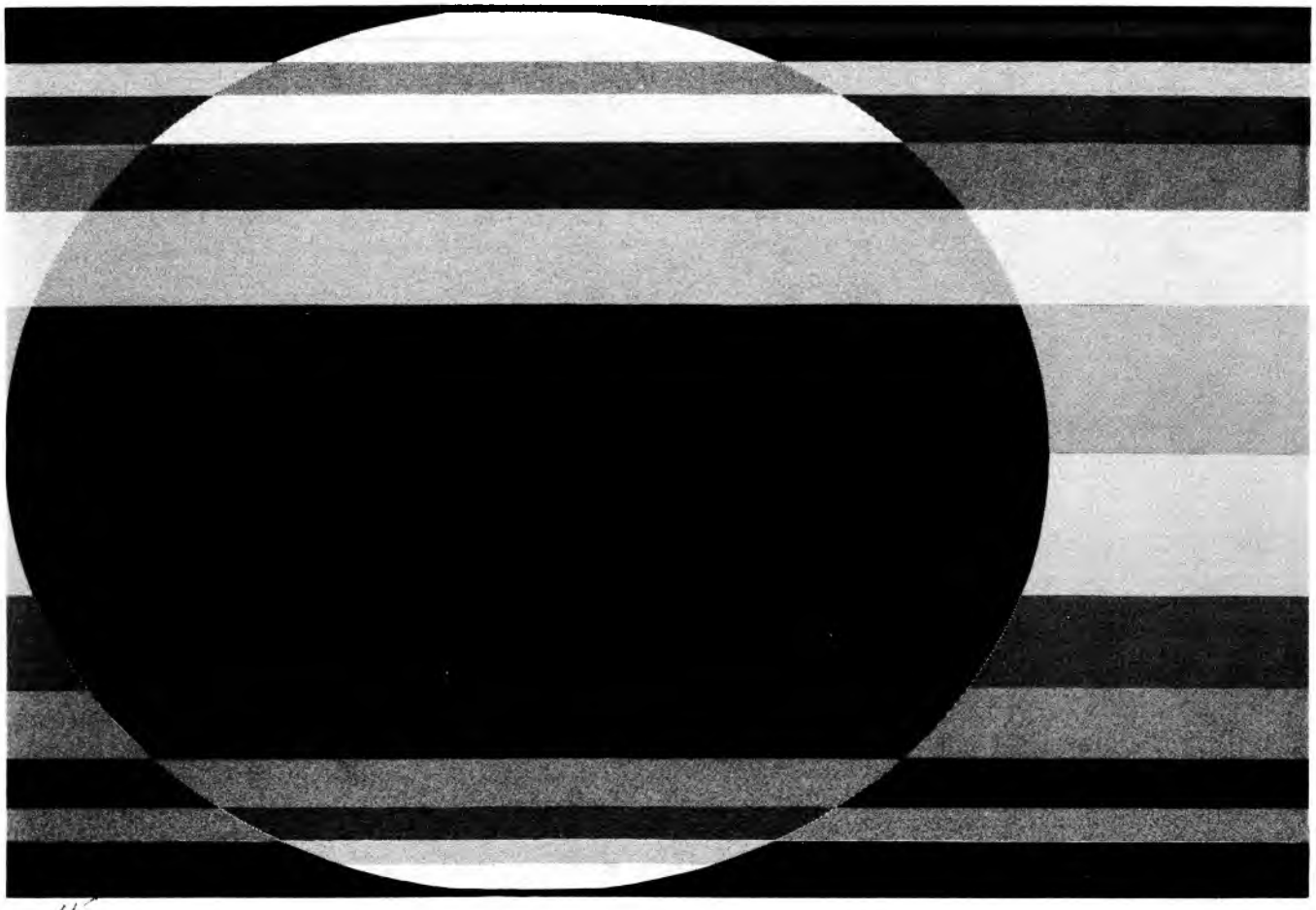
BACKGROUND PAPER

Financing Social Security: Issues for the Short and Long Term

July 1977



Congress of the United States
Congressional Budget Office
Washington, D.C.

FINANCING SOCIAL SECURITY:

ISSUES FOR THE SHORT AND LONG TERM

THE CONGRESS OF THE UNITED STATES

CONGRESSIONAL BUDGET OFFICE

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PREFACE

This year the Congress faces the difficult problems arising from the weakened financial status of the social security system. Because the program is so large -- making up one-fifth of the federal budget and touching the lives of most American households -- changes in the financing structure of social security can have important effects on other parts of the budget as well as on individuals and the U. S. economy in general. Many options are available for closing the projected near-term and long-term deficits in the old-age, survivors and disability insurance program. Financing Social Security discusses some of the major alternatives.

Because the report was prepared before the announcement of the Carter Administration's proposal for refinancing the social security system, the Administration's approach is not considered in detail in the text. An analysis of the proposal, however, has been added as an appendix to the report.

The study was prepared by June O'Neill of the Congressional Budget Office's Budget Analysis Division. The author wishes to acknowledge a number of persons, both at CBO and in other organizations, for their contributions and valuable comments on the report. In particular, thanks go to Robert M. Ball, Lucia Becerra, Jack Besansky, Steven Chadima, Ronald F. Hoffman, James W. Kelly, Mickey Levy, George Merrill, Benjamin Okner, Patricia Pacey, and James Rotherham. The author is grateful to the Social Security Administration for the data and helpful criticism they furnished. The manuscript was edited by Johanna Zacharias and prepared for publication under her supervision. Gwen Coleman typed the several drafts with the help of Marsha Mottesheard, Paula Spitzig, and Anne Benjamin. In keeping with CBO's mandate to provide objective analysis, this report offers no recommendations.

Alice Rivlin
Director

July 1977

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SUMMARY

During the past few years, several government reports have presented an increasingly pessimistic picture of the financial outlook for the social security system. They cite current funding deficits and project dwindling trust funds over the next five years. They also suggest that, during the first half of the next century, sharp increases in payroll taxes will be needed to support projected benefit payments. Not surprisingly, these gloomy prognoses have aroused considerable public concern.

Of course, there is no danger that the system will not continue to make payments to present and future retirees, for unlike a private insurance program, social security benefits are supported by tax receipts. These receipts can always be raised. The real problems involve the mechanics of taxation and decisions about the structure of benefits in the long term.

Social Security benefits are funded largely by current payroll taxes. The trust funds that handle the financing of the cash benefits -- for Old Age and Survivors Insurance (OASI) and Disability Insurance (DI) -- function mainly as accounts into which earmarked taxes are deposited and from which benefits are paid. The reserves held in trust serve primarily to cushion temporary excesses of outlays over revenues.

One consequence of a pay-as-you-go system such as social security is that the financial status of the system is extremely vulnerable to unforseen changes in the population or in the economy. A decline in the growth of wages or employment will reduce payroll tax receipts; an increase in the number of people drawing benefits (whether because they retire earlier or because they live longer) will increase outlays. Since forecasting is an uncertain business, the planning of future tax rates can never be done with any sure knowledge of the size of the tax base or the beneficiary population.

The immediate problem now being faced was precipitated to a large extent by the recession, which reduced payroll tax receipts below expected levels. The possibility of a serious long-range problem (after the year 2010) has been raised as a result of reevaluating projections of the future size of the retired

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population relative to the working population, and from reevaluating the way a certain provision in current law (the so-called "coupled system") can affect future benefits. If no changes were made in current law, these factors would cause total benefits to rise much faster than total taxable wages to pay for them. Because the schedules of benefits and taxes are statutory, changes in benefit and revenue policies must be enacted by the Congress. In the 95th Congress, issues related to both short- and long-run problems are likely to arise.

FINANCING ISSUES FOR THE SHORT TERM

Over the past five years, social security outlays have been growing at a faster rate than revenues. As a result, the balances in the combined OASDI trust funds have fallen from an amount equal to one year's outlays in 1970 to less than half of a year's outlays at the start of 1977.

The economic slowdown of the past few years clearly contributed to the decline. Payroll tax receipts have grown slowly because of the slow growth in real wage rates and because of the high unemployment since 1974. Outlays increased rapidly as a result of a 20 percent across-the-board increase in benefits and because benefits have been tied (since 1975, automatically) to increases in the consumer price index. In addition, the number of beneficiaries grew somewhat more than expected, as workers, faced with poor job opportunities and rising social security benefits, retired earlier than they might have had the economy been stronger. The number of disability insurance beneficiaries has risen faster than can be explained by economic factors alone, which has resulted in a more rapid increase in outlays and a more precipitous decline in the DI trust fund.

Although wages and employment will rise more rapidly with economic recovery, it does not appear likely that these increases could compensate for the erosion that has already occurred. Projections made by the Congressional Budget Office indicate that the balances in the combined OASDI trust funds will be depleted by 1982 or 1983, depending on what it is assumed will happen to economic growth. Considered separately, the DI fund is likely to be exhausted by 1979; the OASI fund between 1983 and 1985.

Because of the immediate vulnerability of the DI trust fund, one temporary measure would be to shift a small portion of the OASI tax to the DI fund. Doing so would require legislation. This shift would not, of course, solve the problem of the less immediate but still pressing issue of the declining balances in the combined OASDI funds.

In principle, the short-run financing problems can be alleviated either by raising revenues, reducing benefits, or some combination of both. Major changes in the benefit structure are likely to be more difficult to agree on and to implement quickly, however, so the primary emphasis in the short run is likely to focus on the provision of additional revenues. Several alternatives are available.

General Revenues Versus Payroll Tax Funding -- Fundamental Choices

Perhaps the most important decision to be made with respect to the short-run financing problem is:

- Whether to rely exclusively on the payroll tax, which has until now been the sole means of funding social security, or
- Whether to use general revenue funding.

The choice involves basic questions about the role of social security.

Those observers who view social security primarily as a compulsory lifetime savings program regard the payroll tax as a mandatory contribution to an earned retirement benefit; they therefore view the payroll tax as the appropriate funding mechanism for the program. Although the link between benefits and contributions is weak, many people feel that public support for the program depends on the link, and indeed many would strengthen it. Another argument for retaining the payroll tax as the sole source of financing social security is that it is believed to encourage fiscal discipline, since legislated increases in benefits must be accompanied by increases in the payroll tax.

