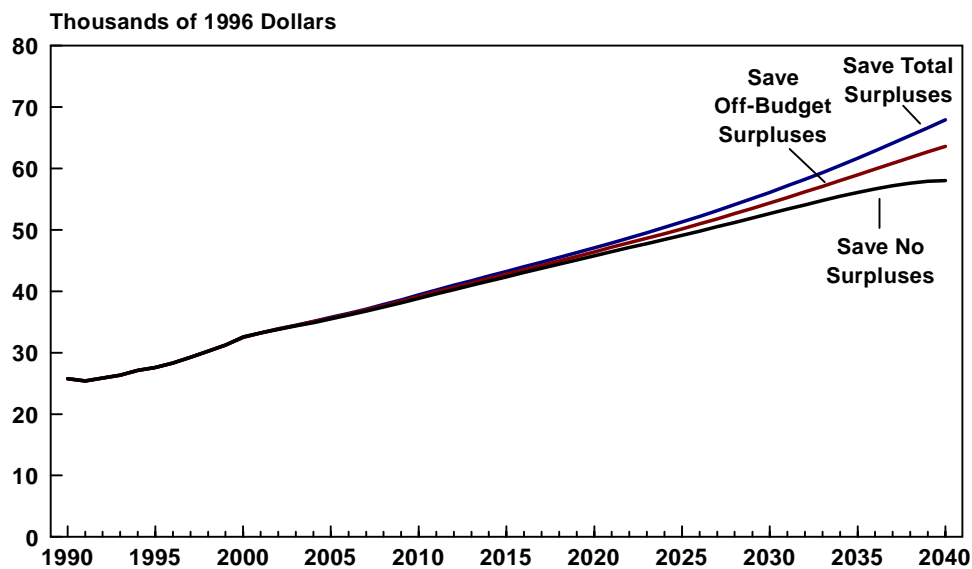
National saving would not rise dollar for dollar with an increase in federal budget surpluses because private savers would probably reduce their saving. There

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3. That estimate is based on CBO's midrange assumptions for population, productivity, and medical costs. For details, see Congressional Budget Office, *The Long-Term Budget Outlook* (October 2000).

are three reasons for such a response. First, higher budget surpluses would lower interest rates, which would reduce people's incentive to save. Second, budget surpluses arise because the government is collecting more income from households than it is spending; as a result, households have less after-tax disposable income than they would otherwise, which reduces both their current consumption and their personal saving. Third, higher budget surpluses imply lower tax liabilities in the future, which

**Figure 14.**  
**Real Income per Person Under Different Assumptions About Saving Surpluses**



SOURCE: Congressional Budget Office.

NOTES: All of these projections use midrange long-term assumptions that are explained in Congressional Budget Office, *The Long-Term Budget Outlook* (October 2000).

Off-budget surpluses consist of the surpluses of the Social Security trust funds and the Postal Service. Under the "save off-budget surpluses" assumption, on-budget surpluses in 2000 through 2010 are zero, and off-budget surpluses match CBO's 10-year baseline for the off-budget accounts published in July 2000. Although CBO published a new 10-year baseline in August 2001, its projection of the off-budget surplus did not change by much.

Under the "save no surpluses" assumption, the total surplus in each year from 2000 through 2010 is zero (an on-budget deficit offsets the off-budget surplus). Revising the assumptions to reflect CBO's 10-year baseline projections published in August 2001 would not significantly affect projections of debt under this assumption about surpluses.

Under the "save total surpluses" assumption, total surpluses (both on- and off-budget) in 2000 through 2010 match CBO's 10-year baseline for the total surplus published in July 2000. Using CBO's August 2001 baseline would increase the projected level of federal debt and reduce the gap between the projected levels of real income per person under the "save total surpluses" and "save off-budget surpluses" assumptions.

lessens people's incentive to save to pay future tax bills.<sup>4</sup> Despite those considerations, it is unlikely that the decrease in private saving would completely offset the increase in budget surpluses.

## Government Accumulation of Assets

One of the potential problems with saving surpluses is that the government could accumulate a large amount of assets and possibly own a significant number of shares in private companies. Although asset accumulation can increase the funds available for capital investment and boost economic growth, it would be unprecedented for the federal government to hold a large quantity of private assets. The possibility of such holdings raises broad philosophical questions (would it be appropriate for the government to own shares in and possibly control private companies?) as well as economic questions (could the government's involvement distort market signals and corporate decisionmaking?).<sup>5</sup>

Answers to those questions would depend on how the investments were chosen, the portfolio managed, and the asset-purchase program overseen. Economic theory and the experience of other governments provide some insights. In principle, the government could reduce the impact of its investments on the economy by investing in index funds, maintaining a passive stance, and letting private shareholders determine corporate behavior. In addition, the investments could be managed by a board that was subject to strict rules. According to economic theory, if financial markets were efficient and government investments in any particular stock were not too large, the government would not significantly affect the prices of stocks selected for its portfolio or alter the allocation of capital among firms.

However, financial markets may not behave exactly as economic models predict, and putting a company's stock in the government's portfolio might influence stock prices and capital flows. For example, the price of a stock often rises when the stock is listed in the Standard & Poor's (S&P) 500 index.<sup>6</sup> A similar situation might occur when the government put a company on its list of stocks to buy.

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4. Robert J. Barro, "Are Government Bonds Net Wealth?" *Journal of Political Economy*, vol. 82, no. 6 (December 1994), pp. 1095-1117. For an evaluation, see Douglas W. Elmendorf and N. Gregory Mankiw, "Government Debt," in John B. Taylor and Michael Woodford, eds., *Handbook of Macroeconomics*, vol. 1C (Amsterdam: Elsevier Science, 1999).

5. For views on those topics, see the statement of Alan Greenspan, Chairman, Board of Governors of the Federal Reserve System, before the Senate Budget Committee, January 25, 2001, and the statement of David M. Walker, Comptroller General of the United States, before the Senate Budget Committee, published as General Accounting Office, *Long-Term Budget Issues: Moving from Balancing the Budget to Balancing Fiscal Risk*, GAO-01-385T (February 6, 2001).

6. Statement of Kevin Hassett, Resident Scholar, American Enterprise Institute, before the House Ways and Means Committee, February 13, 2001.

**Table 2.**  
**Asset Holdings of Retirement Funds for State and Local**  
**Government Employees (In billions of dollars)**

Type of Asset	1996	1997	1998	1999	2000
Corporate Stocks	829	1,085	1,234	1,343	1,352
Corporate and Foreign Bonds	211	245	280	310	322
U.S. Government Securities					
Treasury	204	217	218	211	206
Agency	105	123	142	165	198
Municipal Securities	1	2	3	3	2
Open-Market Paper	28	29	38	40	46
Mortgages	17	18	24	22	22
Checkable Deposits and Currency	8	5	10	9	9
Time and Savings Deposits	2	2	2	2	1
Security Repurchase Agreements	28	29	38	40	46
Miscellaneous Assets	<u>63</u>	<u>64</u>	<u>66</u>	<u>81</u>	<u>85</u>
Total	1,495	1,817	2,054	2,227	2,288

SOURCE: Congressional Budget Office based on data from Federal Reserve, *Flow of Funds Accounts of the United States* (June 8, 2001).

NOTE: The numbers in this table represent asset holdings at the end of the year.

Many state pension funds invest in stocks and bonds. Those funds held almost \$1.7 trillion in corporate stocks and bonds in the fourth quarter of 2000 (see Table 2). The states have a mixed track record in insulating their investment decisions from politics: in some cases, investment policies bent to political pressure, and the performance of the portfolios suffered.<sup>7</sup> However, the overall returns on investments in state and local pension funds are similar to those on investments in private funds (adjusted for differences in the size and composition of the portfolios), which suggests that

7. Olivia Mitchell and Ping-Lung Hsin, "Public Pension Governance and Performance," in Salvador Valdés-Prieto, ed., *The Economics of Pensions: Principles, Policies, and International Experience* (Cambridge: Cambridge University Press, 1997); Alicia Munnell, "The Pitfalls of Social Investing by Public Pension Plans," *New England Economic Review* (September/October 1983), pp. 20-37; John Nofsinger, "Why Targeted Investing Does Not Make Sense," *Financial Management*, vol. 27, no. 3 (Autumn 1998), pp. 87-96; and Roberta Romano, "Public Pension Fund Activism in Corporate Governance Reconsidered," *Columbia Law Review*, vol. 93, no. 4 (May 1993), pp. 795-853.

political influence may not have greatly interfered with the pursuit of market returns for many state funds.<sup>8</sup>

Some countries have also built up large holdings of government-owned private assets.<sup>9</sup> Norway, for example, has accumulated net assets (primarily foreign stocks and bonds) totaling almost half of its GDP. It reduces political interference by having the country's central bank manage those investments. However, its decision to invest mainly in foreign securities limits its potential scope for distorting the activities of its private sector. Moreover, Norway is a relatively small country whose actions would not be expected to affect world financial markets to any appreciable extent.

