

United States General Accounting Office

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GAO

Report to the Chairman, Subcommittee on  
Social Security and Family Policy,  
Committee on Finance, U.S. Senate

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January 1989

**SOCIAL SECURITY**

The Trust Fund  
Reserve Accumulation,  
the Economy, and the



United States  
General Accounting Office  
Washington, D.C. 20548

Comptroller General  
of the United States

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January 19, 1989

The Honorable Daniel P. Moynihan, Chairman  
Subcommittee on Social Security  
and Family Policy  
Committee on Finance  
United States Senate

Dear Mr. Chairman:

In your letter of August 8, 1988, you asked us to report on the current financing plan for the social security trust funds, as well as the funds' relationship to the federal budget and the long-term health of the economy. You also asked that we discuss policy options with respect to the scheduled accumulation of trust fund reserves.

This letter summarizes our analysis and conclusions which are based on a review of major studies, social security projections, and discussions with experts. Details of the analysis are presented in the appendixes.

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## Background

The Social Security Amendments of 1977 and 1983 moved the Old-Age, Survivors' and Disability Insurance (OASDI) trust funds away from their traditional, pay-as-you-go financing basis toward the accumulation of a substantial, though temporary, reserve. Revenues (mainly payroll taxes) were set higher than needed to cover current expenditures (mainly retirement benefits), causing the trust fund balance to grow.

The primary purpose of these changes was to correct both the short- and long-term financial problems of the OASDI trust funds. In doing so, however, the changes had the effect of causing a large buildup of reserves over the next four decades. These reserves can be viewed as having two components. The first is an amount adequate to cover periods of recession or other relatively short-term fluctuations in income or expenditures. This level of 100 to 150 percent of annual outlays is expected to be achieved in the mid-1990s.

The second component—accumulation of reserves beyond this contingency level—should be seen as an attempt to deal with an abrupt and permanent shift in American demographic patterns expected early in the 21st century. In the 1970s projections incorporating this demographic shift demonstrated that the trust funds had moved out of long-term solvency. This led to the 1977 and 1983 legislation.

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When the baby boom generation starts to retire in about the year 2010, there will be a rising ratio of retirees to workers. That is, there will be relatively fewer workers and more retirees, increasing the economic burden of paying retirement benefits. It was hoped that by starting to accumulate trust fund reserves now, that burden would be eased and spread over several decades. Current projections are that the reserves will peak in about 2030 at around \$12 trillion (over \$2 trillion in today's dollars). Thereafter, the reserve will be drawn down to pay benefits to a continuing higher number of retirees. By around 2040, the reserve is projected to drop to contingency levels, which implies that increased revenues (most likely, higher social security payroll taxes) will be needed to maintain benefit levels.

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## The Nature of Federal Trust Funds

As annual trust fund surpluses accumulate, they are invested in special issue U.S. Treasury securities. That is, the cash receipts that are not currently needed to pay benefits are loaned to the Treasury, which uses that cash to meet its current requirements. Thus the immediate effect of a trust fund surplus is to reduce Treasury's need to borrow from the public. If the rest of the budget is in balance or in surplus, Treasury uses the cash to repay outstanding debt. If the rest of the budget is in deficit, as is now the case, Treasury borrows less from the public than would otherwise be required to finance current operations.

When the time comes for the trust funds to draw down their reserves to pay benefits (as will happen for social security beginning in about 2030), the process is reversed. For the trust fund to have the cash needed to pay currently scheduled benefits, Treasury must repay (with interest) what it has borrowed from the trust fund and must raise that cash somewhere else. This means that unless the rest of the government is in surplus, it must either raise taxes, reduce non-social security spending, or borrow from the public.

Understanding the current and long-term implications of the growing, but temporary, social security trust fund reserves requires that they be considered both in the context of the present structure of budgeting and in the context of our national and international economic situation.

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## The Budgetary Context

From 1968 to 1985, social security trust fund receipts and expenditures were included in the unified budget and in the reported deficit or surplus. In 1983, legislation was enacted to remove social security from the unified budget, effective in fiscal year 1993. In 1985, further legislation

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made the removal effective immediately. Currently, then, budget documents routinely report separate totals for the on-budget programs and the off-budget social security program. At the same time, however, the budget documents routinely combine the on-budget and off-budget financial results and projections into a single series of numbers, labeled the "total deficit."

This combined or total deficit is the focus of the Balanced Budget and Emergency Deficit Control Act of 1985, commonly called the Gramm-Rudman-Hollings (GRH) law. Current GRH targets are set to reduce the total deficit to zero in 1993. Because of this continuing concentration on the total deficit, the statutory removal of social security from the budget has been largely ignored in public discussion and debate on the budget.

When social security was on a pay-as-you-go basis, it had little effect on the budget surplus or deficit because the annual balances of the trust funds were small in relation to the budget as a whole. With enactment of the 1983 Amendments and the resultant accumulation of substantial reserves, however, this has changed. In fiscal year 1988, the social security trust funds had a surplus of \$39 billion. Had the on-budget part of government spending been in balance, this would have meant that the government as a whole was running a combined surplus of \$39 billion. Instead, the rest of the government ran a deficit of \$194 billion. Together with the social security surplus, this produced a combined deficit of \$155 billion.

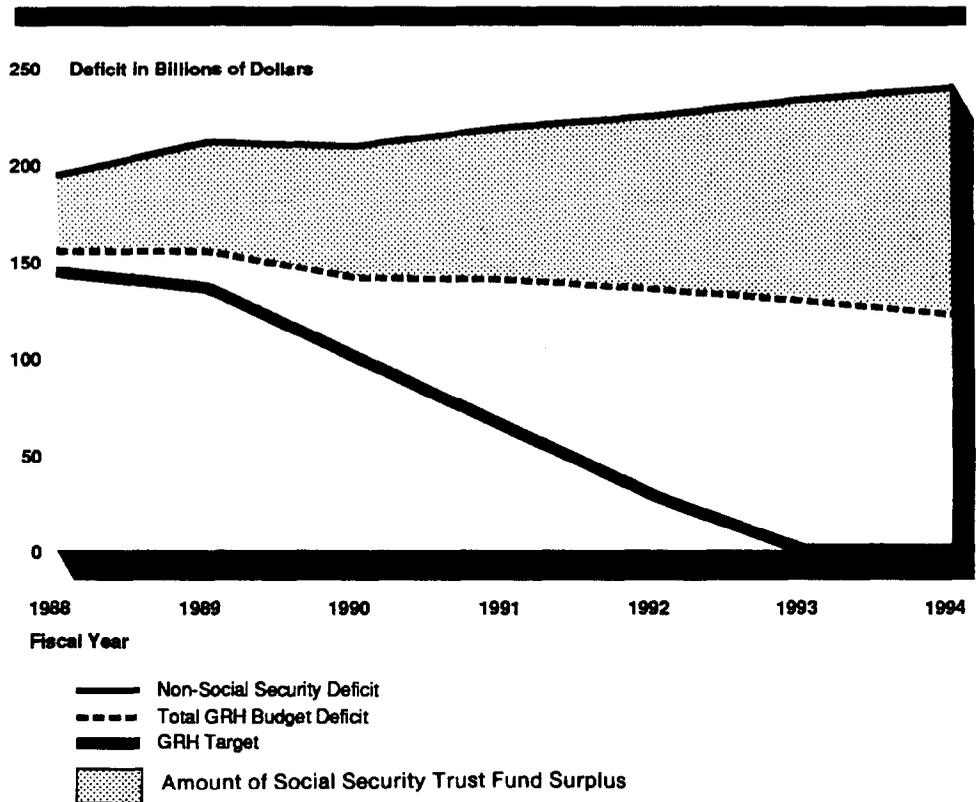
This pattern of very large on-budget deficits, partially offset by social security surpluses, is projected by the Congressional Budget Office (CBO) to continue (see fig.1). For example, projections for fiscal year 1993 show a social security surplus of \$103 billion and an on-budget deficit of \$233 billion, yielding a total deficit of about \$129 billion. By focusing so exclusively on the total deficit, projections of which are declining primarily because of the growing trust fund surpluses, the illusion is created that our budget problems are being solved. In fact, those problems are only being masked by the growing social security surpluses. The budgetary reality is that the increased payroll taxes enacted in the 1983 amendments are being used to finance the current operations of government. This will continue to be true so long as we run on-budget deficits.

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## The Economic Context

In recent years, the United States has had relatively low rates of national saving, net investment, and productivity growth compared

**Figure 1: CBO Baseline Budget Projections** (Fiscal Year 1988-94)



Source: Congressional Budget Office, January 4, 1989.

with other major industrial countries. In the 1980s, the low rate of saving has been depressed further by our very large budget deficits. Financing these deficits has diverted into current consumption savings that otherwise might have financed productivity-enhancing private sector investments. Competition for the remaining savings helped to force up interest rates. This attracted an inflow of foreign capital which, while moderating the budget deficits' adverse effect on investment, was accompanied by an overvalued dollar, a larger trade deficit, and a growing mountain of foreign debt.

In the short run, we must bring down the total deficit. We cannot afford the depression of future economic growth that will result if we continue to channel scarce savings into the financing of large budget deficits. In the longer term, however, lowering the total deficit is not enough. In this

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context, the social security trust fund surpluses present a special opportunity to increase national saving. This should lead to higher productivity and more rapid economic growth. With faster growth, retirement benefits can be maintained for the baby boom generation while also maintaining a higher standard of living for future workers.

In principle, a higher rate of national saving could come in several forms. The only one that is directly subject to government control, however, is the budget. Just as budget deficits are a drain on saving, a budget surplus adds to national saving. As federal debt is repaid, these funds become available for private investment. In this way, the pattern of the 1980s (high interest rates, low investment, capital inflow, and the trade deficit) can be reversed.

Coincidentally, we have an available source of such a budget surplus—the accumulating reserves in the social security trust funds. For the social security surpluses to serve the purpose of adding to national saving, however, they must be accompanied by approximate balance in the rest of the budget, a far cry from the present situation. Without such a balance elsewhere in the budget, the trust fund surpluses will continue only to finance the other operations of government. This will reduce somewhat the current drain on national saving but not eliminate it, much less represent a net addition to saving.

In our view, to accumulate social security reserves (in the context of a budget that is otherwise in approximate balance) as a means of making additional saving available for capital investment is a reasonable and responsible policy. This is so even if these accumulations are not scheduled to continue for more than three or four decades.

Of course, the economic effect of generating a total budget surplus does not depend on whether it comes from a surplus in social security or some other part of the budget. But we believe the public will be more likely to understand and accept a long-term economic growth policy centered on an overall budget surplus if it is tied to the accumulation of social security reserves. Furthermore, there is a logic in having the current working generation save more so that, when it retires, the burden of its retirement benefits will weigh less heavily on the working generation of those future years. This would be particularly advantageous because, in the next century, the ratio of retirees to workers will rise to unprecedented levels.

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Depending on the behavior of the business cycle, the most desirable budget posture of the government from one year to the next may involve either greater or lesser surpluses than are produced by the currently scheduled trust fund accumulations. Over the longer term, other factors may warrant re-examining what level of budget surpluses would be appropriate. For example, shifts in the patterns of personal and business saving could imply the need for total budget surpluses that are either larger or smaller than those projected for the social security trust fund. Nevertheless, we believe that budget surpluses similar in size to the trust fund surpluses now scheduled to accumulate constitute a reasonable and appropriate place to begin a new direction in fiscal policy.

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## Conclusion

In our judgment, the changes to social security enacted in 1983 are not producing the result of lessening the burden of paying for the retirement benefits of the baby boom generation. The budgetary reality is that the payroll taxes are being used to finance the current operations of government and are masking the size of the on-budget deficit. The economic reality is that the trust fund reserves consisting of Treasury securities that are financing current consumption rather than productive investment are illusory. They will remain so until the rest of the government achieves approximate balance between revenues and outlays.

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## Matters for the Consideration of the Congress

There are several options available to the Congress for dealing with the present situation. In our view, the preferable course of action would be to make the accumulation of social security trust fund reserves an economically meaningful process, one that represents a net addition to national saving. This would encourage higher levels of productive investment, higher rates of economic growth, and an economy that could bear the burden of benefits for the retiring baby boom generation without impinging on a growing standard of living for other Americans.