Another way of viewing social security is simply as a tax and transfer system, which redistributes income from one group to another. Those observers who stress the income-transfer elements of the program would like to see the source of funding shifted, at least

partially, to general revenues, which are basically derived from the income tax. The federal income tax can be better scaled to ability to pay since it can take account of dependents and other special circumstances of the taxpayer. Moreover, a shift to the federal income tax is preferred by some as a way of increasing the overall progressivity of the federal tax system.

The use of general revenue funding could challenge the present character of the social security program. It may be difficult to justify the use of general revenues to pay benefits that are related to past earnings. Moreover, it could also be difficult to justify the use of general revenues to pay those benefits that conform to the so-called "social adequacy" criteria of social security. No means test is used in determining eligibility for the latter category of benefits and many higher-income persons receive them.

One objection to raising social security taxes in 1978 is that doing so could restrict economic growth at a time when unemployment may still be high. (The same objection would apply to the use of general revenue funding if it were obtained through an income tax increase rather than an increase in the deficit.) Any restrictive effect of a payroll tax increase could, however, be counterbalanced by a reduction in the federal income tax. If an income tax reduction were scaled to benefit low-income families with earnings, the tendency for the tradeoff to result in reduced progressivity of the overall tax system would also be mitigated.

Alternative Ways to Increase Payroll Tax Revenues

There are two ways to increase revenues through the payroll tax. One is a hike in the tax rate. The other is an increase in the taxable earnings base -- i.e., the maximum amount of earnings subject to the tax. And, of course, both alternatives could be combined.

The major considerations in choosing between a payroll tax rate increase and an increase in the tax base are:

- o An increase in the tax base would increase the progressivity of the social security tax. Only families in the top 40 percent of the income distribution would have an earner subject to the increase. An increase in the tax rate would be paid by families at all levels of income, although it would be concentrated among the upper 60 percent of families, who pay most of the social security tax.

- Because relatively few workers earn more than the taxable maximum, it requires a substantial increase in the ceiling to obtain the same amount of revenue that could be derived from a small tax rate increase. To raise as much in taxes, for example, as an increase in the OASDI tax rate from 9.9 percent to 10.9 percent (0.8 percentage point in 1978, and another 0.2 percentage point in 1981) would require a 63 percent increase in the taxable maximum above the increases scheduled in current law. The taxable maximum would rise to $28,800 instead of $17,700 in 1978 and would go up to $42,900 instead of $26,100 by 1983. This would increase from 85 percent to 96 percent the proportion of workers whose total earnings were taxable. Both alternatives would maintain the trust fund balances at more than 36 percent of annual outlays through 1983.

- An increase in the taxable earnings base provides less and less financing assistance, on balance, as time goes on. Since benefits are based on taxable earnings, an increase in the earnings base results in higher benefits in the future for high wage earners, thereby adding to the long-run size and costs of the system.

LONG-RUN FINANCING ISSUES

The long-run financial situation of the social security system depends critically on future fertility rates, the rate of inflation, and the rate of growth of real wages (that is, wages adjusted for inflation). If the current benefit structure is maintained, and if fertility rates stabilize at an average of 2.1 children per woman (this is the rate that would keep population at a stationary level), and if prices (CPI) and real wages rise by 4 and 2 percent a year respectively, social security expenditures are projected to increase to 22 percent of taxable payroll by the year 2030. If tax receipts were set to match these, this would imply a tax burden more than double the current OASDI tax level of 9.9 percent for employees and employers combined.

If the fertility rates stabilize at 1.7, and if prices (CPI) and real wages grow at 5 and 1.25 percent a year, respectively, benefits are estimated to amount to as much as 37 percent of taxable payroll by the year 2030.

One major factor underlying these sharp increases in the tax burden is a projected increase in the ratio of retired to working populations expected to start about 40 years from now. This increase is the result of the swing that has occurred in the birth rate -- from the prolonged baby boom that began after World War II to the very low birth rates of the 1970s. While the fertility rate may rise above its current low of roughly 1.7, it is not expected to rise much above the 2.1 level over the long term.

The other major factor pushing up tax costs is the result of a technical flaw in the 1972 social security amendments. These amendments sought to index the benefits of retired workers so that their benefits would not be eroded by inflation. The amendments do succeed in achieving this worthwhile goal. The particular mechanism used for achieving this goal, however, also results in an unintended overadjustment for inflation of the benefits of workers who will retire in the future. The mechanism adjusts the benefit rate table for determining benefits in such a way that the ratio of benefits to past earnings rises with the rate of inflation. Since the pressure of inflation typically leads to higher earnings for those who are working, and a higher earnings base leads to higher social security benefits, the additional adjustment in the benefit table for price changes is a second adjustment for inflation.

The effect of this overadjustment is cumulative. As a result, the replacement rate -- the ratio of a new retiree's benefit to his earnings in the year before retirement -- may increase dramatically under conditions of persistent inflation. In fact, with persistently high rates of inflation, some retirees could receive benefits that exceed their pre-retirement wages; that is, their replacement rates could exceed 100 percent. Obviously, as replacement rates rise, the ratio of benefit payments to taxable wages grows, and so do the financial pressures on the system.

Options for Revising the Benefit Structure

Because of the potentially serious fiscal consequences of the present system, which is described as being "overindexed," there has been considerable interest in adopting a new procedure to adjust the benefits of existing and future retirees for inflation. One major issue underlying the choice of a new procedure is: How important should social security benefits be in providing income in retirement as the standard of living rises in the future? Should a level of

benefits intended to serve as the primary or sole source of retirement income be the goal? Or should benefits be scaled so that they serve only as a component of retirement income, with transfers filling in for those with low income and with private savings and pensions expected to play an increasing role?

How these questions are answered depends partly on how people's saving and spending behavior are expected to change as economic growth raises their standard of living to ever higher levels. Of course, a high guaranteed social security benefit can itself affect incentives to save and to work and these are additional concerns.

Any change in the benefit adjustment mechanism is likely to influence the amount of benefits and of social security outlays in the future and so will also affect the amount of taxes paid by future workers. Thus, another issue to be resolved for the long run is how to distribute resources between future workers and beneficiaries.

There are many ways to correct the provision in current law that leads to the overindexing of benefits. Two proposals have been made, which reflect two quite different answers to the overall question about the future size and role of social security. One approach is represented by the "Social Security Benefit Indexing Act" (H.R. 14430), proposed by the Ford Administration in 1976. (A similar proposal has been made by the Carter Administration. See Appendix B for a discussion.) Another approach is represented by the Hsiao proposal (H.R. 12334), named for the director of a panel established to advise the Congress on social security.

In general terms, the Ford Administration's proposal seeks to provide a level of benefits to the average new retiree that will always replace the same proportion of past earnings regardless of how high the standard of living of the average retiree becomes.

The Hsiao proposal seeks to provide a benefit that always replaces the same proportion of earnings for workers at the same standard of living. The social security benefit structure is progressive, however, so that the proportion of earnings replaced by benefits declines at higher earnings levels. The Hsiao proposal does not attempt to compensate for this aspect of the benefit structure. Therefore, as the average worker becomes a richer worker, the Hsiao proposal would give him a higher benefit, but not proportionately as high as his earnings.

For example, if wages adjusted for inflation rise by 2 percent a year, the median annual earnings would rise from the 1975 level of $8,600 to about $37,000 by the year 2049 (in terms of today's purchasing power). The Ford Administration's proposal, in contrast, would give the median wage worker retiring in the year 2050 a benefit of about $16,000, which is about the same proportion of past earnings as the median earner would get if he retired today. The Hsiao proposal would give the worker retiring in 2050 a benefit of $8,600, which replaces a smaller proportion of past earnings than is the case for today's median wage worker at retirement.

Because it provides higher benefits than the Hsiao approach, the Ford Administration's proposal would entail higher future expenditures. Under the assumptions of a 4 percent rate of inflation, a 1.75 percent growth in real wages, and a fertility rate of 1.9, the Ford Administration's proposal would result in expenditures equal to 19 percent of taxable payroll by the year 2050. This compares with 29 percent under the present benefit structure and 11 percent under the Hsiao proposal. (The current level is 11 percent.) Thus, unless other measures are taken to reduce outlays, both the Ford Administration's approach and a continuation of current policy mean that social security will consume a much larger share of the nation's future resources than would be the case under the Hsiao approach.

There are, of course, many possible ways to restructure social security benefits. Some observers would combine the features of the two proposals. For example, the average replacement rate could be allowed to decline at first, with the rise in average earnings, as in the Hsiao proposal, but after reaching a particular level, it could be held constant. The Ford Administration's proposal seeks to hold the average replacement rate constant at the level reached in the late 1970s. By that time, however, the replacement rate is likely to exceed 45 percent, which is very high by historical standards: the replacement rate for the median-wage earner averaged around 30 percent over the 20 years prior to 1972.

CHAPTER I. INTRODUCTION

The social security system experienced tremendous growth over the six years, 1970-1976. The number of beneficiaries increased by 26 percent; total benefit payments (adjusted for inflation) rose by 61 percent. In calendar year 1976, social security benefit payments accounted for 4.5 percent of the gross national product, or one-fifth of the entire federal budget. In that year, the system paid out about $76 billion in cash benefits to 33 million persons; recipients included retired and disabled workers and their dependents, and the survivors of deceased workers (see Table 1).

People who currently receive benefits and those who expect them in the future count on social security as an important source of income when they retire. In 1975, for example, an average of about 39 percent of the personal income of individuals aged 65 years or older came from social security.

The financing of social security is handled through trust funds. 1/ Most wage- and salary-earners and self-employed persons make mandatory contributions to the separate old-age and survivors (OASI) and disability insurance (DI) trust funds through earmarked taxes on their earnings. 2/ Unlike private insurance funds, however, the social security trust funds need not hold as assets the accumulated tax contributions of present and future beneficiaries in order to insure the payment of obligations. The power of the government to tax assures that these obligations will be met.

1/ The status of the trust funds is under the charge of the Board of Trustees, which issues an annual report on the financial operation of OASDI to the Congress. The trustees include the Secretary of the Treasury, Secretary of Labor, and Secretary of Health, Education, and Welfare.