The U.S. government has been successful in managing the Thrift Savings Plan (TSP), which invests in stock and bond markets through broad-based indexes and pays retirement benefits to federal workers through a system of individual accounts. A crucial feature of the TSP is that its assets are owned by federal workers, not the government. The board that oversees the program has a fiduciary responsibility to manage those assets for the sole benefit of the owners of the individual accounts.<sup>10</sup>

If lawmakers decided that the federal government should not invest in private assets, they would need to cut taxes or increase spending at some point to eliminate budget surpluses. Making those changes smoothly over time would be desirable because sudden shifts in policy run the risk of causing economic disruptions.

## Economic Efficiency

Saving surpluses and accumulating nonfederal assets would have an uncertain effect on the efficiency of the U.S. economy. If surpluses were not saved and current spending policies did not change, future taxpayers could face much higher tax rates to cover the growing costs of Social Security, Medicare, Medicaid, and interest on the federal debt. Thus, saving surpluses could help reduce the pressure to raise future taxes and possibly avoid large variations in marginal tax rates over time. (A marginal tax rate is the rate that applies to an additional dollar of taxable income.) Rising marginal tax

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8. Alicia Munnell and Annika Sunden, "Investment Practices of State and Local Pension Funds: Implications for Social Security Reform" (paper presented at the Pension Research Council conference at the Wharton School, University of Pennsylvania, April 26-27, 1999).
  9. General Accounting Office, *Budget Surpluses: Experiences of Other Nations and Implications for the United States*, GAO/AIMD-00-23 (November 2, 1999).
  10. Under certain circumstances, the Secretary of the Treasury is authorized to reduce the holdings of the TSP fund. For instance, when negotiations to increase the legal limit on federal debt deadlocked in 1995, Treasury Secretary Robert Rubin sold holdings of the TSP's Government Securities Investment Fund to create room under the debt limit and ensure that the government would be able to meet its November 15 quarterly payment to bondholders. Those holdings were later replenished in full with interest, as required by law.

**Box 5.**  
**The Impact on Financial Markets of  
Paying Down Federal Debt**

Many private investors hold government debt (Treasury securities) in their portfolios because it provides a relatively safe return and is highly liquid (that is, can be easily bought and sold). If government debt were nearly paid off, investors would have to adjust their portfolios, and investment firms would have to change some of their procedures for assessing the prices of assets.

Investors would probably be able to find other assets that were relatively safe, and U.S. financial markets would most likely create new financial instruments to satisfy investors' demands. But those other assets might not be as liquid as Treasury securities are today. In addition, investors would have to hold assets that were probably not as safe as government debt. Nevertheless, because the cost of guaranteeing government debt is ultimately borne by taxpayers, higher risks to investors might be largely offset in the long run by lower risks to taxpayers. The effects on economic efficiency would most likely be small.

The Federal Reserve uses Treasury securities to carry out some of its important functions, such as buying and selling securities on the open market in order to influence the economy. Nevertheless, it would still be able to perform open-market operations if federal debt was not available. Open-market operations can be carried out using any liquid asset. However, the Federal Reserve would have to work out a number of practical problems, and policymakers might have to change the Federal Reserve's charter to allow it to use other assets.

rates can be particularly harmful to economic efficiency because they reduce people's incentives to work and save, and the resulting losses in efficiency tend to increase by much more than the tax rate does.<sup>11</sup> Paying down debt lessens the pressure to raise tax rates in the future by reducing interest payments on the debt. (Slowing the growth rate of federal spending could have similar effects.)

However, government investments in private assets could interfere with the efficient operation of the nation's capital markets. The size of that interference is difficult to gauge for reasons discussed earlier. Some people also argue that if investors were not able to buy Treasury securities, efficiency in capital markets could suffer, but it is doubtful that such a change would have much effect (see Box 5).

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11. Those losses increase by roughly the square of the tax rate. For a nontechnical discussion of this issue, see Harvey Rosen, *Public Finance*, 5th ed. (Homewood, Ill.: Richard D. Irwin, 1999).



## Creating Private Retirement Accounts

A second strategy that might help the nation prepare for an aging population is to use budget surpluses to pay for the creation of private retirement accounts. During the previous Congress, lawmakers introduced a host of proposals for such accounts (for a list of those proposals, see Appendix B). Although the proposals differed in significant ways, they shared a common feature: the income that would be available from an account at someone's retirement would depend on the contributions made to the account and the rate of return on the account's assets during the person's working life. In addition, most proposals would let workers invest part of their accounts in corporate stocks (see Box 6 for a discussion of the economic effects of such investments).

Private accounts have drawn widespread interest for several reasons:

- They would give workers some freedom and responsibility for choosing investments and planning their retirement;
- They could expand people's access to financial markets and improve their understanding of the value of saving;
- They might help protect budget surpluses from being used for increased government spending or for tax cuts; and
- They could be used to shift control of those surpluses from the government to the private sector and thus avoid the potential drawbacks of having the government own private assets.

Some analysts also argue that private accounts offer the opportunity for higher rates of return than the traditional Social Security system does, but that argument can be misleading (see Box 7).

Proposals for private accounts can help prepare the nation for an aging population only to the extent that they increase national saving. However, private accounts are not necessary, or by themselves sufficient, to boost national saving. As discussed in the previous section, the government might be able to increase such saving by preserving budget surpluses and paying down federal debt. However, national saving would not rise if the government simply financed the creation of private accounts by borrowing. In that case, every dollar saved in a private account would be offset by a dollar borrowed by the government.

In setting up a system of private accounts, policymakers would also have to confront various questions. Would participation be mandatory or voluntary? Would people be given a limited choice of assets (as in the government's Thrift Savings Plan

**Box 6.**  
**The Risks and Returns of Stocks**

Stock investments are a common feature of many proposals for Social Security. Those proposals range from ones that would create private retirement accounts to ones that would invest part of the Social Security trust funds in the stock market (see Appendix A for more details).

The interest in stocks is not surprising. Stocks have historically yielded a higher rate of return than fixed-income securities, such as Treasury bonds. From 1926 through 2000, for example, the real rate of return on large-company stocks averaged about 7 percentage points more than the real rate of return on three-month Treasury bills (see the table at right).<sup>1</sup>

However, stock investments also carry correspondingly higher risks, and the rates of return on those investments vary greatly. According to historical data, investors face about a 25 percent chance of realizing lower returns from holding a portfolio of stocks in the Standard & Poor's 500 index for 10 years than from holding 10-year government notes for the same length of time.<sup>2</sup> Moreover, for several years in a row, a stock portfolio could lose money relative to a bond portfolio.

Analyses that focus only on the average return on stocks and ignore the risk can be misleading. If financial markets are efficient, the higher returns on stocks should exactly compensate investors for the added risk.<sup>3</sup> Although investing in the stock market would improve the projected balances in the Social Security trust funds or in private accounts, on average, it would also make those average balances much more uncertain. Adjusting the projected balances to account for that risk by using the market's assessment (that is, discounting them at a market risk-adjusted rate) would eliminate all of the apparent gains from investing in stocks.

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1. That difference may be smaller in the future. Although the value of the stock market has dropped over the past year, some analysts argue that it is still high relative to corporate earnings. See Robert Shiller, *Irrational Exuberance* (Princeton, N.J.: Princeton University Press, 2000).
  2. Thomas MaCurdy and John Shoven, "Asset Allocation and Risk Allocation: Can Social Security Improve Its Future Solvency Problem by Investing in Private Securities?" in John Campbell and Martin Feldstein, eds., *Risk Aspects of Investment-Based Social Security Reform* (forthcoming).
  3. Traditional economic models cannot easily explain the high returns on stocks relative to their observable risk, but that situation may have more to do with the shortcomings of economists' models than with the possibility that investing in stocks could provide a "free lunch."

**Box 6.**  
**Continued**

**Annual Real Rates of Return on Various Types  
of Assets, 1926-2000 (In percent)**

Type of Asset	Average Real Rate of Return <sup>a</sup>	Real Rates of Return in the 67 Percent Confidence Interval <sup>b</sup>	
		Lower Bound	Upper Bound
Large-Company Stocks <sup>c</sup>	7.7	-11.4	31.0
Small-Company Stocks <sup>d</sup>	9.0	-19.3	47.4
Long-Term Corporate Bonds <sup>e</sup>	2.5	-6.7	12.8
Long-Term Treasury Bonds <sup>f</sup>	2.2	-7.6	13.0
Intermediate-Term Treasury Notes <sup>g</sup>	2.2	-4.5	9.3
Three-Month Treasury Bills	0.7	-3.4	5.0

SOURCE: Congressional Budget Office using data from Ibbotson Associates.

- a. Calculated as a geometric average.
- b. The range in which the middle two-thirds of the numbers fall.
- c. Returns for large-company stocks are calculated from the Standard & Poor's (S&P) 90 index from 1926 to 1956 and from the S&P 500 index from 1957 to 2000.
- d. Returns for small-company stocks are calculated from the smallest one-fifth of stocks by capitalization on the New York Stock Exchange from 1926 to 1981 and from the Dimensional Funds Advisors Small Company Fund from 1982 to 2000.
- e. Returns for long-term corporate bonds are calculated from Salomon Brothers' long-term high-grade corporate bond index.
- f. Long-term Treasury bonds have an average maturity of 20 years.
- g. Intermediate-term Treasury notes have a maturity of five years.