Achieving this goal, however, will require that the budget for the rest of the government be restored to approximate balance. As we have said elsewhere,<sup>1</sup> this will require a multiyear, politically sustainable budget strategy involving some combination of spending restraints and revenue increases. Restructuring the GRH targets, which now focus only on reducing the total deficit (including the social security surpluses) would support the goal of balancing the non-social security budget. In such a restructuring, we believe it would be appropriate to develop separate

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<sup>1</sup>The Budget Deficit (GAO/OCG-89-1TR, Nov. 1988).

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targets for the trust fund (including social security) and general fund parts of the government.<sup>2</sup>

If the Congress and the President are unable to agree upon and implement a strategy for restoring fiscal balance in the non-social security part of the budget, we believe that the Congress should reconsider the pattern of payroll tax increases that is producing the current and projected social security surpluses. To implement this option, it would be appropriate to return the social security program to a pay-as-you-go financing basis once the social security reserves have reached a desirable contingency level of about 100 to 150 percent of annual outlays. Today, these reserves are too meager to cover short-term economic downturns. As we have suggested in previous work, no action should be taken to reduce the rate of reserve accumulation until the mid-1990s. A return to pay-as-you-go would imply reducing payroll taxes below currently scheduled levels beginning in the mid-1990s, but raising them above currently scheduled levels beginning around 2020. This would eliminate the illusory buildup of reserves that now represents little more than a mechanism for using the payroll tax to finance the general operations of government.

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As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 5 days from its issuance date. At that time, we will send copies to cognizant congressional committees, the Secretary of Health and Human Services, the Secretary of the Treasury, the Director of the Office of Management and Budget, and other interested parties.

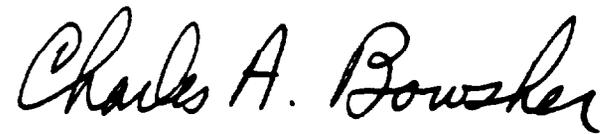
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<sup>2</sup>We also have suggested that the Congress establish separate targets for the capital and operating components of government as well. See Financial Management Issues (GAO/OCG-89-7TR, Nov. 1988).

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This report was prepared under the direction of Joseph F. Delfico, Associate Director. Other major contributors are listed in appendix VI.

Sincerely yours,

A handwritten signature in black ink that reads "Charles A. Bowsher". The signature is written in a cursive, flowing style.

Charles A. Bowsher  
Comptroller General  
of the United States

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**Abbreviations**

AFDC	Aid to Families With Dependent Children
CBO	Congressional Budget Office
DI	Disability Insurance
GAO	General Accounting Office
GDP	gross domestic product
GNP	gross national product
GRH	Gramm-Rudman-Hollings
HI	Hospital Insurance
NNP	net national product
OASDI	Old Age, Survivors' and Disability Insurance
SMI	Supplementary Medical Insurance

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# The Trust Fund Reserve Accumulation, the Economy, and the Federal Budget

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## Introduction

The future financial status of the social security program is attracting increased attention, largely as a result of current projections that show huge reserves accumulating over the next 40 years. Public awareness of the projected accumulation developed gradually following passage of the 1983 Amendments to the Social Security Act. Since then, social security experts and media analysts have begun to write about more frequently and discuss more extensively these projections and their implications for future federal budget policy.

The Congress as well is paying increased attention. In 1988, three major committees held hearings to receive expert testimony on the implications of reserve accumulation and possible policy responses. In addition, two expert seminars were held to discuss the results of technical studies commissioned by the public members of the Board of Trustees of the Old-Age, Survivors' and Disability Insurance (OASDI) program. These studies explored economic, financial, and budget policy implications of the accumulation of large reserves. The focus of social security program debates has changed, away from threatened insolvency in the 1970s and early 1980s and toward the accumulating surpluses.

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## Objectives, Scope, and Methodology

Senator Daniel P. Moynihan, Chairman of the Subcommittee on Social Security and Family Policy of the Senate Finance Committee, asked us to review the current financing plan for social security and discuss its implications, both for near-term federal budget policy and for the long-term health of the economy. In this study, our primary objectives are to explain in nontechnical terms the implications of the current projections, explore the issues raised by these projections, and offer observations we believe will be helpful to the Congress as it deals with these issues. Our focus is the OASDI program, which provides cash benefits to covered workers and their families in the event of the worker's death, disability, or retirement. This program is commonly called "social security."<sup>1</sup>

In conducting our analysis, we reviewed the growing literature and public debate on the relationship among social security finance, the federal

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<sup>1</sup>At its broadest level, social security encompasses not only retirement benefits for retired workers and their dependents but also the full array of income maintenance benefits. This includes Disability Insurance (DI) benefits for those unable to work, Supplemental Security Income (SSI) for the poorer elderly and disabled, Aid to Families With Dependent Children (AFDC) for the nonaged needy, unemployment insurance, and workers' compensation. Broadly defined, "social security" is also used to mean health insurance benefits. Medicare helps meet the cost of hospital and related care through the hospital insurance (HI) program (also known as Part A) and physician care and medical expenses through the supplementary medical insurance program (SMI) (also known as Part B) for the aged and disabled. The Medicaid program covers health care for the needy.

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budget, and the economy. We also considered the views of various individuals and experts who have addressed these matters.

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## The Role of the Trust Funds in Financing Social Security

One key to understanding the current debate over the social security reserve accumulation is to understand the role played in the program's financing by the OASDI trust funds.<sup>2</sup> The trust funds are special accounts maintained at the Treasury. Social security revenues are deposited in these accounts and social security expenditures are paid from them. At any given time the trust fund balances are invested in special Treasury securities, which earn interest. The law provides for five Trustees for the accounts: the Secretaries of the Treasury, Health and Human Services, and Labor and two members of the general public, appointed by the President. The Secretary of the Treasury is the managing Trustee, and is responsible for the day-to-day operation of the accounts.

Each spring, the Trustees prepare an extensive report to the Congress detailing the financial transactions of the funds for the previous year and projecting the pattern of future transactions. Among the latter are estimates of future revenues, expenditures, and balances in the trust fund accounts. Projections are made for up to 75 years hence in order to see how revenues produced by current law compare with expenditures that currently legislated benefit provisions may entail. By using several sets of economic and demographic assumptions, the projections show how sensitive the results, especially for the long-run projections, are to changes in those assumptions. Most discussions of the financial condition of social security use the results from the intermediate economic and demographic assumptions, labeled "II-B" in recent reports.

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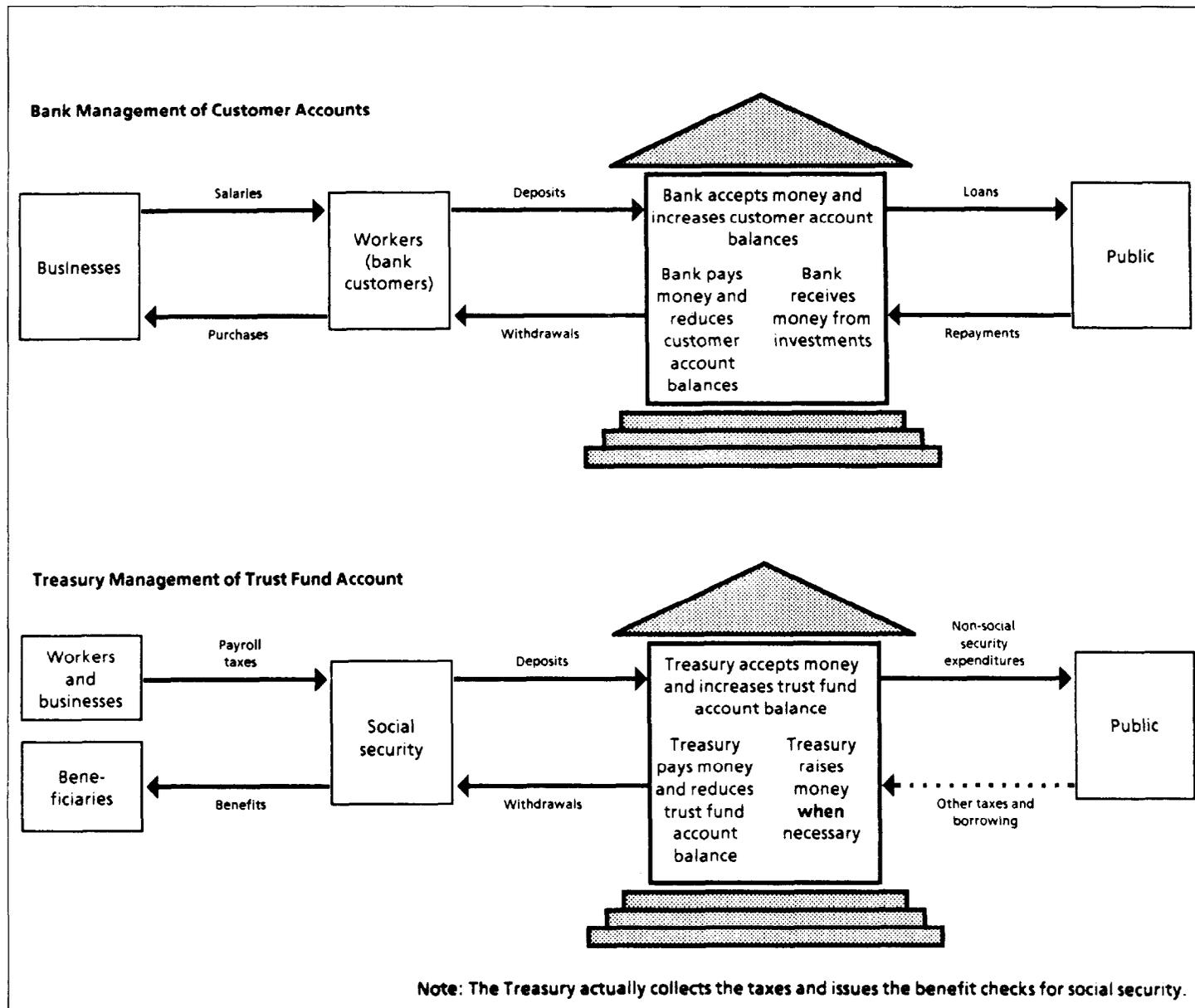
## Treasury Serves as Social Security's Banker

The relationship between the social security program and the Treasury is very similar to the relationship between an individual and his or her bank. The social security program is the depositor, the social security trust fund is the program's bank account and the general fund of the Treasury serves as the program's banker. Thus the role played by the Treasury's general fund is similar to that of other financial institutions, such as banks. (See fig. I.1.)

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<sup>2</sup>Technically, there are two trust funds for the cash benefits program, one for Old-Age and Survivors' Insurance (OASI) and another for Disability Insurance (DI). This report will follow the common convention of discussing these as if they were combined funds being used to account for the receipts and expenditures of one combined OASDI program.

Figure I.1: Comparison of Bank and Treasury Operations



When social security taxes are collected, they are deposited in the general fund and a bookkeeping entry is made, increasing the trust funds' balances. The general fund of the Treasury actually receives the money,

but gives the social security program a claim of equal size on future general fund financial resources. This is also what happens when an individual deposits his salary in his bank.

Social security benefits are paid through checks written on the general fund. In effect, as each check is issued the balance in the social security account is reduced by the amount of the check. A bank would follow the same procedure when issuing a cashier's check on behalf of one of its depositors. In either case, it is the financial institution (the Treasury or the bank) that must come up with the cash necessary to cover the check at the time the check is written; the depositor (social security or the individual) is merely drawing down the balance in the account.

Another similarity is that both social security and the individual earn interest on their account balances, although the mechanics of the interest payment to the trust funds differ slightly from those of such a payment to checking account holders. Instead of simply crediting the trust funds with periodic interest payments, the balance in the social security trust fund is "invested" in special, interest-bearing obligations of the general fund of the Treasury. In effect, the Treasury handles social security's account balance the same way a bank handles the account balance of customers who prefer to "invest" in the bank's certificates of deposit instead of simply opening a checking account.