2/ Another payment is made into the hospital insurance (HI) fund for medicare hospital benefits.

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TABLE 1. BENEFICIARIES AND CASH BENEFITS IN THE OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAMS (OASDI): SELECTED CALENDAR YEARS 1950-1976

Beneficiary or Benefit	1950	1960	1965	1970	1974	1975	1976
Number of beneficiaries a/ (in millions)							
Total	3.5	14.8	20.9	26.2	30.9	31.9	33.0
Retired workers, dependents, and survivors (OASI)	3.5	14.2	19.1	23.6	26.9	27.6	28.4
Retired workers only	1.8	8.1	11.1	13.3	16.0	16.5	17.2
Disabled workers and dependents (DI)	--	0.7	1.7	2.7	3.9	4.3	4.6
Annual cash benefits (in billions of dollars)	1.0	11.3	18.3	31.9	58.5	66.9	75.6
OASI	1.0	10.7	16.7	28.8	51.6	58.5	65.7
DI	--	0.6	1.6	3.1	6.9	8.4	9.9

SOURCE: Social Security Administration, Department of Health, Education and Welfare.

a/ As of December of each year.

For the most part, the annual flow of tax payments earmarked for the trust funds is used to pay for the current flow of benefits. Thus, social security is essentially funded on a pay-as-you-go basis. The role of the trust funds is to provide a reserve to cushion temporary shortfalls in revenues and also to maintain public confidence in the stability of the program. The minimum level of trust fund balances necessary to provide a temporary cushion is generally considered to be an amount not more than a single year's benefits. Some analysts believe it could be a good deal less.

SHORT-RUN FINANCING ISSUES

Since the financing of benefits depends almost exclusively on the flow of current tax payments, and since payroll tax rates are not continuously adjusted, short-run problems can arise if unexpected economic changes cause payrolls -- and hence tax receipts -- to fall behind benefit commitments. Social security revenues have fallen behind outlays during the past few years primarily as a result of two factors: the slow growth in the average real wage since 1973, and the high unemployment of the recession.

Recovery from the recession will undoubtedly stimulate an increase in payroll tax receipts. Even under optimistic economic projections for the next decade, however, revenues are not expected to rise enough to prevent a continuing decline in the trust fund balances as a percent of annual outlays. The steepness of the expected drop depends on the economic outlook, of course, and differs for each fund. According to the Congressional Budget Office's projections, balances in the OASI trust fund will decline more gradually, falling to between 13 percent and 19 percent of a year's outlays by the start of 1982. In the case of the DI trust fund, the outlook is more pessimistic, since outlays in this program have risen by an unexpectedly large amount over the past few years. It is likely that the DI trust fund will be depleted in the next two years if no action is taken to increase future revenues.

Among the possible solutions to the short-run problem are tax increases (in the rate, in the earnings base, or in both), a loan or grant from general federal revenues, or a shift of a portion of the hospital insurance (HI) fund to the OASDI funds. Any changes in the benefit structure that result in reduced outlays would, of course, also help reduce the deficit.

LONG-RUN FINANCING ISSUES

In the long run, the financing of benefits under a pay-as-you-go system can meet with difficulties if population shifts cause an increase in the ratio of retired persons to persons of working age. As persons born during the baby boom after World War II reach retirement age, a very high ratio of retirees to workers is likely to occur, particularly if the low birth rates now prevailing should continue. Under the tax and benefit provisions in current law, benefits would exceed revenues by large and growing margins after the year 2010. Any solution to this long-run fiscal problem will obviously entail an increase -- and possibly a substantial one -- in payroll or income taxes, a slowdown in the rate of benefit increases, or some combination of these measures.

One factor that exacerbates the long-run situation and that can be remedied now is a technical flaw in the procedure for determining benefits; the flaw is often referred to as overindexing. As a result of this fault, the benefits awarded the newly retiring workers of the future will reflect an overcompensation for past inflation. If present high rates of inflation should continue, future outlays would escalate as a proportion of expected tax receipts. Several proposals to correct this feature of current law have already been put forth. These are discussed in Chapter IV.

FUNDAMENTAL CHOICES

Traditionally, social security has been viewed as a compulsory savings system that insures that individuals, during their working years, will provide for their own retirement -- in effect, a self-financing, lifetime savings program. In practice, however, the system does not strictly fit this description. On the contrary, it has had many elements of an annual transfer program. When taxes paid by current workers finance the benefits of current retirees, purchasing power is transferred from one group in the population to another.

In addition, the benefit structure has been designed in an attempt to satisfy dual principles. On the one hand, the principle of what is called "individual equity" is stressed. Strict adherence to this principle implies that the amount of a person's benefits would be determined solely by his lifetime contributions. Although,

upon retirement, the individual does receive a benefit that is related to past earnings, and therefore indirectly to past taxes, that relationship is rather loose. Individual equity has given way to a large extent to another principle, often referred to as "social adequacy."

In an effort to provide social adequacy, several redistributive factors have been incorporated into the benefit structure. For example, the benefit formula is tilted in favor of those with lower pre-retirement earnings. In addition, a retired worker with a dependent spouse receives additional benefits without having paid any additional taxes.

The way current and future problems of financing social security are resolved can have important effects on how the character of the social security program will evolve. Two major issues are involved:

- Should social security strengthen its role as a compulsory savings program, relating benefits more strictly to earnings? Or should the system move further in the direction of an income transfer system, pursuing the goal of social adequacy?

- What should the role of social security be as a source of income for the retired and disabled as real income levels rise in the future?

With respect to the first issue, the question has been raised whether the present redistributive aspects of the program are in fact effective in promoting social adequacy. Because social security is not a means-tested program, i.e., the level of family income is not used to determine benefits, some critics have argued that it does not and cannot efficiently target benefits toward those who are most needy. Groups receiving favored treatment, such as wives qualifying for the spouse benefit and retired workers whose earnings in covered employment were low, may have considerable income from other sources, including pensions from work in federal or other uncovered employment. Thus, it has been suggested that the social adequacy goal of the program would be better handled directly by a means-tested program such as the Supplemental Security Income (SSI)

program introduced in 1974. SSI provides a federally guaranteed minimum income for the elderly who have not been brought to that level by social security or other programs.

The decision whether to use general revenues for financing social security rather than relying solely on the payroll tax can affect the future direction of social security with respect to whether it moves more toward an income transfer program. Although payments to current beneficiaries are not actually paid out of accumulated and invested lifetime contributions, the concept of the "earned right" has been very important to the success and acceptance of social security as an institution. The fact that the program is financed by an earmarked tax on earnings is believed to be consistent with the concept of the earned right.

On the other hand, general revenue financing is considered preferable by those who stress the redistributive elements of social security. General revenues are to a large extent derived from the personal income tax, which being graduated is more progressive, and, taking account of family size and more income sources, is better related to ability to pay. There is a question, however, about whether benefits could long continue to be related to earnings and whether the program would not eventually evolve into a means-tested welfare program if substantial general revenue payments were used to finance the program.

The second major issue is how important social security benefits should be in providing income in retirement as the standard of living rises. Should the benefits be maintained at a level at which they could serve as the primary or sole source of retirement income? Or should benefits be scaled so that they serve only as a component of retirement income, with private savings and pensions, and transfers to those with low income, expected to grow in importance? The choice of a new benefit computation procedure to correct overindexing can have important effects on the future role of social security. The arguments favoring a more substantial role for social security stress the inadequacies of the private pension system as a source of income. Arguments favoring a smaller scope emphasize the negative effects that large benefits could have on economic growth. That is, a high guaranteed pension could reduce savings and hence capital accumulation, and could provide disincentives to continue working.

PLAN OF THE REPORT

This study focuses primarily on the OASDI short-run financing picture and on some issues that must be faced when considering the long-run status of social security. (The problems of finance in the medicare Hospital Insurance (HI) component are not included.) Chapter II presents a brief description of how social security works -- how it is financed and by whom -- how benefit amounts are determined and how they are distributed. Chapter III looks at projections of social security receipts, outlays and trust fund balances through 1985 under different economic paths, and discusses options for raising revenues. Chapter IV discusses the long-run forecast (to the year 2050), the overindexing flaw in current law, and the major options that have been proposed for dealing with this problem. A more technical discussion of the indexing of benefits is contained in Appendix A.

The Carter Administration recently presented a set of proposals for financing the OASDI programs. Appendix B describes these proposals.

CHAPTER II. HOW THE SYSTEM WORKS

TAXES

Whenever an individual works in employment covered by the program, taxes are levied on his earnings up to a maximum dollar amount. In 1977, the tax is 9.9 percent of the first $16,500 of wages, about 88 percent of which is allocated to the Old Age and Survivors Insurance (OASI) Fund and the remainder to the Disability Insurance (DI) Fund. Employer and employee each pay half of this payroll tax. There is an additional payroll tax of 1.8 percent on the same portion of earnings (again shared by employer and employee) for the hospital insurance (HI) program. Self-employed persons pay a tax of 7 percent of their net earnings to the OASI and DI trust funds combined, and a tax of 0.9 percent for hospital insurance.

About 9 out of 10 wage- and salary-earners, and self-employed persons, work in jobs covered by the program and are therefore subject to mandatory payroll taxes. The principal groups not covered are civilian employees of the federal government, who are covered under a federal retirement program, some state and local government employees, and persons working for charitable organizations.

The social security tax is often said to be regressive, since the tax takes a constant, ungraduated proportion of a worker's earnings up to the set maximum. As earnings rise above that point, the tax becomes a decreasing proportion of the worker's total wages. The distributional burden of the tax, however, rather than an individual's covered earnings, is perhaps better measured against total family income. The covered earnings of any one worker are not necessarily indicative of his other sources of income or the income of his family.