**Box 7.****Why Comparing Rates of Return Can Be Misleading**

A popular criticism of Social Security and other public pension programs that are funded on a pay-as-you-go basis is that they produce very low “rates of return” for future beneficiaries. To be sure, simply comparing the present value of taxes paid into the program with the present value of average benefits shows that the implied rate of return on the taxes paid is projected to be low for many workers who will be retiring in the next several decades.<sup>1</sup> If those taxes were instead invested in private accounts, the argument goes, the expected returns would be much higher.

Those types of “money’s worth” comparisons can be highly misleading, however.<sup>2</sup> In any pay-as-you-go program, the first generation of retirees in the system always receives a very high rate of return, at the expense of later generations, who receive a correspondingly low rate of return. That result stems from the fact that initial generations receive benefits far greater than the taxes they paid. Thus, the low rate of return for later generations is not an indication of inefficiency in the system; it merely reflects a zero-sum transfer among generations. Changes to the Social Security system can alter the distribution of returns among generations, but they cannot alter this fundamental arithmetic: raising the returns for current generations of workers can be done only by lowering the returns for future generations.

Another way to understand this argument is to focus on the fact that taxes paid into Social Security are not an investment. The implicit return is determined by the program’s rules for taxes and benefits, not by the return on any real asset. (Investing the trust funds in stocks would not change that analysis; see Appendix A for details.) As noted above, the low rate of return expected by some beneficiaries does not reflect inefficient investment or administration, just the rules for transfers. Because the apparent rate of return is the result of legislative action, it could easily be increased to a level that matched or even exceeded the average return on stocks. Doing that, however, would require transferring wealth from later generations.

Rate-of-return comparisons can be misleading for two other reasons. First, some of the revenues from the Social Security payroll tax are used to finance survivors’ and disability insurance. Ignoring the value of that insurance can understate the benefits of the current Social Security program. Second, some rate-of-return comparisons overlook differences in risk. Corporate stocks deliver a higher expected return than government bonds, but they also carry higher risks. On a risk-adjusted basis, investing in government bonds would provide the same return as investing in corporate stocks. Of course, compared with private accounts, Social Security benefits may involve greater political risk—that is, the risk that future policymakers will decide to reduce benefits.

1. “Present value” converts a stream of future income or payments into an equivalent lump-sum amount received or paid today. Of course, some beneficiaries will receive higher returns than others as a result of their individual circumstances, but an analysis of the net benefits by age group indicates that future workers are likely to receive much lower returns from Social Security than their parents and grandparents did. See Dean Leimer, *Cohort Specific Measures of Lifetime Net Social Security Transfers*, ORS Working Paper 59 (Social Security Administration, Office of Research and Statistics, February 1994).
2. See John Geanakoplos, Olivia Mitchell, and Stephen P. Zeldes, “Social Security Money’s Worth,” in Olivia Mitchell, Robert J. Myers, and Howard Young, eds., *Prospects for Social Security Reform* (Philadelphia: Pension Research Council and University of Pennsylvania Press, 1999).

for federal workers) or would they have the freedom to choose from a wide range of investments (as with individual retirement accounts, or IRAs)? At retirement, would people have to convert the assets in their private accounts into an annuity (a series of regular payments that continues until the person and his or her spouse dies), and if so, under what conditions? How would the accounts affect people's exposure to various sources of risk? Would individuals be guaranteed a minimum benefit if the markets performed poorly, and if so, who would pay for the guarantee? How much would administering a system of private accounts cost? How would the accounts be financed and integrated into the current Social Security program? And how would a system of private accounts handle nonworking spouses, people with disabilities, low-income workers, and people with intermittent work histories?

### **The Basic Structure of a Privatization Plan**

Many proposals for private accounts would combine a cut in the Social Security benefits specified in current law with the establishment of mandatory private accounts that were owned and directed by individual workers. Such proposals—often referred to as privatization—would give workers control over how their money was invested. Most privatization plans have five elements in common:

- They would provide income at retirement that would depend partly on the contributions made into an account and the rate of return on the account's assets during the person's working life;
- They would reduce Social Security benefits from the amounts specified under current law;
- They would require (or at least give a strong financial incentive for) workers to put a certain percentage of their earnings into individual investment accounts;
- They would generally allow workers to decide for themselves how to allocate their accounts among the qualified investments available; and
- They would prohibit withdrawals from those accounts until workers reached a certain age.

The budgetary cost of setting up a system of private accounts would depend on the details of the proposal, but the amount could be large. For example, creating a

system of accounts based on 2 percent of workers' earnings could cost about \$1 trillion over 10 years.<sup>12</sup>

## The Effects on National Saving

Private accounts could increase national saving if they preserved some of the budget surpluses as private saving. The size of that increase is hard to estimate, however, because it would depend on the specific details of the proposal and on how the government and the private sector responded. Moreover, raising national saving is not costless: it requires people to reduce their current consumption (see Box 8).

In analyzing the impact of private accounts on government saving, the major issue is the extent to which using surpluses for such accounts would prevent policymakers from using them for some other purpose, such as additional government spending or tax cuts.

In analyzing the impact on saving in the private sector, the major issue is how the accounts would influence people's decisions about saving. Under many proposals, the government would offer a tax credit that gave people some or all of the funds they would need to set up a private account. Because many low-income people have few assets, an account would probably represent new savings for them. Indeed, past experience with 401(k) plans suggests that low-income people increase their saving in response to tax incentives, although the size of that response is hard to gauge.<sup>13</sup> Similar responses might occur under a system of private accounts.

Experience also suggests that most high-income people respond to tax incentives by shifting their assets from other accounts into their 401(k) plan rather than by increasing their total saving. However, that experience may not be directly applicable to some proposals for private accounts. Combining a tax credit with a cut in future Social Security benefits could limit the risk that people would reduce their other saving dollar for dollar; those who did could have less income in retirement. With that combination, high-income people might increase their total personal saving, including saving in the accounts.

Despite those areas of uncertainty, using budget surpluses for private accounts would probably increase national saving more than using surpluses for additional

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12. That estimated cost excludes any additional interest payments that the government would have to make if it financed the accounts by increasing federal debt.

13. Eric M. Engen and William G. Gale, *The Effects of 401(k) Plans on Household Wealth: Differences Across Earnings Groups*, Working Paper No. 8032 (Cambridge, Mass.: National Bureau of Economic Research, December 2000).

**Box 8.**  
**Who Would Bear the Transition Costs  
of Privatizing Social Security?**

Any proposal to privatize the Social Security program faces a challenge: who would pay for Social Security benefits during the transition from the current system to the privatized one? In today's program, taxes on current workers largely finance Social Security payments to current beneficiaries; thus, the system's funding relies on intergenerational transfers. Under a privatized system, however, intergenerational transfers would be replaced by workers' financing their own retirement by building up assets in private accounts. Thus, a transition period would occur during which some generations of workers might have to make payments not only to their private accounts but also to current beneficiaries.

The added costs to those transitional generations would make them worse off and cause them to reduce their consumption of goods and services. However, that reduction in their current consumption would have long-term benefits for the economy: it would boost national saving, increase the nation's capital stock, and raise the real wages of future generations of workers.

The government could spread the transition costs among many generations by issuing debt that was paid off over a period of time. Such an approach would reduce the burden on any single generation, but it would not increase the economy as fast as would a policy that imposed high transition costs early on.

Using federal budget surpluses to fund the creation of private retirement accounts could produce long-term economic gains if it displaced other, less productive uses of those surpluses. In that case, current generations would bear a transitional cost in the sense that they would have to forgo tax cuts or additional spending on government services.

government spending or tax cuts would. Most types of government spending consume resources, and many types of tax cuts simply stimulate private consumption.<sup>14</sup> By contrast, a substantial portion of the resources transferred to private accounts would probably be saved, for the reasons discussed above.

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14. Tax cuts or government spending may have other economic effects besides their impact on national saving. For example, cuts in marginal tax rates may increase the labor supply. In addition, some types of government spending may increase productivity.

## The Effects on the Labor Market

What effects private accounts would have on the labor market is uncertain. Both the current Social Security system and a private-account system could distort people's decisions about work. Comparing the labor-market effects of the two systems would require examining the specifics of the proposal for private accounts. Without knowing those specifics, no firm conclusions can be drawn.

On one hand, private accounts could reduce distortions in the labor market and encourage people to work more because those accounts would tighten the link between workers' contributions and their retirement benefits. On the other hand, a proposal for private accounts might include provisions (such as subsidies for contributions by low-income workers or guarantees of minimum benefits) that could distort incentives to work.

If low-income workers received subsidies for their contributions, the subsidies might encourage some people to join the labor force. However, if those subsidies were phased out as people's income rose, they would also impose an implicit tax on work for people whose income was in the phaseout range (because those people would receive less subsidy for each additional dollar of income). The size of that implicit tax would depend on the size of the subsidy and the rate at which it was phased out. Other labor-market distortions could arise from the fact that subsidies or guarantees of minimum benefits would have to be paid for in some way. If they were funded through increases in payroll or income tax rates, they could lessen people's incentives to work.