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## Types of Federal Debt Differ

In adding up the various liabilities of the Treasury's general fund, a distinction usually is made between debt held by the general public and debt held by other government agencies. In effect, the debt held by other government agencies represents the aggregate amount of the balances in accounts such as the social security trust funds, while the debt held by the public is owed to nongovernmental entities. With certain relatively minor exceptions, the figure the Congress votes as a debt ceiling applies to the sum of both kinds of debt.

In considering the effect of the Treasury's operations on the economy in a given year, changes in debt held by the public probably are more meaningful than are changes in total debt. In borrowing from the public, the Treasury taps into resources that might otherwise flow into productive private sector uses. Increases in general fund debt held by government accounts—such as occur when the social security trust funds balances are rising—are important to the extent they signal future demands for general-fund cash resources, but by themselves have no effect on the rest of the economy.

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## Trust Fund Accounting Assures Social Security Is Self-Supporting

Social security is not authorized to pay benefits if the balances in the trust funds are insufficient to cover issued checks; social security may not overdraw its account with the general fund of the Treasury. Maintaining this separate account serves to underscore the principle that the social security program is intended to be self-supporting. Social security revenues are derived primarily from taxes levied on workers' earnings and employers' payrolls. The program operates on the premise that these tax revenues will be used only to pay social security benefits. Also, the Congress has repeatedly rejected proposals that would place significant reliance on revenues from sources other than the social security taxes (and interest) to support the program's expenditures.

By mandating the use of a separate trust fund to account for social security's financial transactions, the Congress assures that sums collected through payroll taxes are available to finance program expenditures. This assurance is similar to the assurance given to the individual who deposits his salary in his bank that his money will be available for purposes he subsequently selects. In neither case is the actual cash held or invested separately by the financial institution. Rather, the depositor is given a claim on the institution's future financial resources.

The separate trust fund account also facilitates public and congressional vigilance in assuring that the revenues earmarked for support of the social security program will be sufficient to finance social security expenditures. That is, the program will continue to be self-supporting.

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## Projections Show Account Balance, Not Fiscal Operations of the Treasury

Just as an individual must be sure that the balance in his checking account will always be sufficient to cover the checks he or she is planning to write, the Congress must be sure that the balances in the social security trust funds will be sufficient to cover the future benefits it is promising to pay. The projections of the operations of the social security trust funds are made in large part to serve this purpose. They give the Congress an early warning system, alerting it to the need to make benefit or revenue adjustments when balances are projected to become insufficient or accumulate more than is desirable. The projections also help assure workers that benefits will be available when they become eligible. Participants in the program can see that the Congress is scheduling the future taxes it believes will be necessary to cover the benefits it is promising. But the projections of trust fund status do not necessarily consider how trust fund financial activity will affect the Treasury. No matter how large a depositor's account balance may be, checks written on that account can be honored only if the financial institution that

holds the account can produce the cash needed to cover the check. Trust fund projections deal with the adequacy of social security's account balance, not how the Treasury will come up with the cash to cover social security's checks when those checks are written.

In the past, individual bank depositors occasionally learned that a large account balance was of little use if the financial institution holding the account became insolvent. The U. S. Treasury is not going to become insolvent, but the steps it must take to raise large amounts of cash—raising taxes, increasing borrowing from the public, or printing money—can have serious undesirable effects on society and the economy. Therefore, the Congress must also be concerned about the effect of future Treasury financing operations that may be required to cover promised social security payments.

Much of the current discussion about the implications of future social security reserve accumulations centers on the effect of these accumulations on the Treasury and on society. In the next several sections, we will discuss the current trust fund projections and ways that the pattern over time of trust fund balances might be altered. Subsequent sections will cover what is known about the effect of the trust fund reserve accumulation on the Treasury's cash flows and, through the effect on these, the effect on our society and our economy.

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## OASDI Financing Principles

For much of its history, social security in actual practice has been financed on a “current cost” or pay-as-you-go basis. This means that annual revenues and annual benefit payments are roughly equal and only a modest balance is maintained in the trust fund.<sup>3</sup> Under pay-as-you-go financing, the basic purposes of the reserve balance are to allow for differences in the timing of receipts and benefit payments and to provide a cushion to give the Congress time to make necessary adjustments in the program when receipts are lower, and/or benefit payments are higher, than had been projected.

The financial condition of the social security trust fund is sensitive to the state of the economy. Unforeseen, a serious recession can cause the balance to fall rapidly, while a boom can cause reserves to accumulate

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<sup>3</sup>Although the pay-as-you-go approach is considered inappropriate for most private sector pension plans, it is generally seen as an appropriate way to finance social security because of the minimal risk that the sponsor of the social security program, the federal government, will go out of business. Indeed, some expert observers feel that pay-as-you-go is the most appropriate way to finance a social insurance program.

more rapidly than expected. A reasonable reserve for unforeseen contingencies is a balance approximately in the range of 100 percent to 150 percent of annual expenditures, according to experts who have reviewed the dynamics of social security financing.<sup>4</sup> A balance of this size, it is believed, allows the system to continue paying benefits through a rather significant recession without the need for the Congress to either reduce benefits or increase taxes until well into the subsequent economic recovery.

A trust fund balance in excess of 150 percent of annual expenditures is larger than is needed for unforeseen contingencies. Intentionally accumulating such a balance represents a departure from pay-as-you-go financing and a movement toward what is usually referred to as a partial reserve financing basis.

Projections of the longer-run status of the trust funds tend to focus either on (1) the relationship between projected reserves and projected expenditures or (2) comparisons of projected income and projected expenditures, averaged over a period of several years. The first relationship, usually referred to as the "reserve ratio," is measured by calculating the ratio of projected reserves at the end of a year to the projected expenditures for the following year. This ratio allows one to see how projected reserve levels compare with those deemed desirable for dealing with unforeseen contingencies.

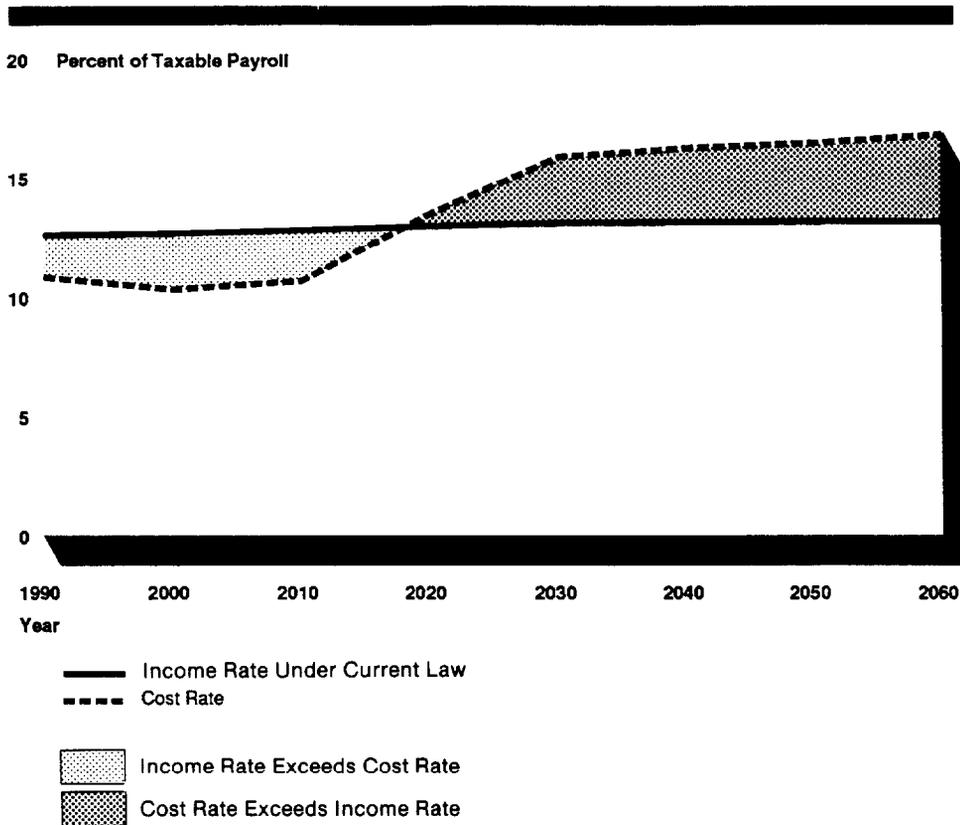
To compare income and expenditures, usually the projection of each is expressed as a percentage of the projection of total earnings subject to the social security tax. The ratio of income to taxable payroll often is called the income rate and the ratio of expenditures to taxable payroll, the cost rate (see fig. I.2). In the most recent long-range projections, the income rate (which includes interest as well as payroll taxes) over the next 75 years is projected to average 12.94 percent and the cost rate is projected to average 13.52 percent.<sup>5</sup> The difference between these two rates is called the actuarial balance. In these projections, the system has a long-run actuarial deficit equal to -0.58 percent of payroll.

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<sup>4</sup>For example, Alicia Munnell and Lynn Blais, "Do We Want Large Social Security Surpluses?" New England Economic Review, Sept./Oct. 1984, pp. 5-21, and Social Security: Past Projections and Future Concerns (GAO/HRD-86-22, Mar. 11, 1986), pp. 60-61.

<sup>5</sup>The Annual Report of the Board of Trustees of the Old Age, Survivors' and Disability Insurance Trust Funds, Washington, D.C., May 1988. Note that these are so-called II-B (intermediate) assumptions; other assumptions produce results that can be quite different, especially as regards the status of the system some 50 years from now. However, a discussion of the various different assumption sets is not within the scope of this report.

Figure I.2: Income and Cost Rates for  
 OASDI Alternative II-B (1990-2060)



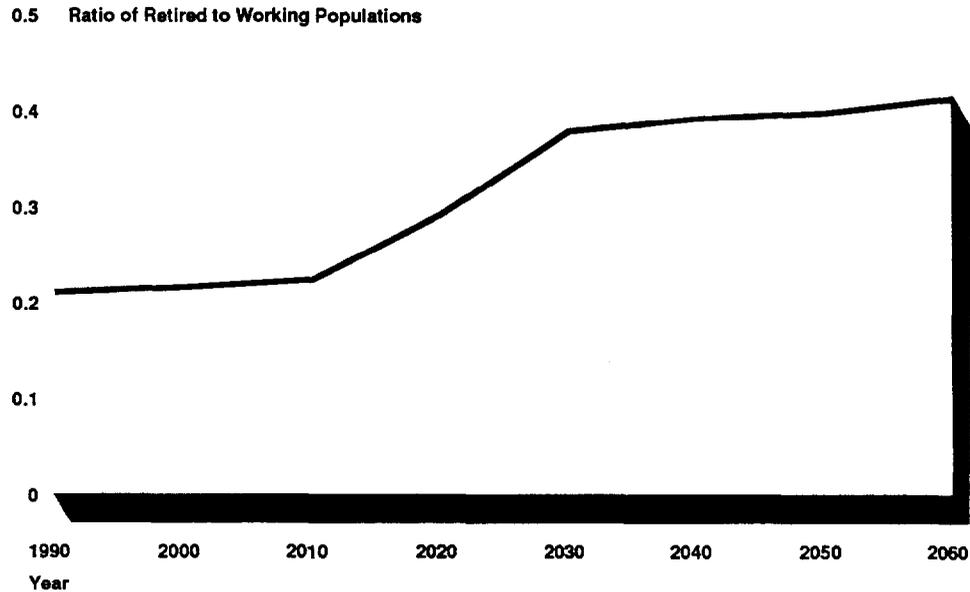
Note: OASDI tax rates shown here include both employer and employee contributions.

Source: OASDI, The 1988 Annual Report of the Board of Trustees, p. 70.

### Changing Demographic Patterns Affect Future Costs

The social security cost rate is expected to rise significantly in the next century because of a projected increase in the aged dependency ratio (see fig. I.3). The latter is the relationship between the number of persons aged 65 and over and those aged 20-64. By and large, total benefit payments rise in line with increases in the number of aged persons, while total earnings subject to social security tax rise according to the number of persons aged 20-64. The number of persons aged 65 and over will increase faster than the number aged 20-64. This projection is based on the assumptions that birth rates will rise only modestly from today's levels and mortality rates will continue to decline.