Although federal income tax payments are highly progressive -- that is, they rise sharply as a percent of income -- the social security tax also tends to be somewhat progressive for all but those families in the highest-income quintile. Table 2 depicts this pattern for 1976. At lower levels of income, taxable earnings -- hence social security taxes -- are a small proportion of total income. About 40 percent of all families in the lowest-income quintile rely exclusively on income from sources other than earnings -- that is, income from cash transfers from the government, private

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TABLE 2. ESTIMATED OASDHI TAXES AND FEDERAL INCOME TAXES PAID AS A PERCENT OF FAMILY INCOME: FAMILIES IN QUINTILES RANKED BY 1976 INCOME a/

Quintiles by Income	Total b/ Family Income	Federal Income Taxes	OASDHI Taxes (Employee's Share)	Combined Federal Tax Payments
Lowest	100.0	2.3	2.4	4.7
Second	100.0	4.1	3.5	7.6
Third	100.0	8.1	4.4	12.5
Fourth	100.0	11.3	4.6	15.9
Highest	100.0	17.1	3.6	20.7
All families	100.0	12.1	3.9	16.0

SOURCE: CBO calculations based on data provided by the Office of Tax Analysis, U.S. Department of the Treasury.

a/ Unrelated individuals are counted as families.

b/ The estimated 1976 incomes (before taxes) for the quintiles are:

Lowest -- up to $5,669 including losses
Second -- $5,669 to $9,854
Third -- $9,854 to $14,679
Fourth -- $14,679 to $21,540
Highest -- $21,540 and over.

Income includes an estimate of capital gains as well as wages and salaries, self-employment income, interest, dividends, rent, social security, government and private pensions, public assistance, veterans' benefits, workmen's compensation, unemployment compensation, alimony, and other miscellaneous sources.

pensions, and income from interest, rent, and so forth. As incomes rise, earnings become the dominant source of income. Because families with higher incomes are likely to have more than one earner (about 75 percent of families in the top quintile have two or more earners), the total earnings of many families remain fully taxable beyond $15,300, the maximum taxable amount for an individual in 1976, the date for the table. At the highest income levels, total family earnings eventually exceed the taxable maximum, and income from property (capital gains, rent, interest, dividends) becomes relatively more important.

One recent development that helps relieve the burden of the social security tax for many of those families in the lowest-income group who do have earnings is the earned-income credit. The credit was introduced by the Tax Reduction Act of 1976 and was intended, at least in part, to provide some relief from the payroll tax for low-income families. The credit is equal to 10 percent of the first $4,000 of earned income, and it is then reduced by 10 percent of adjusted gross income exceeding $4,000. The credit is, however, limited to taxpayers with dependent children. In Table 2, the earned-income credit is included as an offset to federal income tax payments. If the credit were interpreted as an offset to the payroll tax, then social security taxes would appear more progressive at the lower part of the income distribution.

It should be noted that only the employee's share of social security taxes is included in Table 2. Although employers pay half the tax at the time of collection, many analysts believe that, to a large extent, the employer's share is eventually shifted to the worker in the form of reductions in wage increases that otherwise would have occurred. This problem should be considered in comparing the size of social security taxes and of federal income taxes at each income level.

Those observers who view social security as a compulsory savings program evaluate the tax and benefit structure together. To assess the equity of the system from this perspective would require measures of the relation between the expected return (i.e., the present value of an individual's social security benefits) to the accumulated value of the individual's social security tax payments. Efforts to make such calculations differ in both methodology and in results regarding the way the expected return varies by income. Measurement is complicated because aspects of social security

favoring lower-income workers are offset by others favoring higher-income groups. 1/ Pronounced differentials do occur between one-earner and two-earner households (one-earner households are favored because of the benefit for dependent spouses) and between men and women (women are favored partly because of their greater longevity).

BENEFITS

Workers' eligiblity for benefits is based on three criteria: a minimum period in covered employment, age, and disability status. The minimum age of eligibility for retirement benefits is now 62 years. Dependents or survivors of workers may also be eligible for benefits. Income from non-earnings sources is not considered in determining eligibility for benefits. But benefits are subject to reduction if the beneficiary or retired worker has earnings from employment and is less than 72 years old.

The size of a retired worker's monthly benefit is determined by a multi-step process. First, the worker's covered earnings are averaged over a specified number of years (currently 20 years for a large proportion of workers, with the exact number varying by date of

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1/ The benefit formula favors earners with lower wages. The shorter life expectancy of less-educated persons and lower-wage earners, however, works the other way, reducing the expected value of lifetime benefits; this factor is somewhat offset by survivors' benefits. See L.A. Thompson, "Intracohort Redistribution in the Social Security Retirement Program" (paper delivered at the American Statistical Association, Boston, August 1976); J. O'Neill, "Returns to Social Security" (paper presented at meetings of the American Economic Association, Atlantic City, September 1976) and "Issues Concerning Women and Social Security" (paper given at the proceedings of the Eighth Social Security Conference, University of Michigan, Ann Arbor, October 1974); A Frieden, D. Leimer, and R. Hoffman, "Internal Rates of Return to Retired Worker-Only Beneficiaries Under Social Security, 1976-1970," U.S. Department of Health, Education, and Welfare, Social Security Administration, Office of Research and Statistics, Studies in Income Distribution #5, October 1976.

birth and sex). 2/ These average monthly earnings are then applied to a benefit rate table in order to determine the worker's Primary Insurance Amount (PIA). The table is described in Chapter IV. The formula is progressive and provides for a PIA that declines as a percent of average monthly earnings as they rise.

The actual benefit paid to a social security recipient is determined as a percent of the PIA; the proportion varies according to several factors. Workers retiring at age 65 receive a benefit equal to 100 percent of their PIA. Those retiring between the ages of 62 and 65 take a reduction in their PIA. The spouse of a retired or disabled worker receives a benefit equal to 50 percent of the wage-earner's PIA if the benefit is claimed after age 65 (and in such a case, the benefit rises to 100 percent when the wage-earner dies, provided he did not also claim the benefit before age 65 years). When the spouse of a beneficiary reaches retirement age, he or she is automatically entitled to the spouse benefit. A spouse with covered earnings of his own receives an amount equal to the spouse benefit or his own benefit, whichever is higher. 3/

Monthly benefits in 1976 for hypothetical workers in different circumstances are shown in Table 3. Benefits are also shown as a percent of earnings in the year before retirement; these percents are frequently referred to as replacement rates. 4/ Because of the progressive element in the benefit computation schedule, replacement rates are lower for workers with higher earnings. It should be noted

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2/ The averaging period is scheduled to increase each year until it has reached its maximum of 35 years for all new retirees. Lengthening the averaging period typically results in lower benefits, since more years of low earnings in the past are likely to be included and this lowers the average lifetime wage and, hence, benefits.

3/ As a result of a Supreme Court decision in early 1977 (Califano v. Goldfarb), a husband is entitled to the spouse benefit under the same conditions as a wife.

4/ The replacement rate may also be defined as a percent of earnings over some period other than the year preceding retirement. For example, the replacement rate is sometimes defined as benefits as a percent of average monthly earnings over the averaging period, or over the highest five-year or ten-year span.

that benefits are not subject to income taxation. Therefore, if benefits were compared to earnings net of taxes, replacement rates would appear to be somewhat higher, particularly at higher income levels. In addition, the after-tax benefit structure would appear somewhat less progressive.

TABLE 3. MONTHLY BENEFITS AND REPLACEMENT RATES FOR WORKERS IN VARIOUS CIRCUMSTANCES: SECOND HALF OF 1976, IN DOLLARS

	Monthly Benefits			Replacement Rates a/		
Circumstances	Worker b/ with Low Earnings	Worker c/ with Median Earnings	Worker d/ with Maximum Earnings	Worker b/ with Low Earnings	Worker c/ with Median Earnings	Worker d/ with Maximum Earnings
Worker Retiring						
at Age 65	208	320	387	0.56	0.43	0.31
at Age 62	166	252	304	0.45	0.34	0.25
Worker Retiring at Age 65 with Dependent Spouse						
at Age 65	312	480	581	0.85	0.65	0.47
at Age 62	286	440	533	0.74	0.60	0.43
Worker Retiring at Age 62 with Dependent Spouse						
at Age 65	270	410	494	0.73	0.55	0.40
at Age 62	244	370	446	0.66	0.50	0.36

SOURCE: U.S. Department of Health, Education, and Welfare, Office of the Assistant Secretary for Planning and Evaluation.

a/ The replacement rate is defined here as the constant dollar value of the 1976 benefit divided by the constant dollar value of the 1975 wage for retiring workers with the assumed earnings histories.

b/ Hypothetical worker earning half of the median earnings of males during each year of the averaging period.

c/ Hypothetical worker earning the median wage for males during each year included in the averaging period.

d/ Hypothetical worker earning the maximum earnings subject to the social security tax during each year included in the averaging period.

Prior to 1972, benefits were increased periodically by legislation. In 1972, however, the law was amended to provide for automatic annual increases in benefits for retired workers and dependents whenever the Consumer Price Index rises 3 percent or more since the last benefit increase. Although such ad hoc adjustments have resulted in some fluctuation in the replacement rate, the rate had averaged about 32 percent (see Table 4). The 1972 across-the-board benefit increases and automatic indexing provisions moved replacement rates up to the 40-percent range. Moreover, a technical flaw in the way indexing was instituted is likely to result in substantial increases in replacement rates in the future. This double indexing problem is discussed in detail in Chapter IV and in Appendix A of this report.

TABLE 4. SOCIAL SECURITY REPLACEMENT RATE FOR A 65-YEAR-OLD MALE RETIREE EARNING THE MEDIAN WAGE

Year of Retirement	Replacement Rate a/
1953	0.301
1954	0.291
1955	0.344
1956	0.330
1957	0.312
1958	0.320
1959	0.351
1960	0.330
1961	0.327
1962	0.325
1963	0.313
1964	0.306
1965	0.314
1966	0.302
1967	0.289
1968	0.310
1969	0.296
1970	0.311
1971	0.349
1972	0.342
1973	0.381
1974	0.388
1975	0.404
1976	0.433

SOURCE: U.S. Department of Health, Education, and Welfare, Office of the Assistant Secretary for Planning and Evaluation.

a/ The replacement rate is specified here as the constant dollar value of the benefit in the year of retirement divided by the constant dollar value of the median wage in the year prior to retirement. The benefit is that for a hypothetical male earning the median wage for each year in the averaging period.