## Administrative Costs

Any pension system costs something to administer. Staff must perform such tasks as collecting funds, keeping records, managing assets, calculating and paying benefits, overseeing and enforcing rules, and (in some cases) marketing and selling the plans.

Some lessons can be learned by looking at the administrative costs of a range of institutions that offer retirement savings accounts or that manage programs to provide income in retirement. Those institutions include mutual funds, defined-contribution pension plans, Social Security, and private-account plans in other countries. The experience of those institutions suggests that the administrative costs of a system of private accounts would depend greatly on the structure of the program. Under some proposals, administrative costs would be modest; but those costs could be high if an



account system provided many services to investors and gave them a wide choice of investments.<sup>15</sup>

Of course, administrative costs may pay for services that people value. Some people may want to choose whether to participate in the program, how much to contribute, the mix of assets in their portfolio, and the frequency with which they adjust their portfolio. When they are at or near retirement, they may want choices about whether and when to convert their assets into an annuity and the kinds of annuities to buy. Restricting the freedom to make financial choices reduces administrative costs, but it may also reduce the value that people place on their accounts.

Another issue for policymakers to consider is how administrative costs would be allocated among participants. Two concerns arise. First, if people do not face the marginal costs of their transactions, they may take actions—such as churning (short-term buying and selling) of assets in their portfolios—that raise administrative costs. Second, if some of the fixed administrative costs are not spread among accounts, they could absorb much of the income of people who have small accounts (because of low incomes or intermittent work histories).

## Risks and Guarantees

All public and private pension systems carry risks. How those risks are distributed can have significant effects on economic well-being. This section compares two types of public pension systems—a defined-contribution plan and a defined-benefit plan—to show how risk might be allocated in a private-account system. Those two public systems have counterparts in the private sector. Participation in private defined-contribution plans was about half the level of participation in private defined-benefit plans in the late 1970s, but the opposite is true today (see Figure 15).

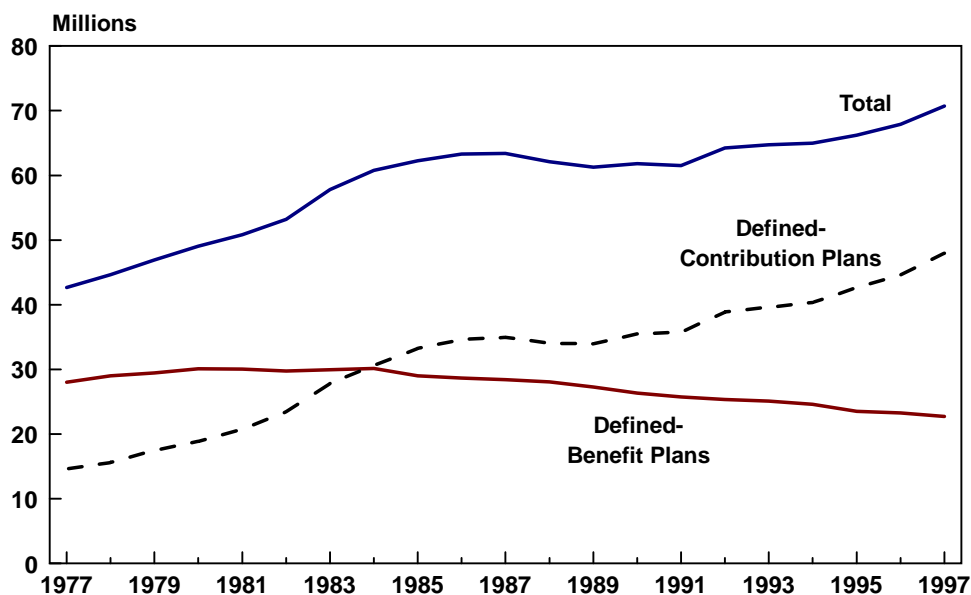
A public defined-contribution plan resembles a 401(k) plan in that a defined amount of a worker's salary is contributed to an account and invested in assets such as stocks and bonds. At retirement, the worker's income depends on the size of the contributions and the rate of return on the assets. In such a system, each individual bears the risk of certain unexpected changes, such as an increase in life spans (which creates the need for more money in retirement), a drop in wages, or a decline in the stock market.

With a public defined-contribution system, variations in the value of stocks can create large differences in the retirement income of workers who retire in different years. The riskiness of stock investments can be dramatically reduced by requiring

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15. For more information, see John B. Shoven, ed., *Administrative Aspects of Investment-Based Social Security Reform* (Chicago: University of Chicago Press, 2000).

**Figure 15.**  
**Number of Active Participants in Private Pension Plans, 1977-1997**



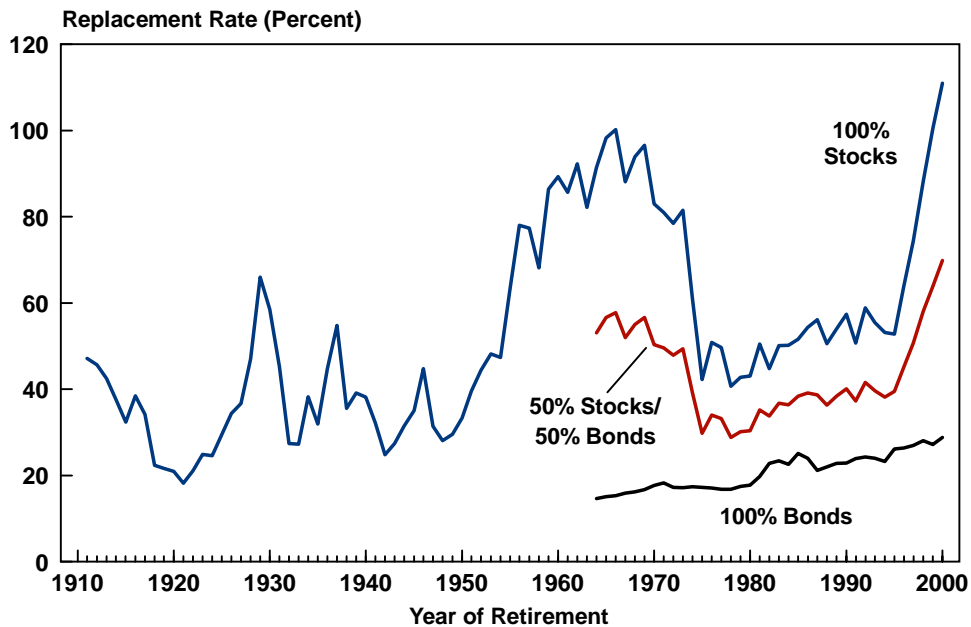
SOURCE: Department of Labor, Pension and Welfare Benefits Administration, "Abstract of 1997 Form 5500 Annual Reports," *Private Pension Plan Bulletin*, no. 10 (Winter 2001), available at [www.dol.gov/dol/pwba/public/programs/opr/bullet97/cover.htm](http://www.dol.gov/dol/pwba/public/programs/opr/bullet97/cover.htm).

that workers invest in a stock market index (such as the S&P 500) composed of many companies. Even so, the risks cannot be eliminated. For example, workers with average wages who invested 6 percent of those wages in the S&P 500 index over 40 years and then bought an annuity at retirement would have replaced almost 100 percent of their peak wage if they had retired at age 62 in 1969 (see Figure 16). But if they had retired just six years later (in 1975)—shortly after the oil price shocks of 1973 and the recession of 1974-1975, which knocked down the stock market—they would have replaced just 42 percent of their peak wage.<sup>16</sup> Those two years present an extreme example, but they show some of the potential for large year-to-year fluctuations in the income of retired workers who retire at different times. Such an analysis also shows that those fluctuations could be reduced by requiring people to hold portfolios of both stocks and bonds.

In a public defined-benefit plan (such as Social Security), by contrast, workers' income in retirement depends on their history of wages and a formula that relates those wages to benefits. The formula can be set up to redistribute income from people

16. Gary Burtless, *Social Security Privatization and Financial Market Risk*, Working Paper No. 10 (Washington, D.C.: Center on Social and Economic Dynamics, February 2000). The replacement rate for similar workers retiring at age 62 in 2000 would have been more than 100 percent of their peak wage.

**Figure 16.**  
**How the Year of Retirement Affects Income-Replacement Rates**  
**in a System of Private Accounts Invested in Stocks or Bonds**



SOURCE: Gary Burtless, *Social Security Privatization and Financial Market Risk*, Working Paper No. 10 (Washington, D.C.: Center on Social and Economic Dynamics, February 2000).

NOTES: The estimates are based on average male workers who are assumed to work for 40 years and save 6 percent of their earnings. Dividends and interest are reinvested. On their 62nd birthday, workers retire and convert their accumulations into a single-life annuity.

"Replacement rate" is the workers' initial annuity divided by their average real annual earnings when they were 54 to 58 years old.

who had high wages to those who had low wages, providing a type of insurance for low-income people.