Figure I.3: Aged Dependency Ratio (1990-2060)

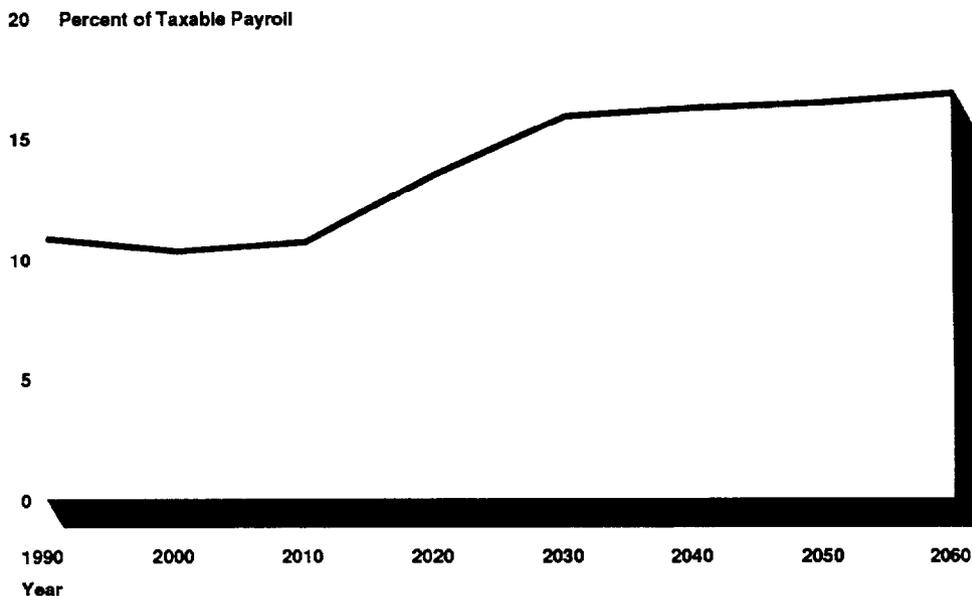


Note: Ratio is calculated by dividing the population of retired persons aged 65 and over by the population aged 20 to 64 years.

Source: OASDI, The 1988 Annual Report of the Board of Trustees, p. 93.

Because of the postwar baby boom, neither the increase in the aged dependency ratio nor the increase in the social security cost rate occur gradually. Rather, costs rise fairly rapidly as the baby boom generation reaches retirement in the years 2011 to 2030 (see fig. I.4). Under the current projections, costs decline only slightly after the baby boom generation passes through the system because continuing mortality improvements coupled with relatively low birth rates keep the aged dependency ratio from falling.

Figure I.4: OASDI Cost Rates (1990-2060)



Note: OASDI tax rates shown here include both employer and employee contributions.

Source: OASDI, The 1988 Annual Report of the Board of Trustees, p. 70,

The effect of a sharp increase in the aged dependency ratio first was introduced into the social security long-run projections in the early 1970s. Also, the economy did not perform as well in the 1970s and the early 1980s as it had in the 1960s. As a result, the balance in the social security trust fund declined significantly. Because of the threat to the trust funds, the Congress responded with significant program changes, first in 1977 and again in 1983.

### Congressional Remedies: The 1977 and 1983 Amendments

Changes introduced in 1977 through amendments to the Social Security Act caused the system to move away from pay-as-you-go financing. They provided for social security tax increases in the late 1980s and 1990s that exceeded the amount needed to finance the benefits scheduled to be paid in those years. But, because of the increase in the aged dependency ratio during the 21st century, the cost rate eventually would rise to exceed the income rate by a substantial amount. Thus, it was projected that the social security trust fund would be exhausted well before the end of the 75-year projection period.

When economic conditions again turned unfavorable in the late 1970s and early 1980s, the system's financial condition was again threatened. In 1981, the National Commission on Social Security Reform was appointed to deal with the short- and long- term financing problems of the program. The commission recommended a package of changes that would close the gap then projected for the 1980s between scheduled revenues and scheduled benefit payments. It also urged that additional changes be enacted to produce a balance between the 75-year revenue and expenditure projections. In enacting the 1983 Amendments to the Social Security Act, the Congress took the Commission's recommendations for dealing with the immediate problem almost without alteration. And by increasing the retirement age, it voted to close the remaining gap in the long-range projections.

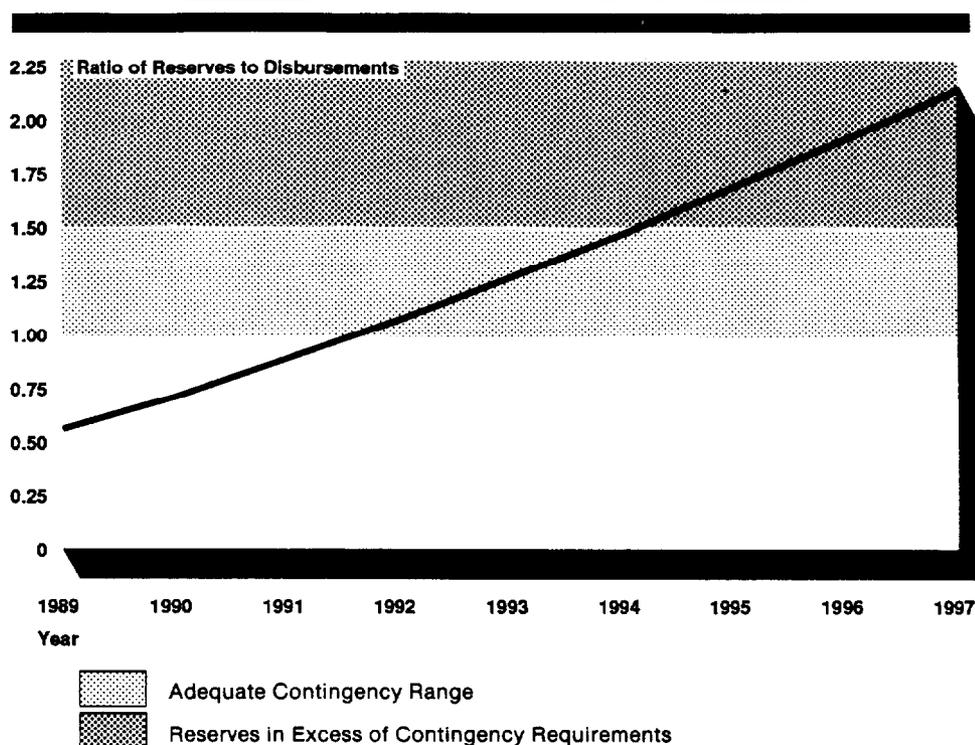
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### Large Reserve Accumulation Now Projected

Until 1983, the balance in the social security trust fund declined steadily, but has improved substantially since then. Between 1974 and 1983, the balance in the OASDI fund fell from \$46 billion to \$25 billion and the reserve ratio (the ratio of reserves to expenditures) dropped from 66 to 14. The condition of the trust funds improved significantly, however, after 1983. This was largely the result of the changes introduced by the 1983 Amendments, although better-than-expected economic conditions helped to accelerate the recovery. By the end of 1987, reserves had increased to \$69 billion, some 31 percent of projected 1988 expenditures.

The Trustee's current projections show that the trust fund's reserve ratio should reach 56 percent by the beginning of 1989. At that point, it will be equal to just under 7-months outgo (see fig. I.5). Despite the significant improvement, the balance is still only about half of the amount generally considered to be an adequate contingency reserve. However, if economic and demographic trends match those contained in the intermediate assumptions used in the 1988 Trustee's Report, the balance in the fund will continue to grow. Under these assumptions, the reserve ratio will reach 100 percent in about 1991 and 150 percent in about 1994. Thus, by the mid 1990s reserves should once again reach the levels generally thought to represent an adequate reserve for contingencies.

Figure I.5: Reserve Ratio, Alternative II-B  
 (1989-97)



Source: OASDI, The 1988 Annual Report of the Board of Trustees, p. 83.

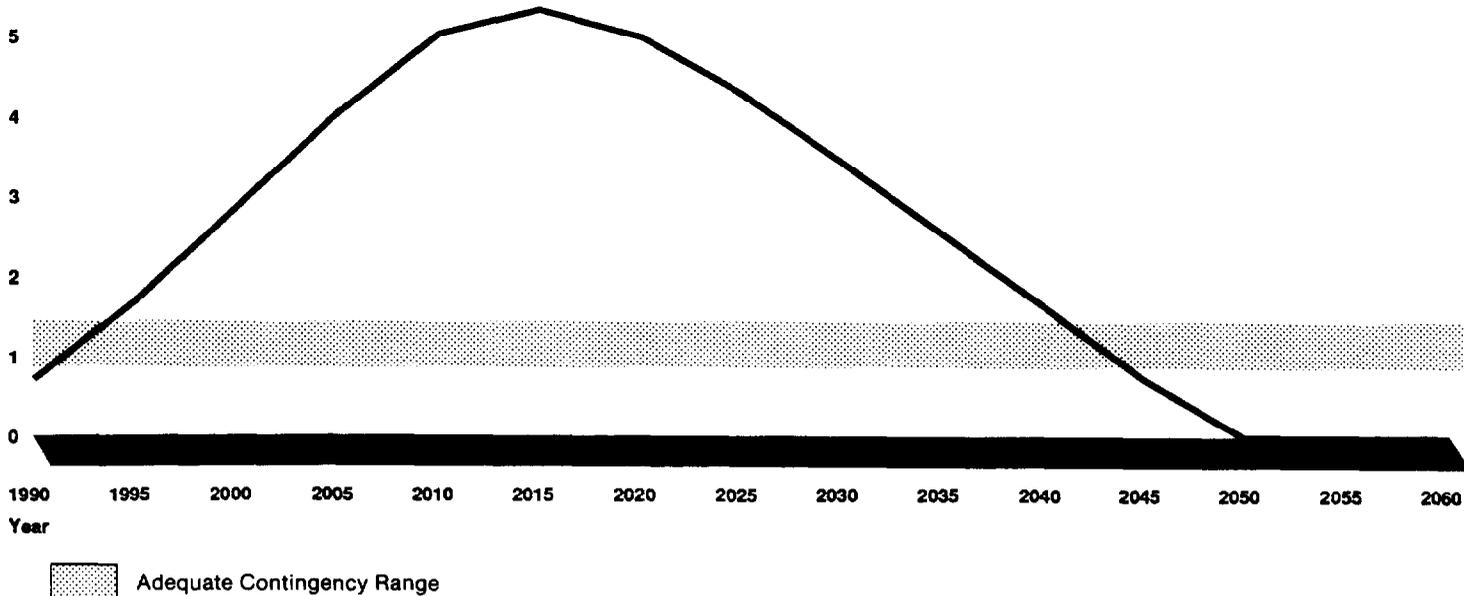
The payroll tax rate is scheduled to increase in 1990 and remain unchanged thereafter. Under the current projections, this results in a payroll tax rate from about 1995 to 2020 that is substantially higher than is necessary for pay-as-you-go financing. As the cost rate rises due to the shifting demographics, however, the payroll tax rate eventually becomes inadequate and the income rate falls below the cost rate (see fig. I.2). Current projections show a combined OASDI system that is in close actuarial balance over the entire 75-year projection period, but the close balance is the result of three decades of surplus followed by deficits thereafter.

Initially, the balance in the fund continues to rise because income substantially exceeds outgo. Under current assumptions, the trust fund balance is more than five times annual expenditures by 2015. The balance in the fund then will continue to rise for the next 15 years, peaking at

almost \$12 trillion in 2030.<sup>6</sup> At that point, the trust fund balance is projected to amount to roughly 22 percent of the annual gross national product. But annual expenditures will overtake annual revenues after 2030, and the balance in the fund will begin to decline rapidly. According to current projections, the reserve ratio will fall below 100 percent sometime after the year 2040 (see fig. I.6). At that time, either additional revenues must be found or benefits will have to be reduced to maintain a reasonable reserve in the trust funds. The funds are projected to be exhausted in 2048. Thus, benefit payments scheduled to occur after 2048 cannot be made unless tax rates are increased or scheduled benefits are curtailed.