CHAPTER III. THE FINANCING PICTURE TO 1985: ISSUES AND ALTERNATIVES

THE RECENT DECLINE IN THE TRUST FUND BALANCES

Between 1970 and 1977, the combined assets of the Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds declined from 103 percent of annual outlays to 66 percent. (Table 5 traces this trend.) At root, the decline is the result of slow growth in the economy, a development which was not included in the forecasts of the early 1970s when the present benefit structure and tax rates were legislated. Three major factors contributed to this drop in the trust funds' assets:

- o Payroll tax receipts have grown more slowly than anticipated because of the high unemployment since 1974 and the unusually slow rate of growth of real hourly wages (wages adjusted for inflation) since 1972. Indeed, real wages actually went down in 1974 and 1975.

- o Outlays grew rapidly, partly as a result of the sharp increase in 1972 of real benefit levels (the purchasing power of benefits). Moreover, in response to the rise in unemployment, combined with the higher benefit levels, the number of beneficiaries rose. 1/ (It should be noted that although inflation leads to increases in outlays, it also leads to increases in revenues, and therefore has little net impact on the trust fund balances in the very short run. As will be discussed later, however, under the benefit computation provisions of the current law, inflation does have a strong effect over the long run.)

1/ It has been estimated that a rise in the unemployment rate of two percentage points, lasting two years, will increase the number of retired workers by 1 percent and the number of disabled beneficiaries by more -- by 5.4 percent. An increase in benefits relative to average wages also has a small effect on increasing retirements. See L. H. Thompson and Paul N. Van de Water, "The Short-Run Behavior of the Social Security Trust Funds," Technical Analysis Paper No. 8. Office of Income Security, U. S. Department of Health, Education, and Welfare, July 1976.

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TABLE 5. ASSETS OF THE OLD-AGE, SURVIVORS INSURANCE (OASI) AND DISABILITY INSURANCE (DI) PROGRAMS FOR SELECTED CALENDAR YEARS 1960-1977: ASSETS AT THE BEGINNINGS OF YEARS AS PERCENTS OF ANNUAL EXPENDITURES

Year	Trust Funds		
	OASI and DI Combined	OASI	DI
1960	186	180	304
1965	110	109	121
1966	95	96	83
1967	99	101	83
1968	101	103	83
1969	103	102	111
1970	103	101	126
1971	99	94	140
1972	93	88	140
1973	80	75	125
1974	73	68	110
1975	66	63	92
1976	57	55	71
1977 a/	47	47	49

SOURCE: 1976 Annual Report of the Board of Trustees of the Federal OASDI Trust Funds.

a/ Estimated by the Congressional Budget Office.

- Disability insurance beneficiaries have increased since the mid-1960s much more rapidly than can be explained by changes in benefit levels or unemployment, although these factors have been demonstrated to be significant. Among the other possible causal factors are: increasing awareness of the program; liberalization in the provisions; increasing value of medicare benefits for which DI beneficiaries are eligible; and the introduction of the Supplemental Security Income program (SSI) in 1974, which supplements DI for workers with low benefits and provides access to medicaid.

THE NEXT DECADE

The future course of the economy will have a strong effect on social security revenue and outlays, but predictions about the economy generally have a wide range of error. In addition, it is difficult to estimate how the growth in numbers of beneficiaries will respond to economic events, as well as to other factors. These uncertainties contribute to the difficulty of forecasting the financial status of the social security system.

In order to obtain information about the possible outcomes, a statistical model of the OASI and DI systems has been used to project social security outlays and revenues over the next few years. 2/ The model estimates the response of social security revenues, outlays, and trust fund balances to various economic and demographic factors. These factors include the unemployment rate, the rates of wage and price increases, the growth of the labor force, and the growth of the aged population.

With the model, the future status of the OASDI system can be simulated under different sets of economic assumptions. Projections based on the model may fall wide of actual developments. They should be interpreted only as indicating what one particular model shows under some particular assumptions about future economic developments. Actual events may be worse or better than the assumed paths. And the model may not perfectly capture the effect of economic and other events on the growth in beneficiaries and benefit levels. 3/

Two sets of economic assumptions have been used in this paper to simulate the future status of social security (see Table 6). Both sets start off with a common economic forecast through 1978. One,

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2/ The model was originally developed by L. H. Thompson and Paul N. Van de Water of the Office of Income Security Policy, Department of Health, Education, and Welfare; it has been slightly modified by the Congressional Budget Office.

3/ The Social Security Administration (SSA) uses a different model for projecting the status of OASDI. For the past few years, the SSA model has tended to show a somewhat larger increase in OASDI beneficiaries than the CBO-modified HEW model, and therefore results in a somewhat more rapid decline in the OASDI trust fund balances using the same economic assumptions.

however, projects a high growth path after 1978 whereby unemployment drops below 5 percent in 1980 and levels off at 4.3 percent in 1982. The other set of assumptions projects a lower growth path with unemployment leveling off at 5.5 percent in 1981.

TABLE 6. ALTERNATIVE ECONOMIC ASSUMPTIONS FOR CALENDAR YEARS 1977-1985

Year a/	I Low Path			II High Path		
	Percent Increase in: b/		Unemployment Rate e/	Percent Increase in: b/		Unemployment Rate e/
	Wages c/	Prices d/		Wages c/	Prices d/	
1977	8.9	6.2	6.8	8.9	6.2	6.8
1978	7.4	5.3	6.3	7.5	5.3	6.3
1979	6.9	5.0	6.1	8.4	5.5	5.4
1980	6.2	4.6	5.6	7.2	5.2	4.7
1981	5.8	4.5	5.5	8.5	5.4	4.4
1982	6.4	4.5	5.5	7.6	5.7	4.3
1983	6.7	4.5	5.5	7.9	5.6	4.3
1984	6.7	4.5	5.5	8.0	5.6	4.3
1985	6.8	4.4	5.5	8.2	5.6	4.3

a/ Dates represent last quarters.

b/ Increase from fourth quarter of preceding year to fourth quarter of stated year.

c/ Average annual earnings.

d/ Consumer Price Index.

e/ Percent of civilian labor force.

Under both sets of assumptions, revenues fall short of outlays each year, and the balances in both the OASI and DI trust funds decline until they are eventually depleted (see Table 7). The rate of decline, however, is faster under the lower growth path, and the funds in the combined OASI and DI funds collapse altogether in 1982. Under the high growth path, the combined OASDI funds are depleted in 1983. Viewed separately, the DI trust fund is in much more immediate

TABLE 7. STATUS OF SOCIAL SECURITY CASH BENEFIT PROGRAMS UNDER ALTERNATIVE ECONOMIC ASSUMPTIONS, CALENDAR YEARS 1977 - 1985: IN BILLIONS OF DOLLARS

	Low Path a/				High Path a/			
	Receipts	Outlays	Balance at End of Year	Funds as b/ Percent of Outlays	Receipts	Outlays	Balance at End of Year	Funds as b/ Percent of Outlays
OASI								
1977	72.6	75.2	32.8	47.1	72.6	75.2	32.8	47.1
1978	80.0	83.2	29.6	39.4	80.0	83.2	29.6	39.4
1979	87.0	90.8	25.8	32.6	87.8	90.8	26.6	32.6
1980	95.2	99.3	21.7	26.0	97.4	99.3	24.7	26.8
1981	101.9	108.0	15.6	20.1	105.9	108.4	22.2	22.8
1982	109.5	117.2	7.9	13.3	115.7	118.4	19.5	18.8
1983	117.1	127.5	-2.5	6.2	125.1	130.0	14.6	15.0
1984	124.8	138.7	-16.4	c/	134.6	143.0	6.2	10.2
1985	132.8	150.9	-34.5	c/	144.6	157.3	-6.5	3.9
DI								
1977	9.6	11.7	3.6	48.7	9.6	11.7	3.6	48.7
1978	11.0	13.3	1.3	27.1	11.0	13.3	1.3	27.1
1979	11.8	15.1	-2.0	8.6	11.9	15.1	-1.9	8.6
1980	12.8	17.1	-6.3	c/	13.1	17.1	-5.9	c/
1981	14.7	19.3	-10.9	c/	15.3	19.4	-10.0	c/
1982	15.7	21.7	-16.9	c/	16.6	21.9	-15.3	c/
1983	16.5	24.4	-24.8	c/	17.7	25.0	-22.6	c/
1984	17.3	27.5	-35.0	c/	18.7	28.5	-32.4	c/
1985	18.0	31.1	-48.1	c/	19.7	32.5	-45.2	c/
Total OASDI								
1977	82.2	86.9	36.4	47.3	82.2	86.9	36.4	47.3
1978	91.0	96.5	30.9	37.7	91.0	96.5	30.9	37.7
1979	98.8	105.9	23.8	29.2	99.7	105.9	24.7	29.2
1980	108.0	116.4	15.4	20.5	110.5	116.4	18.8	21.2
1981	116.6	127.3	4.7	12.1	121.2	127.8	12.2	14.7
1982	125.2	138.9	-9.0	3.4	132.3	140.3	4.2	8.7
1983	133.6	151.9	-27.3	c/	142.8	155.0	-8.0	2.7
1984	142.1	166.2	-51.4	c/	153.3	171.5	-26.2	c/
1985	150.8	182.0	-82.6	c/	164.3	189.8	-51.7	c/

SOURCE: Congressional Budget Office estimates.

a/ See Table 6 for economic assumptions underlying the projections.

b/ Funds at start of year as a percent of outlays during the year.

c/ Fund depleted.

danger than the OASI fund, and it is depleted in 1979. The more rapid depletion of the DI fund is associated with the large and unexpected increases of beneficiaries in this program over the past several years.

Even taking into account the uncertainties of the projections, it appears unlikely that the balances in the social security trust funds could, under currently legislated tax rates, rebound to anything near their former levels. Although an economic recovery and a high rate of economic growth over the next few years would slow the deterioration in the trust fund, it is unlikely to compensate for the permanently depressing effect on future revenues of several years of little or no growth in real wages (wages adjusted for inflation) and of slow growth in employment. The tax rates in current law were legislated before the economic slowdown and, therefore, do not compensate for the reduced revenue base. In addition, revenues from interest on the trust funds are automatically lowered because of the diminished size of the trust funds.