Many of the risks that individuals face in a public defined-contribution system do not disappear in a defined-benefit system. For example, if people live longer than expected, public defined-benefit programs may become financially strained, creating the political risk that policymakers will change the benefit formulas or tax rates. If average wages grow more slowly, average benefits at retirement will be lower (although a progressive defined-benefit formula will help reduce some of the variation in

wages among individual workers). In such a program, however, risks can be shifted to different people and across time, thus providing a form of social insurance.<sup>17</sup>

The risks of any private-account proposal depend on the proposal's specific provisions. Many proposals are not for pure defined-contribution plans; instead, they contain provisions that could pool risks among generations under certain conditions. For example, many private-account proposals guarantee a minimum level of retirement income; some may also tax earnings on withdrawals from the accounts. If the stock market does poorly, a minimum-benefit guarantee can shift the risks onto future generations. In principle, the government can transform any defined-contribution system into a defined-benefit system by using a set of guarantees and taxes to pool risks among generations.

Guarantees can create other problems, however. By insuring people against losses in their investment portfolio, the government could unintentionally encourage investors to put money into risky assets. If such gambles were successful, investors would pocket handsome returns; but if they failed, the losses would be covered by the government. That type of "moral hazard" is a problem inherent in many insurance contracts. It can be reduced by restricting people's choice of assets, but it cannot be eliminated.

## **Annuities**

Most of the public discussion of private accounts has focused on questions about contributions, rates of return, and the accumulation of assets in the accounts. Much less attention has been paid to how people would draw down their accumulated funds in old age, but that issue is equally important.

Today, most retirees receive a life annuity from Social Security that is indexed to inflation. If the retiree is married or has dependent children, Social Security also pays benefits to his or her survivors. In addition, many people receive annuity payments from private pensions.

Annuities like Social Security provide insurance against the risk of longevity—that is, the risk of outliving one's resources. A life annuity protects against longevity risk by providing a stream of payments for as long as the annuitant (or his or her spouse if the contract provides survivor benefits) is alive. The insurer (an insurance company or the government) absorbs the uncertainty about longevity and pools that uncertainty among many annuitants. Since some annuitants live longer than expected

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17. Peter Diamond, "The Economics of Social Security Reform," in R. Douglas Arnold, Michael J. Graetz, and Alicia H. Munnell, eds., *Framing the Social Security Debate: Values, Politics, and Economics* (Washington, D.C.: National Academy of Social Insurance, 1998).

and others die earlier than expected, the insurer can protect each individual against life-span uncertainty but itself be subject only to uncertainty about the average life span of the population.

Without access to annuities, people must divide their resources according to their expectations about how long they will live after retirement. They may find themselves without enough money if their actual life span exceeds what they had expected. For example, someone who retires at age 65 with assets of \$100,000 and who expects to live 10 more years may choose to spend those savings in 10 equal installments. But if the retiree lives to age 76, he or she could end up without any assets.

One key issue for any system of private accounts is how people would be protected from outliving their resources. Would the system rely on private markets to provide annuities or would the government carry out that task? If the former, would people be able to buy annuities at fair prices and would private markets offer the same level of protection against longevity risk during retirement that Social Security does now?

Although private insurance companies currently sell life annuities to retirees, the market is very small. The reasons include competition from Social Security (which provides a similar product), people's desire to leave assets to heirs, and problems in the market that raise prices. An analysis by CBO concluded that private annuities are 15 percent to 25 percent more expensive than average mortality rates would suggest.<sup>18</sup> That higher price reflects a combination of overhead costs and the fact that people who expect to have longer-than-average life spans are more likely than other people to purchase annuities (a phenomenon known as adverse selection).

If a system of private accounts was created and private insurance companies supplied the annuities, the prices of those annuities would probably fall. The system would put more people into the annuities market, which could lower both overhead costs and the share of annuitants with longer-than-average life expectancy. Furthermore, a growing market for annuities could increase the variety of annuity products and better adjust those products to meet consumers' demand.

Nonetheless, some factors could hinder the functioning of the private annuities market: adverse selection, high marketing costs, shortsighted behavior by consumers, and the existence of a social safety net. Government oversight of the annuities market and private retirement accounts could address some of those problems and reduce the cost of annuities to society. But policymakers would face a trade-off between balancing the gains from reducing overall costs and the losses from restricting individual choice.

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18. Congressional Budget Office, *Social Security Privatization and the Annuities Market*, CBO Paper (February 1998).

The government could sharply limit adverse selection in the annuities market by requiring everyone with a private account to convert that account into an annuity at retirement. Such a requirement would increase the pool of people participating in the market and reduce the costs of adverse selection. However, it would also reduce people's choices and might not allow many retirees to pass the assets in their account to their children. (Life annuities end at the death of the owner, unless a joint annuity has been purchased, in which case it ends at the death of the spouse.)<sup>19</sup>

In requiring account holders to buy annuities, policymakers would also have to confront some difficult questions. Would insurers be forbidden to separate annuitants into risk classes on the basis of sex, marital status, income, health, and forebears' longevity? Prohibiting the separation of annuitants into risk classes results in a redistribution of resources among different people. If a low-income retiree with shorter life expectancy pays the same price for an annuity as a high-income person with above-average life expectancy, wealth will be redistributed from the low-income person to the high-income one. If unisex annuities are required, resources will be implicitly redistributed from men to women (since women live longer, on average, than men). Both types of redistribution could have substantial effects on the welfare of certain groups. Those redistributions also occur in the current Social Security system, but they are masked by the complexity of the system.

## Other Considerations

Creating a system of private accounts would require policymakers to address several other practical issues. First, how would the system handle benefits for nonworking spouses, people with intermittent work histories, workers with low income, and people with disabilities? The current Social Security system provides benefits for those people. Would it continue to do so? If so, how would the provision of such benefits be integrated into the system of private accounts?

Second, the success of private accounts will depend partly on people's knowledge about financial markets and the quality of their financial decisions. That is an important issue because in 1998 (the most recent year for which data are available) roughly half of all U.S. families did not own stock either directly or indirectly (through mutual funds, retirement accounts, and other managed assets). Moreover, large percentages of U.S. families in their prime saving years did not own stock in 1998: 41 percent of families headed by someone ages 45 to 54, and 44 percent of

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19. Some countries have addressed that problem by requiring only that people annuitize enough of their accounts to provide a minimum level of income in retirement. The rest of an account could be used for any other purpose, including being passed to children as a bequest. In Chile, for example, people are not allowed to withdraw funds from their account unless they have an annuity that provides income of more than 70 percent of their taxable earnings over the past 10 years and at least 120 percent of the minimum pension. See Congressional Budget Office, *Social Security Privatization and the Annuities Market*, p. 31.

families headed by someone ages 55 to 64 (see Table 3).<sup>20</sup> Of course, that may not be a permanent state of affairs: stock holdings could become more widespread over time and people more knowledgeable about financial markets.

In addition, some people may have trouble making wise financial decisions. Evidence suggests that some people spend their retirement accounts early when they have the freedom to do so. For example, in 1990, nearly \$50 billion in pension assets were distributed to people before they reached age 59½, and roughly half of those distributions were spent rather than rolled over into another qualified account.<sup>21</sup> In addition, some married workers might not pick annuities that provide coverage for their spouse without government regulations. The General Accounting Office found that the share of retired married men selecting joint and survivor annuities (which provide coverage for their spouse) increased by 15 percentage points after passage of the Retirement Equity Act of 1984, which required workers to get written approval from their spouse before choosing an annuity that did not provide such coverage.<sup>22</sup>

Third, policymakers would have to set up a regulatory structure to oversee any system of private accounts. Regulations could be aimed at protecting investors from fraud and incompetence, ensuring that investment funds had enough capital, and preventing people from investing in overly risky assets during their working life or from spending down their assets too fast in retirement and then relying on public assistance programs if they ran out of resources. Dealing with that last issue might require having retirees annuitize part of their wealth so they would not outlive their resources.

The experience of private retirement accounts in the United Kingdom illustrates some of the potential risks of inadequate oversight and regulation. The U.K. instituted a reform that allowed workers to switch funds from their occupation-based pension plans to personal accounts. In the so-called misselling scandal, representatives of financial firms used high-pressure sales tactics to persuade some people to switch from favorable occupational pensions to personal pensions that provided lower returns.<sup>23</sup>

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20. Many of those families do not own stock because they have low income and do not save; however, stocks also account for a disproportionately small fraction of the portfolios of low-income people who have assets.

21. Andrew Samwick and Jonathan Skinner, "Abandoning the Nest Egg? 401(k) Plans and Inadequate Pension Saving," in Sylvester Schieber and John Shoven, eds., *Public Policy Toward Pensions* (Cambridge, Mass.: MIT Press, 1997).

22. General Accounting Office, *Pension Plans: Survivor Benefit Coverage for Wives Increased After 1984 Pension Law*, GAO/HRD-92-49 (February 1992).

23. For more details, see Congressional Budget Office, *Social Security Privatization: Experiences Abroad*, CBO Paper (January 1999).