Figure I.6: Reserve Ratio, Alternative II-B (1990-2060)

6 Ratio of Reserves to Disbursements



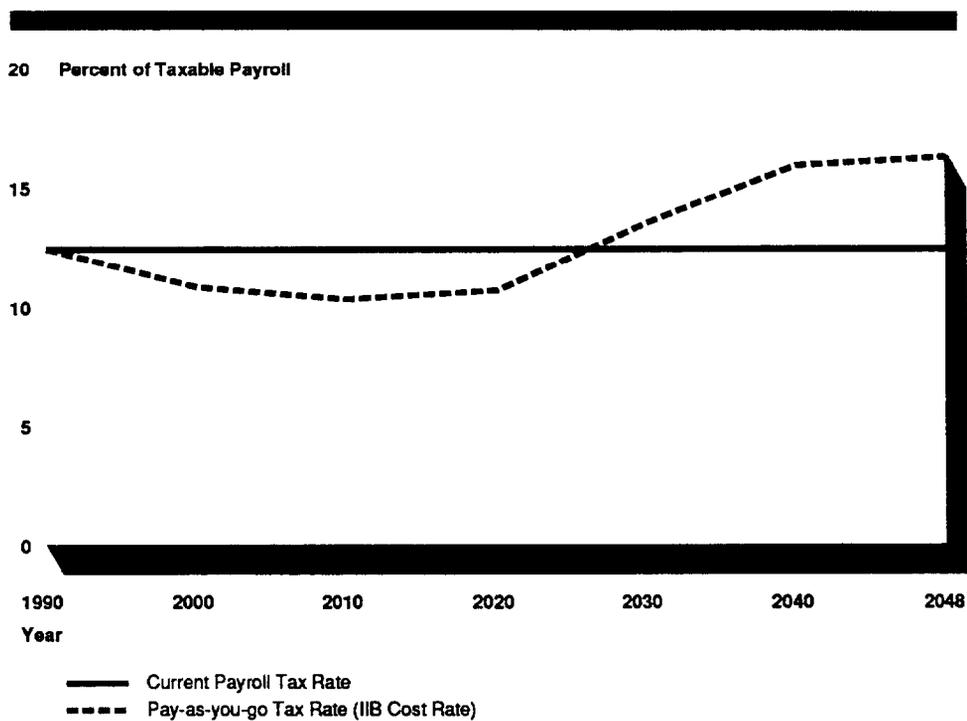
Source: OASDI, The 1988 Annual Report of the Board of Trustees, p. 83.

<sup>6</sup>It is estimated that in real terms (i.e., 1988 dollars) the level of reserves in 2030 will equal \$2.256 trillion. See, David S. Koitz, "The Social Security Surplus: A Discussion of Some of the Issues," Congressional Research Service, The Library of Congress, Nov. 21, 1988.

**Alternative: Return to  
 Pay-As-You-Go Financing**

The current schedule calls for social security payroll tax rates higher than are needed to finance the benefit payments that will be made over the period from roughly 1995 through 2020. On the other hand, payroll tax rates are scheduled to be lower than necessary to finance the benefit payments that will be made between 2020 and 2048. The current financing approach could be called a temporary, partial reserve plan. Over about the next 50 years, the plan maintains reserves at levels in excess of those needed for contingencies. But the accumulation is temporary, because these reserves will be drawn down over the period 2030-2048. As far as the operations of the trust funds are concerned, when the reserve ratio finally falls to the neighborhood of 100 to 150 percent in the 2040 time frame, it will no longer matter that the reserve was once accumulated. The system will have returned to a pay-as-you-go basis.

**Figure I.7: Current Law Versus Pay-As-You-Go Payroll Tax Schedules**



Note: The social security trust fund is projected to be exhausted in 2048 under current law. OASDI tax rates shown here include both employer and employee contributions.

Source: OASDI, The 1988 Annual Report of the Board of Trustees, p. 70.

If the system was to be operated on a pay-as-you-go basis over the next 75 years, social security payroll tax rates could be reduced below currently scheduled levels as soon as the reserve reached an acceptable contingency level. Thereafter, the payroll tax rates would be set so that the revenue stream followed roughly the same path as the projected cost stream (see fig. I.7).<sup>7</sup> Thus, payroll tax rates would be lower than currently scheduled between roughly 1995 and 2020, but thereafter would be higher than currently scheduled. Presumably, payroll tax rates under the two approaches would be roughly similar in the second half of the 21st century, when the system would be on a pay-as-you-go basis under either financing plan.<sup>8</sup>

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### Treasury Cash Needs Probably Similar Under Either Approach

One major difference between the two plans is the timing of payroll tax rates. Under the current schedule, the rates will be higher than pay-as-you-go in the first 20 years of the 21st century, but lower in the next 28 years of that century. This difference in payroll tax rate patterns should not be confused with the effect of the two plans on the financial flows of the Treasury's general fund, however. Under either approach, the general fund will have to come up with sufficient cash to cover the benefit checks at the time they are issued. Changing from one financing plan to the other should have little if any effect on the pattern of social security expenditures or the amount of cash the Treasury must raise for this purpose in any given future year.

With respect to Treasury cash needs, the major difference between the two plans involves the source of the Treasury's cash:

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<sup>7</sup>Such an approach has been suggested by Robert J. Myers, former Chief Actuary of the Social Security Administration.

<sup>8</sup>The tax that most people think of as the social security payroll tax is divided between the OASDI program and the hospital insurance portion of the Medicare program. Although the HI program is generally not considered a part of the current debate over the social security reserve accumulation, it may play a key role in the debate in the near future.

HI financial transactions are handled through a separate trust fund. Current projections of the effect of the current legislation show the balance in the HI fund beginning to decline in the late 1990s and the fund becoming exhausted in the first decade of the 21st century. If these projections are accurate, sometime in the 1990s the Congress will have to adjust the provisions controlling this program's benefits and/or revenues. Given the projected healthy status of the OASDI program in the mid-1990s, some have suggested that at that time a portion of the revenues scheduled to go to OASDI be diverted to HI to prevent insolvency in the HI fund. This would allow HI revenues to be increased without increasing the total social security payroll tax rate. However, because it reduces the revenues scheduled to go to OASDI, its effect on the OASDI program is similar to the effect of returning to pay-as-you-go financing.

- Under pay-as-you-go financing, the cash derived from payroll tax revenues in any given year should be sufficient to cover the benefit payments in that year.
- Under the temporary, partial reserve approach, social security will generate excess cash during the time the reserve level is growing.

Under this latter approach, depending on the status of the budget as a whole, cash can be used either to retire outstanding debt being held by the public or as a substitute for cash that would otherwise have to be borrowed from the public in order to finance other government activities. However, when the social security reserves begin to decline, the general fund will have to come up with cash to cover benefit checks from sources other than payroll tax receipts. The extra cash will have to come either from borrowing from the public or from revenue sources not associated with the social security program.

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## Economic Implications of the Trust Fund Reserve Accumulation

Over the past quarter-century, the rate of improvement in living standards in the United States has lagged behind that in many other industrial nations. For example, while Japanese workers have enjoyed living standards rising 4 percent annually for the past 15 years, Americans' real wages and family incomes have scarcely changed.

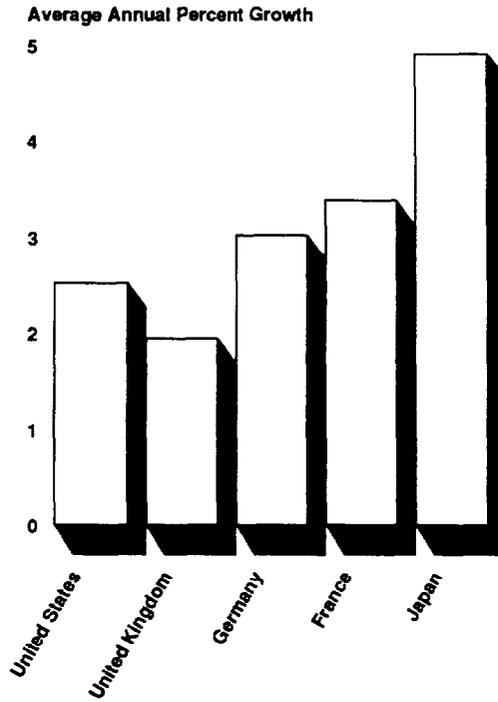
The emergence of large U.S. trade deficits in the 1980s has further stimulated concern about American international competitiveness—the ability to redress our foreign trade imbalance and at the same time to improve our living standards.<sup>9</sup> To achieve both goals, most observers agree, the rate at which U.S. productivity grows must accelerate. History shows that countries that can succeed in boosting the amount of output generated by each worker also usually succeed in lifting the living standards of their workers (see figs. I.8 and I.9).

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<sup>9</sup>George N. Hatsopoulos, Paul R. Krugman, Lawrence H. Summers, "U.S. Competitiveness: Beyond the Trade Deficit," *Science*, Vol. 241, July 15, 1988, pp. 299-307.

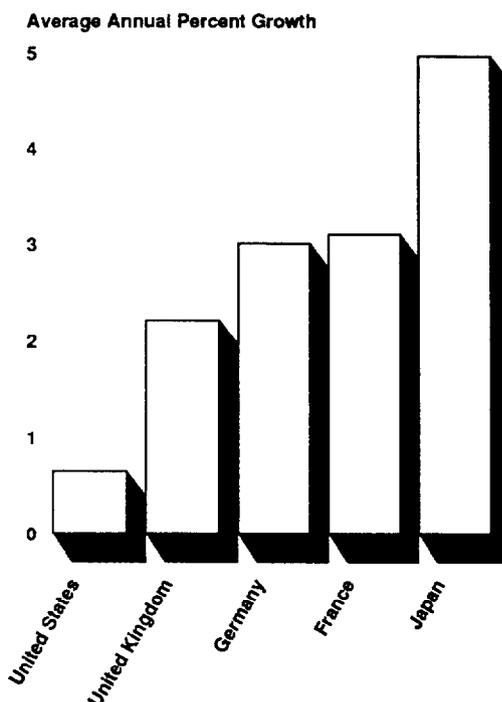
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Figure I.8: Growth in Living Standards for  
the U.S. and Four Other Major Industrial  
Countries (1962-85)



Source: Compiled from statistics published by the Organization for Economic Cooperation and Development, Department of Economics and Statistics.

**Figure I.9: Productivity Growth for the U.S. and Four Other Major Industrial Countries (1966-85)**



Note: Data is based on 1980 prices.

Source: Compiled from statistics published by the Organization for Economic Cooperation and Development, Department of Economics and Statistics.

## Levels of Investment, Saving Are Low

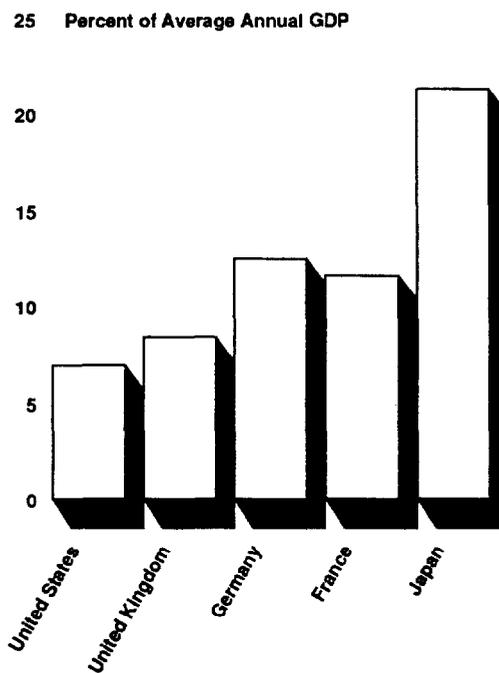
One way the government can increase productivity growth is to increase the rate of net investment in tangible capital.<sup>10</sup> Relative to the number of American workers, the amount of equipment, factories, and other buildings has not grown significantly during this decade.<sup>11</sup> In fact, the share of national income devoted to business investment in new equipment and structures has shrunk to a level smaller than in any other sustained period since 1945. During the period 1960 to 1985, the United States' net national investment rate has lagged behind that of other major industrial countries (see Fig. 1.10). Similarly, investment by government in

<sup>10</sup>Tangible capital includes such items as equipment, machinery, factories, and other buildings used in production.