After 1985, the long-range effect of the high inflation rates of the past few years will begin to be felt. The provision in the current benefit computation procedure, which overadjusts for inflation the benefits awarded new retirees, begins to have a perceptible effect on costs about a decade after a high rate of increase in the Consumer Price Index occurs. Thus, the temporary short-run problem created by a depressed economy is eventually merged into the long-run problem considered in more detail later in this report.

OPTIONS FOR THE SHORT RUN

Some action must be taken to keep the DI trust fund from collapsing during the next two years. Although the OASI fund is in a stronger position than the DI fund, it, too, is declining. By 1980 or 1981, the OASI fund could reach levels that many analysts would consider dangerously low if no action were taken to stabilize it before then.

There are many options for resolving the short-run financing problems of the social security system. Among the choices are that:

- Revenues could be raised by increasing payroll tax receipts (with a hike in the tax rate, a hike in the wage base, or some combination of both);

- Some portion of the health insurance (HI) payroll tax could be transferred to OASDI;

- General revenue funding could be transferred to OASDI either as a grant or a loan;

- Some combination of the above could be done. 4/

Of course, the financing problems of the system could also be eased by measures that would result in reduced outlays. For example, both the Ford and Carter budgets for 1978 included proposals that would limit the amount of benefits going to certain groups. 5/ For 1978, the Ford revisions were estimated to save $1 billion, and the Carter revisions about $800 million.

Other fundamental revisions with even greater potential for savings in both the OASI and DI programs have been suggested. The House Ways and Means Committee has been studying the particular problem of the rapid increase in DI beneficiaries and has published several reports that examine ways of restricting future growth. 6/

4/ The proposal made by the Carter Administration adopts a combination, with some modifications and new emphases. For a discussion of the proposal see Appendix B.

5/ Both the Ford and Carter budgets proposed: to eliminate a provision that permits retirees electing to retire before age 65 years to receive an initial lump-sum payment in exchange for reduced future benefits (a cost savings in the short run but not in the long run); and to change their retirement test to an annual basis, eliminating the monthly test. The Ford budget proposed to phase out student benefits under social security over a four-year period. The Carter budget proposed to cap student benefits rather than phase them out. See Social Security Benefits for Students, CBO Background Paper, May 1977.

6/ See Public Hearings Before the Subcommittee on Social Security of the Committee on Ways and Means, House of Representatives, 94th Congress, Second Session, May 17, 21, 14, June 4, 11, 1976. Also see the Subcommittee's Explanatory Material and Relevant Background Reports to H.R. 15630, Disability Insurance Amendments of 1976, introduced by James Burke, Chairman of the Subcommittee.

Major changes in the benefit structure or aspects of program eligibility, however, are likely to require considerable evaluation and discussion. And even if any such changes were supported by the Congress, they would take time to put into place. Since the financing issues require consideration now, the primary emphasis is likely to focus on how to provide additional funds.

FUNDING FROM OASDI TAXES

Continued reliance on traditional means of financing OASDI (i.e., with an earmarked tax on covered earnings) will necessitate an increase in tax receipts to bring the weakened OASDI trust funds to the desired level. But when should taxes be raised? And by how much? The answers to these questions depend in part on what role the trust funds are expected to play in the future.

Social security finances, as has already been observed, are extremely sensitive to changes in economic conditions. No trust funds reserves would be needed, of course, if tax rates were constantly adjusted up or down to conform to economic shifts. But such a policy would be highly impractical. In addition, it would result in tax increases during recessions, and such an action could be harmful to economic recovery. For these reasons, many observers consider it prudent for a pay-as-you-go system to build up sufficient balances during periods of prosperity to insure that commitments can be paid in the event of a recession without requiring any increases in taxes during the period of high unemployment. Once economic recovery began, however, taxes would have to be raised to rebuild the trust fund revenues again.

What level of balances should be held to serve as a contingency in the event of an economic downturn? The answer depends partly on the severity of recessions considered likely. Another consideration is whether, in order to maintain public confidence, the reserves should never be allowed to fall below some minimum level. One study has determined that if future recessions were expected to be at least as deep and long as the current one, a reserve of 60 percent of a year's outlays would be needed in the OASI fund at the onset of the recession. This requirement would maintain a balance in the funds that would fall as unemployment rose, but would not reach zero before economic recovery had reduced unemployment below 6 percent. At this

point taxes would have to be raised. 7/ If an extra margin were required for public confidence, the contingency reserve level would have to be higher than 60 percent of annual outlays at the start of a deep recession.

Smaller reserves could be maintained in the trust funds during prosperity if loans or grants from general revenues were available, on a standby basis, to finance fund deficits that might result from recessions. If loans were actually required, social security taxes would eventually have to be raised to repay them. If general revenues were transferred to the trust funds on a nonrepayable basis, the transfer would ultimately be paid through higher income taxes or reductions in federal spending.

There are two ways to increase revenues through the payroll tax. One is a hike in the tax rate. The other is an increase in the amount of earnings subject to the tax. And, of course, both alternatives could be combined. Each alternative is briefly considered below.

Increase the Tax Rate

The Ford Administration's budget for fiscal year 1978 proposed a three-step increase in the combined employer-employee OASDI tax rate, to add 1.1 percentage points by 1980. It is estimated that these increases would prevent the combined OASDI trust funds from falling below 40 percent of outlays by 1982. The Carter budget, however, did not adopt the tax rate increase. 8/

7/ See Paul N. Van de Water and L. H. Thompson, "The Social Security Trust Funds as Contingency Reserves," Technical Analysis Paper No. 9, Office of Income Security Policy, U. S. Department of Health, Education, and Welfare, July 1976.

8/ The proposal for funding OASDI made by the Carter Administration in June does not include either a tax base or tax rate increase for 1978, but relies on general revenues and a shift from the hospital insurance fund in that year. Starting in 1979, however, OASDI taxes are increased in various ways (predominantly through a tax base hike for employers). See Appendix B for a description of the proposal.

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One objection to raising social security taxes in 1978 (whether through a tax rate or tax base hike), is that doing so could hold back economic recovery at a time when unemployment is still likely to be high. This restrictive effect could, however, be counter-balanced by a reduction in another tax, such as the federal income tax. The outcome of such a tradeoff would tend to reduce the overall progressivity of the tax system since the income tax is a more progressive tax (see Table 2). Again, however, this effect could be minimized by an income tax reduction that was scaled to benefit low-income families with earnings.

A payroll tax rate increase (but not a tax base increase) may have specific disadvantages for low-wage earners since, after a period of time, it may reduce their employment opportunities. 9/ It should be noted that any increase in the payroll tax would be in addition to the 0.4 and 0.5 percent increases that are already scheduled for the hospital insurance component of the payroll tax in 1978 and 1981.

One alternative to an immediate increase in the tax rate is to take temporary measures to ensure the payment of social security commitments. This would either permit the postponement of a rate increase until economic conditions improved or allow time for the consideration of other options.

As an immediate measure (which would require legislation) to insure that the DI trust fund is not exhausted, a portion of the total payroll tax could be shifted from the OASI fund to the DI fund. Such an expedient would avoid an increase in the total payroll tax during the present period of high unemployment, although it would involve a substantially larger tax increase, or infusion of other funds later. Shifting revenues from OASI to DI, of course, would

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9/ The portion of the social security tax levied on employers serves, in effect, as an increment to the minimum wage. When payroll taxes are increased, employers gradually shift at least part of the tax increase to workers in the form of lower wage increases. When workers are at the minimum wage, however, employers cannot require employees to absorb the tax in the form of lower wages, so the payroll tax increase would act as an increase in the minimum wage. Workers whose skills could not command the cost of employment (the minimum wage plus the payroll tax and the cost of any fringe benefits) may then suffer a decline in employment prospects.

accelerate the decline of the OASI trust fund balances. The combined OASDI trust funds are projected to have reserves of only about 21 percent of a year's outlays at the start of 1980.

Increase the Taxable Earnings Base

Payroll tax revenues can also be increased by raising the maximum earnings subject to the tax. At present, the taxable earnings base is $16,500, and this ceiling increases automatically each year at a pace that is related to the rate of increase of average covered wages. Because few workers are at high-earnings levels, however, a substantial increase in the ceiling would be required to obtain the same amount of revenue that could be derived from a small increase in the tax rate.

For example, either alternative -- a tax rate increase or a tax base increase -- would raise an equivalent amount of revenues through the year 1983. Under either alternative, revenues would maintain the trust fund balances above 30 percent of outlays. The specifics of these options are:

- An increase in 1978 in the combined employer-employee OASDI tax rate of 0.8 percent and 0.2 percent in 1981, which would increase the rate from its present level of 9.9 percent to 10.9 percent;

- An increase of 63 percent in the taxable earnings base. This would raise the base to $28,800 in 1978 and $42,900 by 1983. (The increases scheduled under current law raise the base to $17,700 in 1978 and $26,100 in 1983.) As a result of the hike in the taxable earnings base, the proportion of workers with all of their earnings below the ceiling would rise from the current level of 85 percent to 96 percent in 1978 and thereafter.

An increase in the taxable earnings base is sometimes preferred to an increase in the tax rate because it would increase the progressivity of the social security tax. Only those families in the top two-fifths of the income distribution could have a member earning more than the current maximum. 10/ An increase in the tax

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10/ Of course, not all families in the top two-fifths would have such an earner since many families have high total income because of two earners, each below the maximum.

rate would be paid by families at all levels of income, although it would be concentrated among the highest three-fifths of all families, who pay most of the social security tax. On the other hand, this remedy has been criticized because it raises revenues at the expense of future program costs. Since benefits are based on taxable earnings, a rise in the earnings base would result in higher benefits in the future for high-wage earners, thereby adding to the long-run size and costs of the system. 11/

Another criticism of a substantial increase in the wage base is that it might result in a reduced demand for private pensions and other savings among high-income households. The large tax increase would reduce income that could be used for savings, and the promise of higher benefits would reduce the incentive to save. As a consequence of such a decline in savings, capital accumulation -- and therefore economic growth -- could diminish.