**Table 3.**  
**Families' Direct and Indirect Holdings of Stock, by Type of Family**

	1989	1992	1995	1998
<b>Percentage of Families with Direct or Indirect Holdings of Stock</b>				
All Families	31.6	36.7	40.4	48.8
Families by Income (In 1998 dollars)				
Less than 10,000	*	6.8	5.4	7.7
10,000 to 24,999	12.7	17.8	22.2	24.7
25,000 to 49,999	31.5	40.2	45.4	52.7
50,000 to 99,999	51.5	62.5	65.4	74.3
100,000 or more	81.8	78.3	81.6	91.0
Families by Age of Family Head				
Less than 35	22.4	28.3	36.6	40.7
35 to 44	38.9	42.4	46.4	56.5
45 to 54	41.8	46.4	48.9	58.6
55 to 64	36.2	45.3	40.0	55.9
65 to 74	26.7	30.2	34.4	42.6
75 or more	25.9	25.7	27.9	29.4
<b>Median Value of Stock Holdings Among Families with Stock (In thousands of 1998 dollars)</b>				
All Families	10.8	12.0	15.4	25.0
Families by Income (In 1998 dollars)				
Less than 10,000	*	6.2	3.2	4.0
10,000 to 24,999	6.4	4.6	6.4	9.0
25,000 to 49,999	6.0	7.2	8.5	11.5
50,000 to 99,999	10.2	15.4	23.6	35.7
100,000 or more	53.5	71.9	85.5	150.0
Families by Age of Family Head				
Less than 35	3.8	4.0	5.4	7.0
35 to 44	6.6	8.6	10.6	20.0
45 to 54	16.7	17.1	27.6	38.0
55 to 64	23.4	28.5	32.9	47.0
65 to 74	25.8	18.3	36.1	56.0
75 or more	31.8	28.5	21.2	60.0

(Continued)



**Table 3.**  
**Continued**

	1989	1992	1995	1998
<b>Stock Holdings as a Percentage of Families' Financial Assets</b>				
All Families	27.8	33.7	40.0	53.9
Families by Income (In 1998 dollars)				
Less than 10,000	*	15.9	12.9	24.8
10,000 to 24,999	11.7	15.3	26.7	27.5
25,000 to 49,999	16.9	23.7	30.3	39.1
50,000 to 99,999	23.2	33.5	39.9	48.8
100,000 or more	35.3	40.2	46.4	63.0
Families by Age of Family Head				
Less than 35	20.2	24.8	27.2	44.8
35 to 44	29.2	31.0	39.5	54.7
45 to 54	33.5	40.6	42.9	55.7
55 to 64	27.6	37.3	44.4	58.3
65 to 74	26.0	31.6	35.8	51.3
75 or more	25.0	25.4	39.8	48.7

SOURCE: Congressional Budget Office based on Arthur B. Kennickell, Martha Starr-McCluer, and Brian J. Surette, "Recent Changes in U.S. Family Finances: Results from the 1998 Survey of Consumer Finances," *Federal Reserve Bulletin*, vol. 86, no. 1 (January 2000).

NOTES: Indirect holdings of stock are those held in mutual funds, retirement accounts, and other managed assets.

\* = 10 or fewer families surveyed.

## Changing the Rules of the Current Social Security System

Policymakers have discussed a third approach for addressing the budgetary challenges of an aging population: phasing in cuts in future Social Security benefits so as to slow the growth of the program's spending. In addition, some people have proposed increasing the rate of the Social Security payroll tax. Cutting benefits and raising taxes represent different choices about how to divide economic resources between workers and retirees and between current and future generations. Although tax increases could improve the solvency of the Social Security trust funds and the balance of the federal budget, they might not address the broader economic challenges created by an aging population.

## Reducing Benefits

Slowing the growth of Social Security spending by reducing benefits to future retirees could be one way to lessen future pressures on the federal budget and expand the economy in the long run.<sup>24</sup> Indeed, economic models suggest that many types of benefit cuts could increase GDP in the long run, although those long-term gains could take a couple of decades to appear fully.<sup>25</sup> How benefit cuts would affect the economy in the near term is uncertain.

Reducing benefits would probably increase national saving, although the size of the effect—and its path over time—is very uncertain. The results would depend on how much workers anticipated and responded to the cuts in benefits. Workers who were forward looking would probably reduce their current consumption and increase their saving in anticipation of receiving smaller benefits. However, some people might not be so forward looking. They would also have to lower their consumption, but that would probably occur in retirement when they received smaller benefit checks.

The effect on the labor supply of cutting future benefits would depend on the precise nature of the cuts. Some reductions in benefits might encourage people to work more. For example, raising the age for early retirement could cause some workers to delay their retirement. The size of that impact is uncertain, but an analysis of retirement behavior around the world suggests that there is a strong link between the earliest age at which workers can claim public pension benefits and the age at which they retire.<sup>26</sup> In the United States, the number of men retiring at age 62 rose significantly after policymakers added a provision to Social Security in 1961 that allowed early retirement at that age (see Figure 17). Benefit cuts might also encourage work by reducing expected lifetime income, causing people to work more to make up some of the difference. Conversely, benefit cuts could discourage work by reducing the amount by which expected future benefits rise with each additional hour of work.

Slowing the growth of Social Security spending by cutting benefits would probably reduce the lifetime resources of some transitional generations. Later generations, however, would most likely have higher real wages and pay lower taxes, for two reasons: the additional national saving that would result from lower spending would boost the capital stock and raise their wages, and the cuts in benefits would lessen the chance that taxes would be raised in the future.

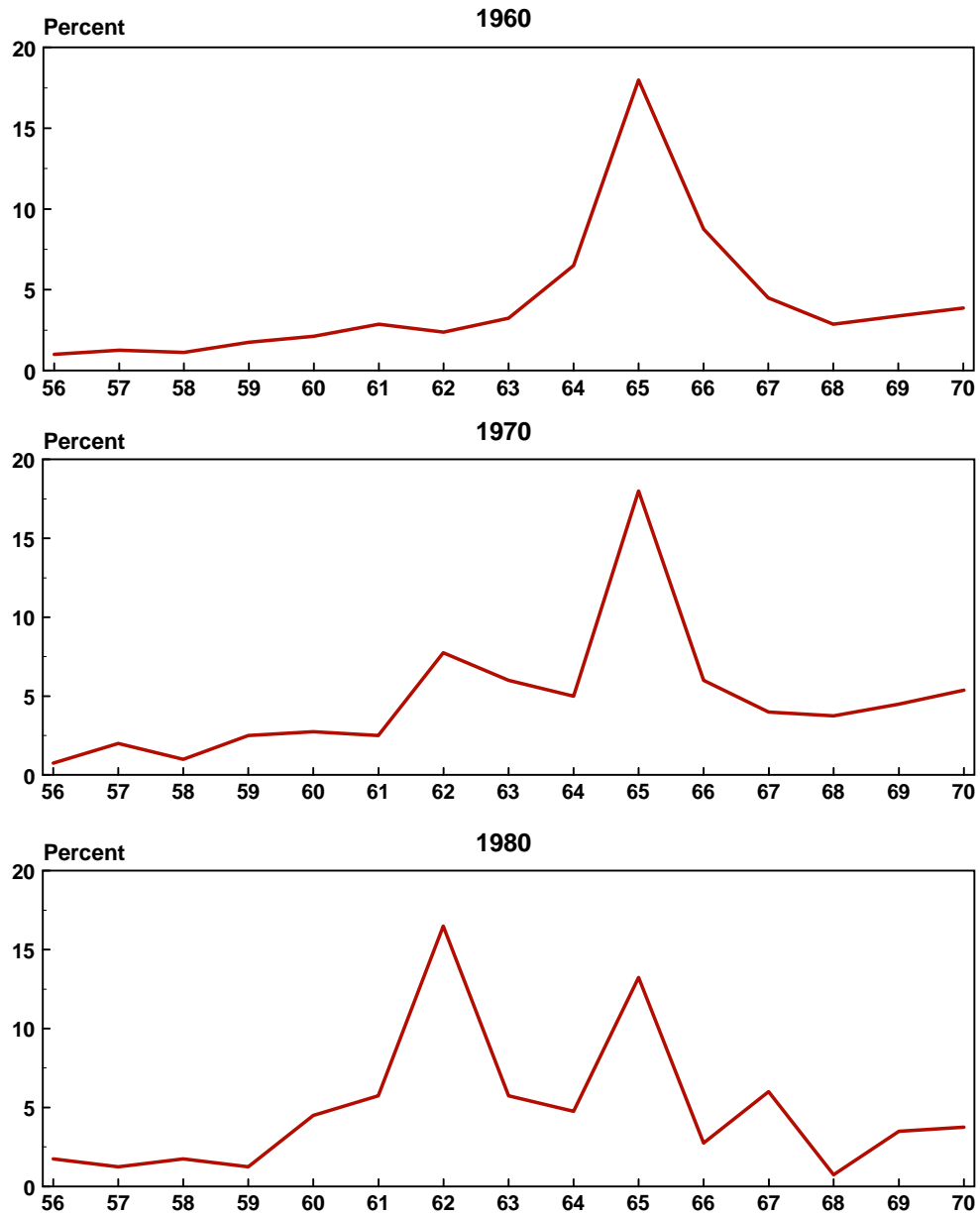
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24. See Congressional Budget Office, *Long-Term Budgetary Pressures and Policy Options* (May 1998), Chapter 3.