<sup>11</sup>Economic theory concludes that higher investment cannot accelerate productivity growth permanently; that requires a sustained quickening in the advance of technical knowledge. But higher investment can speed up productivity growth over the medium run—a horizon that is still very important for economic policy decisions.

public infrastructure—roads, bridges, and the like—has declined relative to national income as well. In sum, government has not exercised its influence sufficiently to foster investment and thereby productivity growth.

Figure I.10: Net National Investment Rates for the U.S. and Four Other Major Industrial Countries (1960-85)

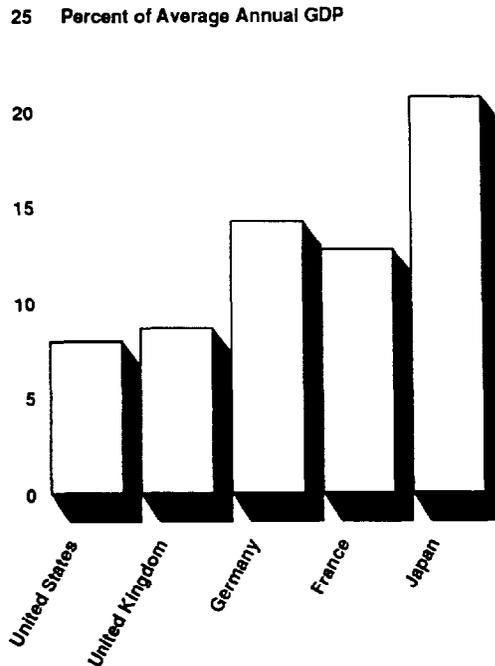


Note: Rates are based on the average annual Gross Domestic Product (GDP).

Source: Compiled from statistics published by the Organization for Economic Cooperation and Development, Department of Economics and Statistics.

Most funds for investment are drawn from the domestic national saving undertaken by individuals, businesses, and government. Yet, despite efforts to stimulate saving through changes in the tax code the share of national income that is not consumed, but saved, has been lower in the United States than in most major industrial countries (see fig. I.11). Over the period 1960-85, it averaged 8 cents out of each dollar. As a nation in 1986 and 1987, the U.S. saved less than 2 cents out of every dollar of income, public and private. This rate of domestic national saving is one-fourth of our 1970s' performance, itself considered inadequate; less than half the British saving rate; one-fifth that of the major industrialized countries; and one-eighth of the Japanese rate.

**Figure I.11: Net National Saving Rates for  
the U.S. and Four Other Major Industrial  
Countries (1960-85)**



Source: Compiled from statistics published by the Organization for Economic Cooperation and Development, Department of Economics and Statistics.

Our low saving rate has also contributed to our trade deficit. Like any nation, if we invest more than we save, we must borrow funds from foreigners to make up the shortfall. As funds flow in from abroad, our currency appreciates. This makes U.S. businesses less competitive.

### Do the Trust Funds Contribute to National Savings?

Most economists believe the federal budget is the strongest and most reliable tool the federal government has to affect the amount of domestic national saving and thus the funds available for private investment. When the Treasury needs to borrow from the public to pay for federal expenditures, its borrowing drains the pool of domestic saving, leaving less to finance private investment.<sup>12</sup> Over the past 5 years, federal borrowing has reduced national saving by an amount exceeding two-thirds of private saving.

<sup>12</sup>This conclusion holds when labor and capital resources are fully employed. In a recession, particularly a severe one, government borrowing may "crowd in" or increase private investment, rather than "crowding out" such investment from the credit markets.

When the Treasury takes in more cash than it pays out for government operations, it can redeem some of the Treasury securities the public holds. By reducing the stock of federal debt held by the public, the federal government adds to the pool of domestic national saving. It allows those who had been lending funds to finance federal expenditures to use the cash received from the Treasury to lend to private borrowers seeking financing for new buildings, machines, and technology.

In any given year, the net cash flow of the Treasury is approximately equal to the size of the total budget surplus or deficit. The surplus or deficit in the total budget is equal to the sum of the surplus or deficit in the social security trust funds and the surplus or deficit in the non-social security portion of the budget.

This total budget deficit or surplus, then, determines whether Treasury financial operations add to or subtract from the amounts available for private investment. That is, the amount available for private investment depends on the position of the total budget, which depends in turn on the position of the social security trust funds as well as that of the non-social security budget. If the trust funds run a surplus while the non-social security budget is balanced, the total budget will be in surplus. Treasury operations will result in an increase in national saving. If, however, the trust funds run a surplus while the non-social security budget experiences a deficit as large or larger than the social security surplus, the total budget will be in balance or deficit. National saving will not be increased. Instead, the social security surplus will be just one of several sources the Treasury uses to obtain the cash needed to cover its non-social security budget deficit.

The scheduled buildup of large reserves in the social security trust funds presents an opportunity to lift the national saving rate and to quicken advances in productivity and living standards. The peak annual surplus in social security, projected for 2008, represents 2.25 percent of GNP. If translated fully into higher national saving, this would constitute a major increase in national saving, compared with its current share of approximately 2 percent of GNP. But this chance for the United States to save more would be squandered if the rising social security surplus were offset by a rising deficit in the rest of the budget. That is, social security surpluses can raise national saving, if changes in the size of the social security funds translate into changes of equal size in the net cash flow of the Treasury.

We cannot, of course, increase our saving rate while consuming the same share of our income. To free up resources for capital formation, we must reduce the fraction of national income consumed each year.<sup>13</sup> After a time, however, the increased investment will have augmented our capacity to produce sufficiently, then consumption levels can rise above those previously possible. This will be true even if saving continued at its new, higher rate.

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## Analyses Estimate Effects of Accumulation

Several recent studies have examined the effect of the scheduled social security reserve buildup on productivity and the economy.<sup>14</sup> Employing empirically-based models that reflect postwar historical relationships in the U.S. economy, analysts confirm that the scheduled social security accumulation can increase future economic well-being, if the surpluses translate into higher saving. One major study, for example, projects national output for the year 2020 to rise by 2 to 4 percent above the level it would reach without the saving increase.<sup>15</sup> The total amount of tangible capital and the real wage rate increase as well. This means that if the non-social security part of the federal budget is kept roughly in balance, the social security surpluses can help restore our international competitiveness and generate a higher level of national income in the first third of the 21st century.

When the rising number of retirees and their dependents push up social security benefit payments early in the next century, the Treasury will have to obtain the cash needed to pay them. It can do so, as indicated earlier, from higher social security taxes, from increases in other taxes, or by borrowing from the public. At the very least, the impact of such measures on the after-tax income of tomorrow's workers will be lessened if steps are taken to ensure that the trust fund reserve buildup

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<sup>13</sup>The analytical perspective adopted in this report focuses on the long-term growth of productivity and national output. In the short run, however, a shift to a higher saving policy by means of a more restrictive budget policy could have effects on aggregate demand leading to lowered growth of output and employment. Other policy adjustments, notably less restrictive monetary policy, may mitigate such negative effects.

<sup>14</sup>H. Aaron, B. Bosworth, and G. Burtless, Final Report to Social Security Administration, U.S. Department of Health and Human Services, on Contract No. 600-87-0072 to the Brookings Institution, 1988. See also H. Aaron, B. Bosworth, and G. Burtless, Can America Afford to Grow Old? Paying for Social Security, Brookings Institution, Washington, D.C., 1989.

J. Anderson, R. Kuzmack, D. Moran, G. Schink, D. Jorgenson, and W. Perradin, Study of the Potential Economic and Fiscal Effects of the Assets of the Social Security Old-Age and Survivors Insurance Trust Funds, Final Report Submitted to U.S. Dept. of HHS, Social Security Administration, Lewin/ICF, Inc., May 1988.

<sup>15</sup>Aaron, Bosworth, Burtless, Final Report to Social Security Administration, 1988.

currently scheduled will be translated into new saving. If this is done, at least one analysis suggests, the economy will grow fast enough to offset entirely the cost effect of the rising number of retirees on the after-tax incomes of future workers.<sup>16, 17</sup>

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## The Reserve Accumulation and Budget Policy

Without significant changes in revenue or expenditure trends, current budget projections suggest that the only progress we can expect in dealing with the budget deficit will result from the increasing social security surpluses. In fact, if present trends continue, the growing social security surpluses may serve largely to offset growing deficits in the rest of the budget.

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## Social Security and the Budget

Prior to 1986, the operations of the OASDI trust funds were included with the other financial operations (the non-OASDI budget) in what is called the unified budget. The unified budget included all the revenues of the federal government—from social security as well as other sources—and federal expenditures. The unified budget deficit was the difference between total revenues and total expenditures. In 1985, the Congress removed OASDI from the overall budget. However, it retained OASDI revenues and expenditures in the calculation of the deficit for purposes of measuring the progress toward meeting deficit targets set by the Balanced Budget and Emergency Deficit Control Act of 1985. This is commonly known as the Gramm-Rudman-Hollings (GRH) law.<sup>18</sup>

The GRH deficit definition has the advantage of showing approximately the amount of new government borrowing that will be necessary to meet the Treasury's cash needs. This is the amount that the federal government withdraws from the pool of domestic savings available for private sector investment. However, under this measure a surplus in the trust funds can offset—or mask—a deficit in the other operations of the general fund—the non-social security portion of the budget. For example, if the overall budget is in deficit by \$100 billion and the OASDI trust funds

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<sup>16</sup>Aaron, Bosworth, Burtless, Final Report to Social Security Administration, 1988.

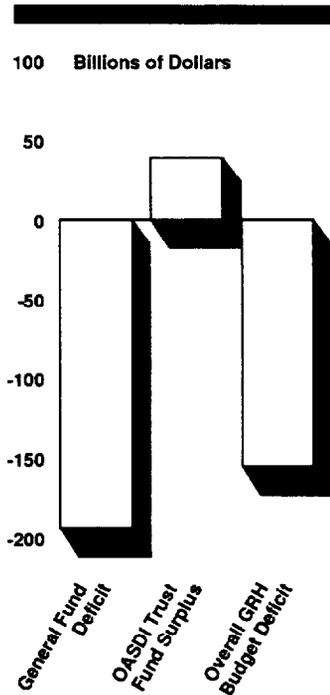
<sup>17</sup>For additional discussion of how a policy to increase saving can alleviate the burden of social security on future workers, see app. II.

<sup>18</sup>As part of the 1983 Amendments to the Social Security Act, the Congress voted to remove the operations of the social security trust funds from the unified budget starting in fiscal year 1993. In 1985, Congress advanced to fiscal year 1986 the date at which these trust funds were to go "off budget." Thus, although the technically removed from the unified budget, the trust funds are included in the numbers used to discuss progress relative to the GRH targets—numbers that are the focus of most current debate over federal tax and spending policies.

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are running a surplus of \$100 billion, the budget as measured for GRH purposes is in balance. But the balance is achieved only because the general fund uses the trust fund surplus to mask the shortfall in revenues resulting from a non-social security deficit (see fig. I. 12).

**Figure I.12: Masking Effect of the Social Security Trust Funds on the Budget**  
 (Fiscal Year 1988)



Note: The GRH budget deficit combines the general fund deficit and the OASDI trust fund surplus.

Source: U.S. Department of the Treasury, Financial Management Service, Final Monthly Treasury Statement of Receipts and Outlays of the United States Government, FY 1988.