FUNDING FROM GENERAL REVENUES

The decision to use some general revenue funding for social security, as opposed to a continued, exclusive reliance on the payroll tax, depends on fundamental choices about the overall function of social security. Observers who view social security simply as a transfer payment from current workers to current beneficiaries regard the payroll tax as part of the total tax system. Viewed in this way, the OASDI tax can be seen as undesirable, since it tends to decrease the overall progressiveness of the tax system. Viewed as a transfer program, there may also be difficulties in justifying earnings-related benefits and other aspects of the benefit structure.

Other observers, who view social security primarily as a compulsory savings system, regard the payroll tax as a mandatory contribution toward an earned retirement benefit. Although the link between benefits and contributions is weak, many people feel that the

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11/ Under the present benefit structure, a substantial increase in the wage base would actually increase the deficit in the long run, since costs would go up more than revenues. Under a decoupled system such as that proposed by the Ford and Carter Administrations (see Chapter IV and Appendix A), the increased costs would not necessarily exceed the increased revenues in the long run.

link is important to public support of the program; some would make the link stronger. Another argument cited for funding through the payroll tax alone is that it promotes restraint, since increases in benefits must usually be accompanied by increases in the earmarked payroll tax.

It has been suggested that the burden of the payroll tax on low-income families is better dealt with through direct tax relief rather than by revising the means of financing social security. In this regard, the Earned Income Credit, passed by the Congress in 1975, has been viewed by some as an offset to the payroll tax, since it provides relief from federal income tax payments (or direct payments when there is no tax liability) to low-income families with dependent children, when their income is based on earnings.

Of course, the general revenues that could be used to support social security must come from some place -- from an increase in the federal deficit, an increase in income or other federal taxes, or a reduction in other government spending. The extent to which general revenue funding restricts economic expansion and is less regressive than a payroll tax increase depends on how it is ultimately financed. For example, if the federal deficit were simply enlarged, general revenue funding would not restrict the economy. If general revenue funding of social security benefits ultimately resulted in a reduction in low-income housing assistance or compensatory education benefits, the outcome would be quite regressive. This is because the payroll tax falls most heavily on families with incomes above $10,000 a year, and these housing and education benefits are concentrated on families with incomes considerably below that.

SHIFT THE HI TAX TO OASDI

Another proposal for funding, suggested by the 1975 Advisory Council, is to shift all or a portion of the medicare hospital insurance (HI) payroll tax to the OASDI programs. Since medicare benefits are based on hospital expenses incurred, and not on prior earnings, some of the arguments against using general revenue funding for OASDI do not apply for the HI program. Medicare, however, is now a $22 billion program and is growing rapidly. Future funding of medicare out of general revenues could, therefore, imply substantial increases in the federal income tax, depending on the extent of the transfer from HI to OASDI and future medicare expenditures.

CHAPTER IV. THE LONG-RANGE FINANCING PICTURE -- TO 2050

In setting tax rates for the Old-Age, Survivors and Disability Insurance (OASDI) system, the Congress follows a general principle: estimated future income to the trust funds should equal estimated future outgo. A 75-year planning period has been adopted by the Congress and the funds' trustees. It is important for the planning of the finances of social security, therefore, to make long-run projections of revenues and expenditures.

Future revenues and expenditures of the social security system will depend on many factors. Revenues will be affected by the size and composition of the work force, which in turn will be determined by factors such as the birth rate, immigration, mortality rates, and the proportion of the population in the labor force at different ages. Revenues will also be influenced by the rate of increase in earnings and prices. Benefit payments will depend on the size and composition of the retired beneficiary population and on their past earnings. These factors, in turn, depend on many of the elements mentioned above. The future course -- and interaction -- of all these determinants obviously is unknown. In order to get an idea of what may happen, one can look at long-term projections made according to a variety of possibilities.

Table 8 shows OASDI expenditures as a percentage of taxable payroll projected to the year 2050. Four sets of assumptions are made regarding the major variables:

- The fertility rate (the average number of births a woman has in her lifetime);
- The rate of inflation (rate of increase in the Consumer Price Index); and
- The rate of increase in average real wages.

The projection to the year 2050 is highly sensitive to these factors and in the way they interact with each other. A low fertility rate increases the burden of benefits (benefits as a percent of taxable payroll) primarily because of its effect on the size of the working population: the bigger the rate of increase in

TABLE 8. PROJECTED EXPENDITURES OF THE OLD-AGE, SURVIVORS AND DISABILITY INSURANCE SYSTEM AS PERCENT OF TAXABLE PAYROLL UNDER CURRENT LAW AND DIFFERENT LONG RANGE ASSUMPTIONS, FOR SELECTED CALENDAR YEARS 1976-2050

	(percents)				
Assumptions	I	II	III	IV	OASDI Tax Rate Schedule (Current Law)
Rate of Increase in Real Earnings a/	2.25	2.0	1.75	1.25	
Rate of Increase in Prices b/	3.0	4.0	4.0	5.0	
Fertility Rate c/	2.3	2.1	1.9	1.7	
Year					
1976 (actual)	10.9	10.9	10.9	10.9	9.9
1985	10.4	11.2	11.2	12.0	9.9
1990	11.1	11.8	12.1	13.1	9.9
2000	11.7	12.9	13.4	15.3	9.9
2010	12.8	14.9	16.0	19.6	9.9
2020	15.5	19.2	21.3	28.2	11.9
2030	17.2	22.7	26.0	37.2	11.9
2040	16.6	23.1	27.5	42.1	11.9
2050	16.3	23.5	28.6	46.0	11.9
Average 1976 to 2050	13.8	17.0	18.9	25.5	10.9

SOURCE: 1976 Annual Report of the Board of Trustees of the Federal OASI and DI Trust Funds.

a/ Average annual taxable earnings expressed in dollars of constant purchasing power.

b/ Consumer Price Index.

c/ Estimated average number of births a woman would have during her lifetime assuming she followed the pattern of births estimated for each age group of women in the stated year.

real wages (wages in dollars of constant purchasing power), the lower the benefit burden. 1/ The higher the rate of inflation, the bigger the burden because of a provision in the current law that results in rapidly accelerating benefit levels when inflation increases.

Set I of the assumption packages results in the lowest-cost forecast because it combines the highest rate of fertility, the lowest inflation, and the highest real wage rate increase. Set IV results in the highest-cost forecast because it uses the most pessimistic assumptions. Sets II and III correspond to the assumptions that have been used as the basis for the central forecasts in the 1975 and 1976 trustees' reports.

Although the differences in outcomes are wide, all sets of assumptions considered indicate an increase in social security expenditures as a percent of taxable payroll after the year 2000. Under current law, the OASDI tax is set at 9.9 percent of taxable payroll, rising to 11.9 percent in 2011 and thereafter. If future developments should follow any of the projected paths in Table 8, tax payments scheduled under current law would not be sufficient to meet long-run expenditure commitments. By the year 2050, expenditures would exceed revenues by 4 percent of taxable payroll even under the most optimistic set of assumptions; they will exceed revenues by 34 percent of taxable payroll under the most pessimistic assumptions. If, on the other hand, tax rates were set to cover current costs, the rates would have to be raised by those amounts.

The central assumptions used in the recently released 1977 trustees' report are somewhat different from those of the 1976 report. Because some of the changes lead to increased future expenditures as a percent of payroll and others have the opposite effect, the net effect on the long-range cost estimates is close to the 1976 estimates. In the 1977 report, expenditures as a percent of taxable payroll are projected to be 19.2 percent over the 75-year period compared to 18.9 percent in the 1976 report. The long-run inflation rate and real wage rate assumptions are the same in both reports. The differences result from a higher fertility rate assumption in the 1977 report, a lower mortality rate projection, and various other changes.

1/ A higher rate of increase in average real wages reduces the benefit burden partly because the revenue base increases. Rapid growth in real earnings, however, also tends to reduce the rate of benefit increase since the benefit formula is progressive, providing for falling replacement rates as earnings rise.

Such a bleak picture of the financial future of social security is in large part the result of two factors:

- o A dramatic demographic change whereby the ratio of retired persons to workers will rise sharply above present levels; and

- o A provision in current law that results in an unintended overadjustment for inflation.

A significant share of the long-run deficit can be eliminated by correcting this latter provision; the correction is sometimes referred to as "decoupling" the system. Several proposals for decoupling have been made. Because this highly technical issue is likely to be a current concern of the Congress -- and because letting a long time go by before doing something about it can be costly -- the remainder of this paper focuses on decoupling. There are, of course, many other changes in the social security system and its financing that could also have significant effects on the long-run fiscal situation. These are noted; but a full discussion of the alternative remedies for social security financing is beyond the scope of this report.

REVIEWING THE ASSUMPTIONS

Because of the strong effects that different assumptions can have on estimates of long-run expenditures and the long-run deficit, the assumptions themselves must be carefully examined. Each year the OASDI trustees choose the assumptions they believe are most likely to reflect future developments. In their 1973 report, the trustees forecasted only a very slight 75-year deficit under current law, as a result of adopting high fertility and low inflation assumptions. In subsequent reports, the assumptions chosen became increasingly pessimistic, primarily in response to changing economic and demographic developments. Such assumptions, however, are best evaluated in the context of their long-run historical patterns. A review of the available information about future patterns is in order before turning to the issue of over-adjustment for inflation.

Fertility and Mortality

With a system such as the current social security system, in which current flows of revenues finance current benefit payments, the relative sizes of the beneficiary and working populations are crucial in determining the extent of the financial burden.

Although the proportion of the working age population that actually works obviously affects the size of the working population and the proportion of the eligible population that chooses to retire affects the beneficiary population, the basic demographic constraints are the number of persons at working and retirement ages. Under each set of assumptions shown in Table 9, the population of retirement age (persons age 65 years or older) is projected to grow sharply as a percent of the working-age population (persons 20 to 64 years old). The sizable population born during the post-World War II baby boom will start reaching retirement age after the year 2010. But at that point, the working population will be composed, at least in part, of the groups born during the period of sharply declining fertility starting in the late 1960s. (The fertility rate is defined as the average number of births that the average woman is projected to have over her lifetime). From now on, fertility rates will, in large part, determine the size of the working population after the turn of the next century.