25. Laurence Kotlikoff, Kent Smetters, and Jan Walliser, "Privatizing Social Security in the U.S.—Comparing the Options," *Review of Economic Dynamics*, vol. 2, no. 3 (July 1999).

26. Jonathan Gruber and David Wise, eds., *Social Security and Retirement Around the World* (Chicago: University of Chicago Press, 1999).

**Figure 17.**  
**The Probability of Retirement for Men at Various Ages in Different Years**



SOURCE: Jonathan Gruber and David Wise, eds., *Social Security Retirement Around the World* (Chicago: University of Chicago Press, 1999).

NOTE: Early retirement benefits were introduced for men in 1961. (They were introduced for women in 1956.)

Because Social Security benefits are a major source of income for many people, it would be important to announce any benefit cuts well in advance so people would have enough time to respond by adjusting their plans for saving and retirement. Moreover, if the changes were made in a way that preserved the benefits of low-income people, then larger cuts would be necessary in the benefits received by other retired workers.

Some of the major issues involved in reducing benefits can be seen by looking at three options: speeding up the increase in the retirement age, lengthening the number of years of employment for which Social Security benefits are calculated, and reducing annual cost-of-living adjustments.

**Accelerate the Increase in the Retirement Age.** Under current law, workers born before 1938 become eligible for full Social Security retirement benefits at age 65. That normal retirement age increases in two-month increments for people born thereafter, reaching 66 for workers born in 1943. It remains at 66 for workers born between 1944 and 1954 and then begins to rise again in two-month steps, reaching 67 for people born in 1960 or later. Workers will still be able to start collecting reduced benefits at age 62. But as the NRA increases and moves further away from age 62, the size of that reduction will grow.

Members of Congress and others have recommended speeding up the change to a normal retirement age of 67. One option would steadily increase the NRA by two months per year until it reached 67 for workers born in 1949. Under that option, the first people to face a normal retirement age of 67 would become eligible for reduced benefits (at age 62) in 2011, which is 11 years sooner than under current law.

The savings from that change would begin as workers in the first affected age group (people born in 1944) reached age 62 in 2006. Each year after that, the savings would grow as more beneficiaries were affected, with each successive group incurring larger reductions in benefits. Workers in the first group who began collecting benefits at 62 would receive about 1 percent less than they would under current law. Workers who turned 62 in 2011 would receive about 7 percent less than they would under current law. Some Social Security beneficiaries with low income would qualify for federal means-tested programs, such as Supplemental Security Income and Food Stamps, so part of the savings in Social Security benefits might be offset by greater spending for other programs.

Proponents of raising the normal retirement age point out that, on average, people are healthier and live longer today than was the case in the early days of Social Security, and thus they may be able to work for a longer part of their lives. Opponents argue that raising the normal retirement age is nothing more than another way to cut future monthly Social Security benefits.

**Lengthen the Computation Period for Benefits.** Social Security retirement benefits are based on the average indexed monthly earnings of workers in jobs covered by the system. The current formula computes those earnings on the basis of a worker's 35 highest-earning years of employment. Lengthening that averaging period would generally lower benefits slightly by requiring more years of lower earnings to be factored into the benefit computation.

One argument for lengthening the computation period is that it would encourage people, who are now living longer, to stay in the labor force longer as well. It would also reduce the advantage that workers who postpone entering the labor force sometimes have over people who get jobs at a younger age. Because the AIME calculation is based on 35 years of employment and thus can ignore many years of low or no earnings, people who enter the labor force later suffer little or no loss of benefits for their additional years spent not working and not paying Social Security taxes.

Opponents argue that this option would hurt beneficiaries who retire early because of poor health or unemployment—the people who would be least able to continue working. It would also disproportionately affect people who spent significant time outside the Social Security system—such as parents (usually women) who interrupted their career to raise children—and workers who were unemployed for long periods.

**Reduce Cost-of-Living Adjustments.** Each year, the Social Security Administration must adjust recipients' monthly Social Security benefits for inflation. To do so, it raises benefit payments by the percentage increase in the consumer price index. Some policymakers suggest that the law be changed so that the yearly COLA equals the increase in the CPI minus a specified amount, such as 0.5 percentage points.

Many economists believe that the CPI may overstate increases in the cost of living, but they disagree about the size of the overstatement. There are conceptual problems with devising a "true" cost-of-living index, as well as difficulties collecting and compiling data for such an index. For those reasons, economists have had trouble reaching a strong consensus on this issue. In 1996, the Advisory Commission to Study the Consumer Price Index (known as the Boskin Commission) concluded that the CPI probably overstates the change in the cost of living by between 0.8 and 1.6 percentage points a year.<sup>27</sup> Since the commission's report was issued, the Bureau of Labor Statistics has made several changes to the way it calculates the CPI and eliminated some of the problems with the index. But some thorny issues remain, including how to measure the cost of living for Social Security beneficiaries.

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27. Advisory Commission to Study the Consumer Price Index, *Toward a More Accurate Measure of the Cost of Living*, final report submitted to the Senate Finance Committee (December 4, 1996).

To the extent that the CPI still overstates increases in the cost of living for those beneficiaries, policymakers could reduce COLAs by a corresponding amount without making Social Security recipients' real benefits lower than they were when the recipients became eligible for the program. Moreover, reducing cost-of-living adjustments by a relatively small amount could save a great deal of money.

The impact of even a small cut in COLAs, however, would be significant for future older beneficiaries, whose benefits would reflect the cumulative effects of a series of smaller COLAs. In the long run, the people whose benefits would be most affected would be the oldest recipients and those who first became eligible for Social Security at an early age on the basis of disability.

## The Effects of Raising Payroll Taxes

Another option—which would address the narrow issue that promised Social Security benefits are expected to exceed the revenues dedicated to the program—would be to raise payroll taxes. Because what really matters is the overall budget balance, any tax could be increased to finance future Social Security spending. However, to limit the scope of the analysis, this report focuses on the Social Security payroll tax.

The Social Security trustees project that the gap between the program's income and costs in 2050 will be about 4.6 percent of the nation's taxable payroll.<sup>28</sup> Thus, increasing the combined payroll tax on workers and their employers from 12.4 percent to 17.0 percent at that time would be one way of dealing with the shortfall.<sup>29</sup>

The payroll tax rate has been raised several times since the Social Security system was created in the 1930s (see Figure 18). The total rate (including the shares paid by employers and employees) was only 2 percent when the program began, but it increased in a series of steps over the years to the current rate of 12.4 percent. The wage base to which the tax rate applies also rose during that period. In 1951, the payroll tax was assessed on workers' earnings up to \$3,600, which was 148 percent of the average wage at that time (see Table 4). By 1999, the payroll tax applied to earnings up to \$72,600, or 251 percent of the average annual wage. This year, the maximum level of earnings for the tax is \$80,400.

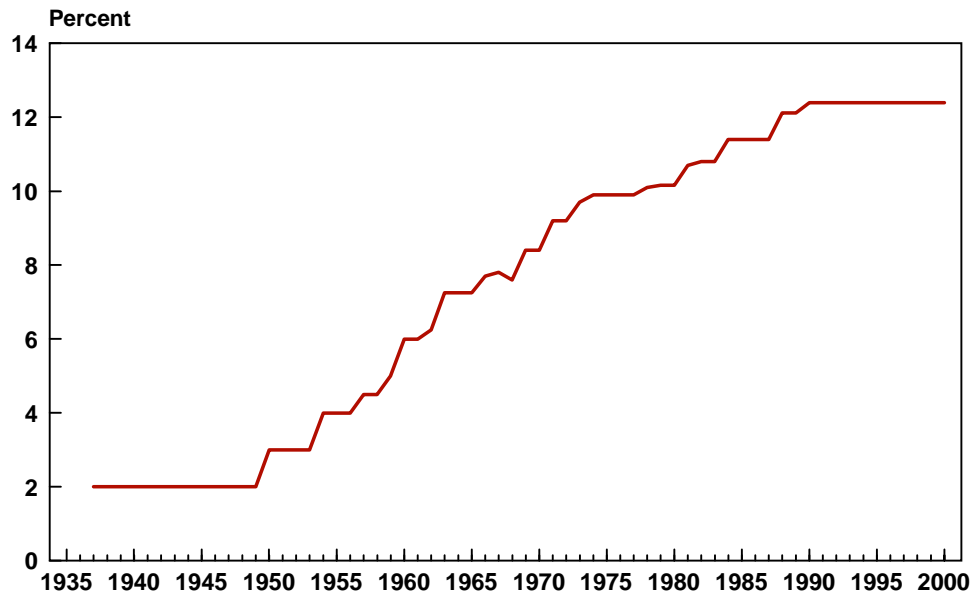
Although employers nominally pay half of the payroll tax, the burden of the tax largely falls on workers. Both economic theory and empirical studies suggest that most of the tax is shifted to workers in the form of lower wages and less generous

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28. Social Security Administration, *The 2001 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (March 19, 2001).

29. Another option for raising revenues would be to increase the maximum level of earnings subject to the payroll tax.

**Figure 18.**  
**The Payroll Tax Rate for Social Security, 1937-2000**



SOURCE: Social Security Administration.