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## The Current Budget Outlook and the Reserve Accumulation

In fiscal year 1988, the total federal deficit was \$155 billion. Baseline projections released in January 1989 by the Congressional Budget Office (CBO) suggest in fiscal year 1993 the deficit will be about \$129 billion.<sup>19</sup> However, under Gramm-Rudman-Hollings, the deficit target for fiscal year 1993 is a balanced budget.<sup>20</sup>

CBO's projections illustrate the masking effect of current trends on the budget deficit. While the total deficit is improving only slightly in these baseline projections, the social security surplus is growing significantly (see fig. I.13). The projected 1989 deficit of \$155 billion is actually the result of a deficit of \$211 billion in the various accounts included in the current definition of the unified budget and an "off-budget" surplus of \$56 billion in social security. By fiscal year 1993, the baseline deficit of \$129 billion consists of a \$233 billion deficit in the current unified budget accounts and a \$103 billion surplus in social security. In other words, excluding social security, the budget deficit will grow by \$22 billion between 1989 and 1993, CBO projects. But because of the \$47 billion increase in the size of the social security surplus, the total deficit declines.<sup>21</sup>

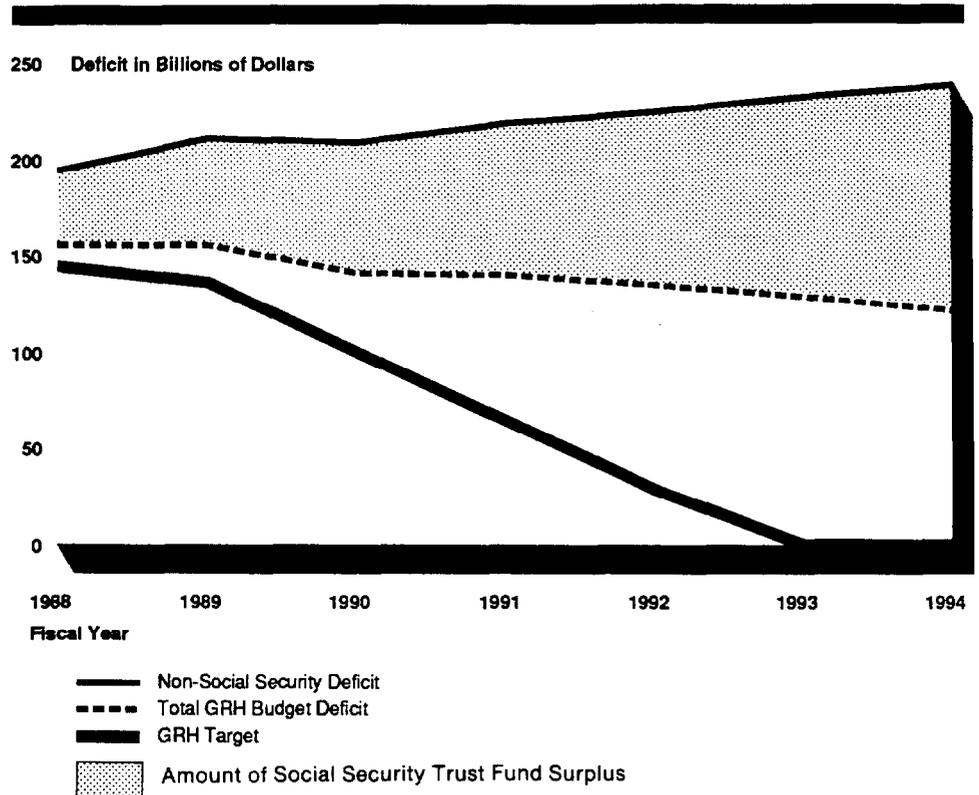
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<sup>19</sup>U.S. Congressional Budget Office, "Summary of CBO's Baseline Budget Projections for Fiscal Years 1990-1994," Jan. 4, 1989. Typically, CBO's periodic baseline budget projections assume that current laws governing taxation and mandatory entitlement spending continue unchanged and that appropriations for the expenditures increase by just enough to offset inflation.

<sup>20</sup>Current budget targets are based on the amended version of the 1985 GRH law, the Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987, which specifies targets for fiscal year 1988 through 1993.

<sup>21</sup>The masking effect also arises in relation to government trust funds other than OASDI. There are a large number of trust funds that are similar to OASDI in that income is earmarked for certain types of expenditures and they contribute annual surpluses to the budget. The three major trust funds other than OASDI are, Medicare, Military Retirement and Civil Service Retirement. In FY 1989, these three funds were expected to add \$57 billion in additional revenues and, including all trust funds, \$65 billion according to August 1988 CBO projections. See U.S. Congressional Budget Office; Economic and Budget Outlook; An Update. August 1988.

Figure I.13: CBO Baseline Budget  
 Projections (Fiscal Year 1988-94)



Source: Congressional Budget Office, January 4, 1989.

## Social Security, Federal Budget Policies Conflict

At this time, the implicit assumptions underlying social security financing policies may not be entirely consistent with those underlying budget policy. In terms of social security, the implicit underlying assumption is that the trust fund buildup will lessen the burden of paying benefits in the first half of the next century. For this to happen, the trust fund surpluses must result in increased national savings. In contrast, under Gramm-Rudman-Hollings, the goal is to balance the total budget. In an era of substantial non-social security deficits, this means that trust fund surpluses are allowed merely to act as another source of spendable cash to fund current governmental needs. In short, social security policy implicitly assumes that the surpluses are a source of increasing national savings, while GRH budget policy allows these same funds to be a source for increased general fund spending.

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## Public Capital Investment Also Can Enhance Economic Growth

Increasing the total budget surplus (or reducing the deficit) is not the only way the federal government can enhance capital formation. It also can do so by increasing the portion of the budget that is public investment.

Traditionally, federal expenditures are treated as if they were composed entirely of current consumption and did not lead to higher future output. However, many federal expenditures—e.g., those for infrastructure such as roads, bridges, and dams—represent capital formation that can contribute to enhanced productivity and economic growth. Deficit spending by the federal government to finance these kind of expenditures may not detract from national saving. Rather, government borrowing for them can be seen as a way of spreading over several years the cost of long-term capital expenditures.<sup>22</sup>

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## Revising the Budget Structure Can Highlight Key Choices

The budget deficit definition used under GRH (or the unified budget definition used before 1986) highlights the net cash flow of the Treasury but hides many other important fiscal relationships. Recently, we proposed that the budget presentation be modified to depict more clearly the various important fiscal relationships within the budget yet still show how they combine to indicate the Treasury's cash financing needs.<sup>23</sup> The total budget would be subdivided into six different constituent parts that, taken together, would sum to an amount very like the total currently counted under Gramm-Rudman-Hollings.

Under our proposal, the budget first would be divided into capital and operating components. Each would then be further divided into trust fund, general (federal or non-trust fund), and enterprise (the activities in which the government is sponsoring a government enterprise—e.g. the Tennessee Valley Authority). Each of these elements would have its own revenue, expenditure, and deficit subtotals. (See table I.1).

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<sup>22</sup>Several investment options for surplus trust fund reserves have been suggested. For example see W. Rostow, "For a Public Investment Bank," *New York Times*, July 7, 1988, and "U.S. Social Security Surpluses: Pitfall or Opportunity?" *World Financial Markets*, Morgan Guaranty Trust Company, July 1, 1988.

<sup>23</sup>Comptroller General of the U.S., "The Budget Crisis: Reducing the Budget Deficit and Improving Budgeting Practices," Correspondence to the National Economic Commission, Aug. 3, 1988.

Budget Reform for the Federal Government (GAO/T-AFMD-88-13, June 7, 1988).

Budget Issues: Trust Funds and Their Relationship to the Federal Budget (GAO/AFMD-88-55, Sept. 30, 1988).

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**Table I.1: GAO Revised Budget Structure**  
 (Illustrative Example for Fiscal Year 1987)

Dollars in billions				
Budget component	Accounts			
	Total	General	Trusts	Enterprises
Operating surplus/deficit(-)	\$-96.2	\$-163.1	\$68.0	\$-1.1
Capital financing requirements (net)	-54.2	-57.7	3.7	-0.2
<b>Total financing requirements</b>	<b>\$-150.4</b>	<b>\$-220.8</b>	<b>\$71.7</b>	<b>\$-1.3</b>

For example, we estimate that the \$150 billion deficit reported for fiscal year 1987 actually was composed of a deficit of \$96 billion in operating accounts combined with \$54 billion in capital expenses. Viewed differently, the \$150 billion total deficit was the result of a \$221 billion deficit in the general fund accounts, a \$72 billion surplus in the trust fund accounts, and a \$1 billion deficit in public enterprise accounts.

This approach offers the following advantages:

- Dividing the budget into separate trust fund, general fund, and enterprise fund accounts highlights the relationship between a growing deficit in the non-social security portion of the budget and the growing surpluses in social security. In so doing, it makes clear the extent to which the movement toward budget balance is being achieved at the expense of substantial future government spending promises.
- Dividing the budget into capital and operating accounts emphasizes the extent to which government borrowing can be viewed properly as a reduction in funds available for investment, versus being a means of financing government capital expenditures.
- Summing each of the components to a total deficit similar in concept to the unified budget corresponds in concept to the aggregate cash flow of the Treasury. Such a correspondence between budget totals and cash flow helps to assure honesty in budgeting. Cash needs cannot be hidden by redefinition of budget accounts.

In summary, if done carefully, restatement of the budget into its various constituent subtotals can highlight important relationships hidden in current budget figures without obscuring important relationships that the budget totals now highlight.

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## Conclusions and Matters for Consideration

Over at least the next several decades, the revenues of the social security program are likely to be more than adequate to cover projected program expenditures, according to current projections. At present, the trust fund balances are below the levels generally considered adequate to deal with unforeseen contingencies. Under the assumptions currently used by the funds' Trustees, however, balances should reach adequate contingency levels, 100 to 150 percent of projected annual outlays, sometime in the mid-1990s. As we have recommended in previous work, nothing should be done that would prevent the attainment of these contingency levels in the time period specified.<sup>24</sup> Thereafter, balances will continue to grow so that trust fund reserve levels will accumulate well beyond levels necessary to operate social security on a pay-as-you-go basis.

In the long run, under current projections, reserves stop accumulating about the year 2030. Thereafter, as long as payroll tax rates continue at levels currently scheduled, benefits can be paid only by drawing down the balances in the funds. Sometime around 2040, this strategy will have reduced these balances to the level generally considered necessary to protect the system from unforeseen contingencies. At that point, either revenues must be increased or benefits reduced to keep trust fund account balances adequate.

The current method of presenting budget figures can obscure some critical budgetary relationships and fiscal choices. In particular, the Gramm-Rudman-Hollings measure of the total deficit shows the amount the Treasury will have to borrow from the public to make its required payments, but not how the balance was achieved. That is, the current deficit figure does not reflect undesirable reductions in federal outlays on productive capital or use of surpluses in the trust funds to cover deficits in the general fund—the non-social security part of the budget.

Achieving balance on the total deficit measure would be a marked improvement over the present situation. But unless changes are made in budget policy and budget presentation, the substantial surpluses now projected for the social security program may be used mainly to mask equally large deficits in the rest of the budget. This possibility is troublesome because the current social security financing plan contemplates drawing down from these surpluses to cover benefit commitments in the second quarter of the next century. At that time, the Treasury

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<sup>24</sup>The U.S. General Accounting Office, *Health and Human Services Issues* (GAO/OCG-89-10TR, Nov. 1988).

will have to raise substantial amounts of cash from sources other than the payroll tax to pay social security benefits. Current budget accounting obscures the need for policymakers to focus today on the effect current policies may have on the rest of the government and on the economy.

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### The Reserve Accumulation: An Opportunity to Increase Long-Term Economic Growth

In recent years, domestic savings rates in the United States have been substantially lower than those of many of our major economic competitor nations, and three-quarters of our net savings has been used to finance federal budget deficits. Our net investment rates also have been low. As a result, our productivity has grown more slowly than in many other competitor nations. Net investment would have been even lower had we not imported substantial amounts of capital from abroad. This heavy borrowing from foreigners ensures that an increasing share of the returns on our recent investments will flow back to those foreigners.

In this environment, current projections of future social security financing flows present both a challenge and an opportunity. The challenge is the burden of financing adequate benefits in a society with substantially higher ratios of retirees to workers. The opportunity is to use wisely the excess funds we now expect social security to accumulate over the next several decades. If they are used wisely, future incomes may be increased by enough that coming generations of workers will be able to support the higher number of aged citizens without suffering a decline in their living standards.

Over the next several decades, the scheduled accumulation of social security reserves can reverse the Treasury's current role as a net borrower from the public. Bringing the deficit in the rest of the budget under control can result in a surplus in the total budget. Then the Treasury can use its positive cash flow to redeem some of the maturing government debt now held by the public. This would allow private sector investors to switch their funds from the financing of government deficits to the financing of private capital formation. The ensuing long-term rise in national income would make it more likely that, when social security reserves have been drawn down to their contingency level, future workers will be better able to support the growing number of retirees while maintaining their own standard of living.

But if the social security surpluses are used merely to offset or mask large deficits in the rest of the budget, they will not have added to national savings and thus will have served little real economic purpose.

Indeed, their existence may lull the American people into thinking that our budget problems have been solved. In fact, with general fund revenues continuing to fall short of general fund expenditures, painful and inescapable budgetary choices simply will have been postponed.

Given the string of huge federal budget and international financing deficits we have experienced recently, increasing the amount of domestic saving available for private sector and public investment is especially critical. Accumulating social security reserves as a means to do so constitutes a reasonable and responsible policy, even if these accumulations are not scheduled to continue for more than three or four decades. We recognize that the economic effect of a positive Treasury cash flow—a total budget surplus—does not depend on whether it comes from a surplus in social security or in some other part of the budget. The most desirable net cash flow position for the Treasury may involve either greater or lesser amounts than are produced by the currently scheduled trust fund accumulation. But we believe citizens will be more likely to understand and accept a policy of a budget surplus if it is tied to the accumulation of social security reserves. The amounts now scheduled to accumulate constitute a reasonable place to begin a new direction in fiscal policy.

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### Sounder Budget Policy Needed

From the standpoint of full disclosure and sound budget policy, the public should know more about where budget expenditures are going. As we have recommended in the past, the budget presentation should be changed to draw a clearer line between expenditures for capital projects and expenditures representing operating expenses. Also, the budget should be redesigned to highlight more clearly the relationships among trust fund public enterprise and general fund accounts. As we have proposed to the National Economic Commission, the Gramm-Rudman-Hollings targets should be revised and refined to specify what portion of the budget is to be balanced and the extent to which balance is to be achieved by curtailing capital outlays or increasing the surpluses in trust and public enterprise funds.

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### Matters for Consideration

If the Congress adopts budget reforms that revise the GRH targets to remove the social security trust funds from the deficit totals, it should consider letting the trust fund accumulation continue. By contrast with today's situation, this combination of policies would allow the achievement of real increases in the amount of national saving available for capital formation.

Achieving this goal, however, will require that the budget for the rest of the government be restored to approximate balance. As we have said elsewhere, this will require a multiyear, politically sustainable budget strategy involving some combination of spending restraints and revenue increases.<sup>25</sup> Restructuring the GRH targets, which now focus only on reducing the total deficit (including the social security surpluses) would support the goal of balancing the non-social security budget. In such a restructuring, we believe it would be appropriate to develop separate targets for the trust fund (including social security) and general fund parts of the government.

If the Congress and the President are unable to agree upon and implement a strategy for restoring fiscal balance in the non-social security portion of the budget, we suggest that when the reserve has reached an adequate contingency level the Congress consider revising the social security financing schedule to more closely approximate a pay-as-you-go approach. In this case, payroll tax rates could be reduced below currently scheduled levels beginning in the mid-1990s, but would have to be raised above currently scheduled levels beginning around 2020.

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<sup>25</sup>The U.S. General Accounting Office, The Budget Deficit, GAO/OCG-89-1TR, November 1988.

# How Higher Savings and Economic Growth Rates Can Alleviate the Burden of Social Security on Future Workers

A policy that leads to higher saving and growth in productivity, real wages, and income can offset the effects of the increased future burden of supporting the social security system. In this appendix we consider an example that illustrates the effect of real earnings growth on the after-payroll-tax income of an individual, representative wage earner. Then we briefly discuss in aggregate terms the economic burden of social security. This aggregate analysis is illustrated with results from a recent, computer model-based study of the reserve accumulation.

The burden of social security can be defined as the reduction in an average worker's income after payroll taxes. In 1988, an average worker earned \$19,000 annually and paid an OASDI payroll tax rate of 6.06 percent (all earnings for the average worker are below the taxable maximum). The tax rate will rise to 6.2 percent in 1990 and thereafter.

This 6.2 percent rate is higher than the tax rate that would be required under pay-as-you-go financing. In the mid-1990s the cost rate is estimated at about 10.5 percent. This implies that the payroll tax rate required under pay-as-you-go for an individual would be about 5.25 percent. The difference between the rate currently legislated, 6.2 percent, and the pay-as-you-go rate, 5.25 percent, is about 1 percent of payroll. This goes to build trust fund reserves.

For example, the worker with average earnings of \$19,000 in 1988 would earn a total of \$20,962 in 1995 if his/her earnings grew at the rates assumed in the social security trustee's Alternative II-B projection. After deducting payroll taxes at a 6.2 percent rate, the worker has net earnings of \$19,662. At the pay-as-you-go rate of 5.25 percent, the worker has net earnings of \$19,861. The difference of \$199 is the individual's contribution toward trust fund reserves.

In the year 2040, at the earnings growth rates assumed in the Trustees' II-B projection, the representative worker earns \$39,265 annually. If there were no demographic shift, such as that requiring a higher future payroll tax rate, this worker would continue to pay the pay-as-you-go payroll tax rate of 5.25 percent. This implies an after-tax income in 2040 of \$37,204 and this is the income level at which the worker experiences no increased burden.

Of course, social security costs are expected to rise as members of the baby boom retire. In approximately 2040, a payroll tax rate of about 8 percent will be required to cover projected benefit payments. At this higher tax rate, the worker will receive a lower after-tax income

(\$36,124) than the after-tax income (\$37,204) associated with the 5.25 percent rate. In dollar terms, the higher tax required to finance the additional burden is \$1,080 for the average earner.

However, higher economic growth may mitigate the adverse effect of higher taxes on the future worker's living standard. As discussed, the current payroll tax rate of just over 6 percent exceeds the rate needed to keep the system on a pay-as-you-go financing basis over the next several decades. The resulting extra revenues permit the trust funds to run surpluses. If these trust fund surpluses add to national saving, investment and productivity should increase, permitting future income to rise more rapidly. It is possible, although not certain, that income could rise enough to offset the higher share of income (8 percent) devoted to supporting the social security system and even to provide the worker with higher income after payroll taxes.

For example, if higher saving were to raise productivity so that earnings grew faster than assumed in alternative II-B by one-tenth of a percentage point each year for 30 years (from 2000 to 2030), the gross income of the average worker in 2040 would rise to \$40,483.<sup>1</sup> Deducting the 8-percent payroll tax leaves the worker with after-tax income of \$37,244. This exceeds the amount the worker would have received (\$37,204) had the payroll tax rate remained at 5.25 percent and if economic growth had not accelerated. That is, the worker enjoys a higher living standard in 2040 as a result of higher economic growth during the period 2000 to 2030, even though he/she pays a higher proportion of income in taxes to finance baby boom retirement costs. While the future increase in the payroll tax represents an increased burden on future workers, more rapid economic growth from higher saving now (i.e., from a small reduction in the after-tax income of today's workers) can more than offset the effect of these higher costs on future workers' living standards.

Recent studies of the reserve accumulation consider the economic burden of social security in aggregate terms. For example, the Brookings study investigates the effects of increasing the saving rate and finds that net national product (NNP) in 2040 would be about 3 percent higher than under a baseline policy which kept the saving rate unchanged.<sup>2</sup> In addition, wages of the average worker would be about 5 percent higher.

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<sup>1</sup>This example illustrates the effect of changing only one of many possible assumptions that could affect the analysis.

<sup>2</sup>Net national product (NNP) is gross national product minus economic depreciation of physical capital.

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**Appendix II  
How Higher Savings and Economic Growth  
Rates Can Alleviate the Burden of Social  
Security on Future Workers**

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Despite the modest size of the increase in NNP and worker incomes due to higher saving, these increases are of sufficient size to offset the higher future costs of social security and leave future workers with a higher living standard. In this sense, the burden of social security is reduced.

# Data on Social Security Payroll Tax Rates

Period	Annual maximum taxable earnings	Employer total	Contribution rates (percent)						
			Employee, each			Self-employed persons			
			OASI	DI	HI	Total	OASI	DI	HI
1989	\$48,000	7.51	5.53	.53	1.45	15.02	11.06	1.06	2.9
1990	a	7.65	5.6	.6	1.45	15.3	11.2	1.2	2.9
2000	a	7.65	5.49	.71	1.45	15.3	10.98	1.42	2.9

<sup>a</sup>Subject to automatic increase.

Source: Social Security Administration, Social Security Bulletin, Annual Statistical Supplement, 1987, p. 24.

# Projected Status of Social Security (OASDI) Trust Funds (1988-2050) (Under Alternative II-B)

Dollars in billions

Calendar year	Trust funds' status				Balance end of year	Trust fund ratio (percent) <sup>a</sup>
	Income, excluding interest	Interest income	Total income	Outgo		
1988	\$254.7	\$8.0	\$262.7	\$222.4	<b>\$109.1</b>	<b>41</b>
1989	269.6	11.7	281.4	235.9	<b>154.6</b>	<b>56</b>
1990	293.3	16.3	309.5	252.2	<b>211.9</b>	<b>71</b>
1991	312.4	21.4	333.8	268.6	<b>277.1</b>	<b>89</b>
1992	333.4	26.8	360.3	285.2	<b>352.1</b>	<b>107</b>
1993	355.7	32.5	388.2	302.2	<b>438.2</b>	<b>127</b>
1994	379.0	38.5	417.4	319.8	<b>535.9</b>	<b>147</b>
1995	403.2	44.8	447.9	338.3	<b>645.5</b>	<b>169</b>
1996	429.3	51.6	480.8	357.8	<b>768.5</b>	<b>191</b>
1997	456.3	58.9	515.2	378.6	<b>905.2</b>	<b>214</b>
2000	547.9	83.6	631.5	446.8	<b>1,409.4</b>	<b>285</b>
2005	739.9	146.4	886.3	595.1	<b>2,632.5</b>	<b>404</b>
2010	987.4	250.5	1,237.9	825.8	<b>4,460.6</b>	<b>501</b>
2015	1,302.6	383.7	1,686.3	1,203.7	<b>6,763.0</b>	<b>531</b>
2020	1,730.6	523.2	2,226.2	1,775.4	<b>9,124.3</b>	<b>497</b>
2025	2,220.3	636.7	2,857.0	2,549.4	<b>10,996.2</b>	<b>427</b>
2030	2,898.7	692.0	3,590.7	3,524.5	<b>11,837.5</b>	<b>341</b>
2035	3,788.2	664.4	4,452.6	4,703.2	<b>11,240.0</b>	<b>251</b>
2040	4,937.8	532.8	5,470.6	6,121.7	<b>8,840.4</b>	<b>162</b>
2045	6,422.5	251.8	6,674.3	7,966.8	<b>3,799.4</b>	<b>71</b>
2050	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>

Source: OASDI, 1988 Trustees' Report, pp 83, 84, 141.

<sup>a</sup>At beginning of year.<sup>b</sup>Trust funds estimated to be exhausted.

# Baseline Deficit Projections and Targets (By Fiscal Year)

Figures in billions

	<b>1987 (actual)</b>	<b>1988 (actual)</b>	<b>Projections</b>					
			<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>
Baseline projections								
On-budget deficit	\$170	\$194	\$211	\$209	\$219	\$225	\$233	\$239
Off-budget OASDI surplus	20	39	56	68	79	90	103	117
Total deficit	150	155	155	141	140	135	129	122
Deficit targets	a	144	136	100	64	28	0	a

Source: Congressional Budget Office, January 4, 1989.

<sup>a</sup>The Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987 established targets for fiscal year 1988 through 1993.

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