NOTE: The payroll tax rate includes both employee and employer payments.

fringe benefits.<sup>30</sup> Workers would also bear most of the burden of any increase in the tax rate.

Raising the payroll tax rate would reduce the marginal return from working (that is, the return from an additional hour worked). For many workers, raising the payroll tax rate by, say, 5 percentage points could reduce their marginal after-tax compensation by almost 10 percent (compared with what that compensation would be otherwise).<sup>31</sup> Those workers could include people in families in the 28 percent income tax bracket and some low-income workers who already face high implicit marginal tax rates because the earned income tax credit phases out as they earn more.<sup>32</sup>

30. For new evidence and review of the literature, see Jonathan Gruber, "The Incidence of Payroll Taxation: Evidence from Chile," *Journal of Labor Economics*, vol. 15, no. 3, part 2 (July 1997), pp. S72-S101.

31. That would be true for anyone facing a total marginal tax rate on labor compensation of almost 50 percent (such as a federal income tax rate of 28 percent and a state income tax rate of 5 percent, in addition to the 12.4 percent payroll tax for Social Security and the 2.9 percent tax for Medicare).

32. This year, the earned income tax credit (EITC) phases out at a 21 percent rate for workers with two or more children and earnings between \$13,090 and \$32,121. For each additional dollar they earn, workers in that income range lose 21 cents of EITC benefits. Thus, the phaseout imposes a marginal tax of 21 percent on those workers.

**Table 4.**  
**The Payroll Tax Base for Social Security and Average Wages**  
**in Selected Years, 1951-1999**

	1951	1961	1971	1981	1991	1999
Maximum Taxable Earnings (Dollars)	3,600	4,800	7,800	29,700	53,400	72,600
Average Wage for a Worker Covered by Social Security (Dollars)	2,425	3,573	5,754	12,600	20,487	28,948
Maximum Taxable Earnings as a Percentage of the Average Covered Wage	148	134	136	236	261	251

SOURCE: Congressional Budget Office based on data from the Social Security Administration.

Increasing the payroll tax rate would probably reduce the labor supply (compared with keeping the tax rate steady). The size of that effect would depend on how workers responded to the increase. Some information can be gleaned by examining how workers responded to earlier changes in their after-tax wages. Based on past observations, the total supply of labor could decline by between zero and 3 percent for each 10 percent drop in after-tax wages, with virtually all of the response coming from second workers in households that already have one worker.<sup>33</sup> However, responses outside that range are not unlikely.<sup>34</sup>

The effect on GDP of raising the payroll tax rate is less certain; it would depend on what was done with the additional revenues. If the government did not use them for another purpose, those revenues would increase government saving, which could boost national saving. In that case, the impact on GDP would depend on whether the positive effects on economic growth from more national saving outweighed the negative effects on the labor supply. Moreover, the decline in interest costs associated with lower federal debt could allow policymakers to reduce the payroll tax rate in the future, which could have a positive long-term impact on the economy.

33. Congressional Budget Office, *Labor Supply and Taxes*, CBO Memorandum (January 1996).

34. Raising the payroll tax rate could increase hours of work or intensity of work among people who earn more than the maximum level of taxable earnings. The tax increase would reduce their income but not their marginal incentive to earn an extra dollar. As a result, they would have an incentive to work a little more to make up for the lost income. In addition, increases in the payroll tax would have a smaller effect on the supply of labor than the estimate cited in the text if they increased workers' expectations of future benefits.



By contrast, if the extra payroll tax revenues were used to finance more government consumption spending, national saving would not rise. Further, because the labor supply would probably fall, the policy would most likely reduce GDP. In that case, the tax increase could make it more difficult for the nation to prepare for an aging population.



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# Appendixes



# The Economic Effects of Having the Government Issue Debt to Finance Investments in the Stock Market

Some proposals for Social Security reform envision having the government issue debt and invest the proceeds in corporate stocks. Such a policy raises concerns about possible government interference in corporate decisionmaking (discussed in Chapter 4). It also raises questions about how such investments would affect the overall economy. Those economic effects are uncertain, however, because they would ultimately depend on how future Congresses allocated the risks and the returns of stock investments among various people.

Such a policy would essentially represent a swap of assets between the public and private sectors. The government would buy shares of stock from private investors and issue Treasury bonds of the same value. Other things being equal, such an exchange cannot create wealth for the government: the value of the stocks in the government's portfolio would exactly match the value of the bonds that it sold to the public.

The investment policy would affect the economy only to the extent that it redistributed income. That redistribution could either increase or decrease saving depending on how the government reallocated the income from the investments. If, for example, current generations received higher benefits when the stock market did well but did not receive lower benefits when the market soured, government investments in stocks would redistribute income toward current generations. That would encourage current consumption, reducing national saving and future gross domestic product.<sup>1</sup> Current generations would be better off because of such a policy, but future generations would be worse off.

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1. Kent Smetters, *Investing the Social Security Trust Fund in Equities: An Option Pricing Approach*, Technical Paper 1997-1 (August 1997), available from CBO's Macroeconomic Analysis Division or at [www.cbo.gov/tech.html](http://www.cbo.gov/tech.html).

The government could also redistribute investment income to people who do not own stocks now.<sup>2</sup> However, the economic impacts of such a policy are uncertain. On one hand, that redistribution could raise interest rates, which might cause some people to save more.<sup>3</sup> On the other hand, it would increase the income of people who save but do not own stocks, which could cause some of those people to save less. The latter effect could be significant: by one estimate, it could cause the private stock of capital to decline by 50 cents for each dollar invested by the Social Security trust funds.<sup>4</sup>

Some people argue that because the government could pool the risks of stock investments broadly over time and among people, it could bear such risks at less cost than individuals can. However, that argument ignores the fact that people already implicitly share the risks and rewards of stock market investments through the income tax system. Indeed, some of the recent improvement in the federal budget can be traced to the rise in the stock market and the resulting revenues from capital gains realizations. Explicit stock investments might produce no additional benefit. Moreover, to pool risks, the government would have to distribute stock losses as well as gains to people who do not hold stocks now. There are doubts that the government would really do that, especially since many of those people have low income.

In addition to the effects on saving and risk sharing, government investments in the stock market could raise interest rates on government debt and reduce returns on stocks. Those possibilities stem from the fact that to induce private investors to buy additional government bonds instead of stocks, interest rates on bonds would have to rise relative to those on stocks.

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2. People may not own stocks for a variety of reasons, including transaction costs (the explicit charges associated with buying or selling stocks as well as the implicit costs of acquiring information about the stock market).
  3. Peter Diamond and John Geanakoplos, *Social Security Investment in Equities I: Linear Case*, Working Paper No. 7103 (Cambridge, Mass.: National Bureau of Economic Research, April 1999).
  4. Andrew B. Abel, "The Effects of Investing Social Security Funds in the Stock Market When Fixed Costs Prevent Some Households from Holding Stocks," *American Economic Review*, vol. 91, no. 1 (March 2001), pp. 128-148.

# Proposals for Private Accounts in the 106th Congress

The table below lists proposals to create private retirement accounts that were introduced in the 106th Congress in 1999 and 2000. (None of the proposals were enacted.) Those bills were among many proposals to change the Social Security program.

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Bill Number	Title of Bill	Sponsors
<b>House Bills</b>		
H.R. 249	Personal Retirement Act of 1999	Mark Sanford
H.R. 251	Strengthening Social Security Act of 1999	Mark Sanford
H.R. 874	Individual Social Security Retirement Accounts Act of 1999	John Porter, Spencer Bachus, Mark Sanford, Ernest J. Istook Jr., Christopher Shays, Nick Smith
H.R. 1793	21st Century Retirement Act	Jim Kolbe, Charles Stenholm, Nick Smith, Cal Dooley, Mark Sanford, Carolyn McCarthy, James C. Greenwood
H.R. 1897	Retirement Security Act of 1999	Thomas Petri
H.R. 3206	Social Security Solvency Act of 1999	Nick Smith, Charles Stenholm, John Porter, Jim Kolbe, Thomas J. Campbell, Mark Sanford, John Shadegg, Patrick J. Toomey
H.R. 5659	Personal Social Security Act of 2000	John Kasich

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(Continued)

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Bill Number	Title of Bill	Sponsors
<b>Senate Bills</b>		
S. 21	Social Security Solvency Act of 1999	Daniel Patrick Moynihan, Robert Kerrey
S. 588	Social Security for the 21st Century Act	Jim Bunning
S. 1103	Personal Security and Wealth in Retirement Act of 1999	Rod Grams
S. 2740	Savings Accounts Are Valuable for Everyone Act of 2000	Mary Landrieu
S. 2774	Bipartisan Social Security Reform Act of 2000	Judd Gregg, Robert Kerrey, John Breaux, Charles Grassley, Fred Thompson, Charles Robb, Craig Thomas
S. 3200	Social Security KidSave Accounts Act	Robert Kerrey, Rick Santorum, Daniel Patrick Moynihan, Charles Grassley, John Breaux

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**T**he following Congressional Budget Office (CBO) staff played important roles in preparing this publication.

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