What is a plausible projection for future fertility? The historical pattern indicates a long-term decline in the fertility rate in the United States. From rates of 5.4 births per woman in the mid-nineteenth century, there was a fairly steady decline, reaching 3.6 in 1900, 3.0 in 1925, and 2.2 in 1940. Against this long-term decline, the very high fertility rates of the postwar baby boom, which lasted from the late 1940s well into the 1960s (peaking at 3.8 in 1957), appear as an abberation. (The abnormal sequence of the Great Depression, which probably depressed birth rates below the trend, followed by World War II, may well have had an effect on the unusual swing in the birth rate.) Since the late 1960s, the fertility rate has declined to below the level of the 1930s, reaching an estimated 1.7 births per woman in 1976; this figure is roughly similar to the rate in other highly industrialized countries today. The so-called "replacement level" fertility rate, which would result in a stationary population, is 2.1.

Although fertility may not remain at its present low level, there have been significant changes in social and economic behavior that could cause future fertility to remain close to current levels. People are marrying later than they used to and wives are increasingly likely to work. For these reasons among others, some observers assume the fertility rate will stay on a low plateau around the replacement rate level of 2.1 births per woman; others believe a long-term rate close to 1.9 is more likely. In this latter case, even if the proportion of women who work continues to increase, there will be a decline in tax-paying workers to support social security

TABLE 9. PROJECTIONS OF THE U. S. POPULATION OF RETIREMENT AGE AS A PERCENT OF THE WORKING AGE POPULATION UNDER ALTERNATIVE FERTILITY ASSUMPTIONS: SELECTED YEARS 1985-2050

	Fertility Rate [a]		
Year	1.7	2.1	2.3
1975	18.9	18.9	18.9
1985	19.5	19.5	19.5
1990	20.3	20.3	20.3
2000	20.3	20.3	20.3
2010	21.3	20.9	20.7
2020	28.4	26.8	26.1
2030	37.5	33.6	31.9
2040	39.2	32.8	30.2
2050	38.9	30.6	27.4

SOURCE: 1977 Annual Report of the Board of Trustees of the Federal OASI and DI Trust Funds.

a/ Estimated average number of births a woman would have during her lifetime assuming she followed the pattern of births estimated for each age group of women in the stated year.

NOTE: The population of retirement age is defined here as 65 years and over. The population of working age is defined as 20 to 64 years of age. The underlying mortality assumptions are those of the 1977 trustees' report, which indicate an improvement of 18 percent over the assumptions of the 1976 report.

beneficiaries. This is a major reason why the projections show such a large increase in social security outlays relative to receipts.

Less attention is often paid to the mortality assumptions underlying the projections. When mortality improves at older ages, the number of beneficiaries increases and the average beneficiary collects benefits for more years. The projections in Table 9 reflect the assumptions of the 1977 trustees' report which is more optimistic in this respect than the 1976 report. The projection of mortality improvements may still be regarded by some as too low. The mortality improvements of the 1977 report translate to a life expectancy of 70.8 years for men and 79.6 years for women in the year 2050. If these estimates should be surpassed (some countries have already reported life expectancy for men as high or higher than these figures), then the ratio of beneficiaries to workers would be still higher.

Wages

Since 1950, there has been a decline in the growth rate of average annual real wages caused by several factors. During the 1950s, real wage growth averaged 2.3 percent and then fell to a rate of 0.7 percent in the decade 1965 to 1975. Part of this decline is the result of changes in the composition of the work force: as teenagers and women entered the labor force in growing numbers, there was an increase in the proportion of part-time and inexperienced workers just entering the labor force; these people start at low wage rates. The recession has also affected the very low averages of the last few years.

Many analysts believe, however, that the decline in productivity over the past decade is due to a longer-term slowdown in the rate of economic growth, which could well continue into the future. Such a trend may be offset to some extent as the proportion of teenagers in the population declines and as women develop more experience and attachment to the labor force. It seems likely that the rate of real annual wage increase will rise above the rates experienced in the 1965 to 1975 period. Because of the uncertainty about future economic growth, however, this rate could average anywhere from about 1.0 to 2.5 percent a year. Both the 1976 and 1977 trustees' reports project a growth in real wages of 1.75 percent a year.

Prices

Because there is considerable uncertainty about the determinants of the rate of inflation, it is especially difficult to forecast changes in the price level. Historical experience shows that the Consumer Price Index rose at an average rate of 2.5 percent a year during the entire period 1929 to 1975; it rose another 3.3 percent between 1950 and 1975. Of course, there has been considerable fluctuation within periods. The average rate of increase for the period 1960 to 1970 was 2.8 percent a year, but it rose at a 5.5 percent rate between 1965 and 1975. The last few trustees' reports have used a long-run inflation rate of 4 percent a year for their central set of assumptions.

THE PROBLEM OF OVERINDEXING

Before the 1972 legislation that introduced overindexing, or coupling, into the computation of social security benefits, the table for determining benefits could be changed only by legislation. Legislative changes in the table were made on an ad hoc basis. For persons already receiving retirement benefits, once the amount was determined, it stayed fixed at the same dollar amount throughout retirement unless (or until) it was changed by legislative action.

Obviously, as prices rose, and in the absence of legislative action, the real value of this fixed benefit would erode. So ad hoc increases were enacted periodically to maintain the purchasing power of benefits. The increases were implemented by a method that applied not only to the benefits of those already retired, but also to the potential benefits of those people who were still in the work force. The 1972 amendments made these increases automatic and tied them to increases in the Consumer Price Index (CPI). It was not foreseen, however, that the procedure that had worked in the past could produce undesired results once it was made automatic, especially in a period when inflation was higher and wage growth lower than they had been or were anticipated to be.

How the automatic benefit adjustment operates is outlined below.

A retiree's social security benefit is determined through a procedure that applies a benefit rate table to the average monthly earnings (AME) on which the individual paid a payroll tax during his

working life. As of July 1976, the benefit rate table provided a monthly benefit for a worker retiring at age 65 approximately according to the following formula:

137.77 percent of the first	$110.00	25.51 percent of the next	$250.00
50.11 percent of the next	$290.00	22.98 percent of the next	$175.00
46.83 percent of the next	$150.00	21.28 percent of the next	$100.00
55.04 percent of the next	$100.00	20.00 percent of the next	$100.00
30.61 percent of the next	$100.00		

The amendments of 1972 established the following method for automatic adjustment of the benefit table for inflation: if the CPI increases by 3 percent or more since the last annual adjustment, the benefit rates in the table are all raised by the same percent. Thus, if the CPI were to rise by 10 percent next year, the schedule given above would provide 152 percent instead of 138 percent of the first $110 of AME, 55 percent instead of 50 percent of the next $290, and so on.

For those who are already retired and who therefore have fixed wage histories (that is, fixed AMEs), this adjustment mechanism achieves the desired effect: it simply adjusts the value of the social security benefit for cost-of-living increases. The same benefit rate table applies for those who are still working, however, and for this group the provision results in an unintended over-indexing of future benefits. 2/ This occurs because workers who are still employed do not have fixed wages. Rather, their wages typically increase by the rate of inflation plus a productivity factor of one percentage point or two. Thus, without any adjustment

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2/ The system is said to be "coupled" because the same formula is used for indexing the benefits of those already retired and for indexing the potential future benefits of those who are still working. It is not the coupling feature, that produces the problem, however, but the particular form of the adjustment. Nonetheless, the word "decoupling" has come to be used to refer to all proposals designed to correct the flaw, even those that technically are coupled systems.

of the benefit schedule for inflation, the benefits of future retirees would rise, because inflation tends to push up the worker's wages, and benefits rise with wages. The automatic indexing of the rates in the benefit schedule thus represents a second adjustment for inflation. In sum, inflation raises wages, and as a result, workers move higher up in the benefit schedule; but at the same time, the benefit rates are adjusted so that each step in the schedule is also associated with a higher dollar benefit. 3/

The effect of this automatic adjustment is cumulative. If high rates of inflation persist over a number of years, the so-called "replacement rate" -- defined here for simplicity as the ratio of the new retiree's benefits to his wages in the year before retirement -- could increase sharply. 4/ Indeed, it is possible for benefits eventually to exceed pre-retirement earnings. And as replacement rates rise, so does the burden to the taxpayer. High replacement rates are translated into a high ratio of total benefit payments to total taxable earnings, which in turn implies a high OASDI tax rate on earnings.

The replacement rate applying to workers who had earned the median wage and retired in the mid-1970s is about 43 percent. Table 10 shows how replacement rates and implied tax rates would vary by the year 2045 under different assumed rates of increase in future wages and prices and if the "coupled" benefit adjustment provision in

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3/ In order to insure that wage increases would be reflected in higher benefits and higher taxes, the maximum wage taxed by social security is automatically increased by the rate of increase in money wages. But because of the progressivity in the benefit table (outlined above), an increase in wages does not increase benefits proportionately. This is discussed further in the text.

4/ As noted above, the replacement rate can be defined using any number of different denominators. For some purposes it would be preferable, for example, to define it using average monthly earnings (AME) as the denominator, since this is the base directly used in the actual benefit calculation procedure. The overindexing flaw would, however, have a roughly similar effect on changes in the replacement rate regardless of whether AME or earnings in the year before retirement are specified in the denominator.

current law were allowed to continue. As the table shows, small changes in the long-term rate of price and/or wage growth produce large changes in the replacement rate and in the implied tax rate.

TABLE 10. REPLACEMENT RATES AND IMPLIED OASDI TAX RATES IN THE YEAR 2045 UNDER CURRENT LAW AND ALTERNATIVE ASSUMPTIONS ABOUT FUTURE WAGE AND PRICE INCREASES

	Case A	Case B	Case C	Case D	Case E	Case F	Case G	Case H
Average Annual Rate of Increase in								
Prices	0.5	2.0	4.0	6.0	8.0	10.0	4.0	6.0
Money Wages	2.5	4.0	6.0	8.0	10.0	12.0	5.0	7.0
Real Wages	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0
Replacement Rate a/ in 2045	30	50	59	77	95	115	85	110
Implied Tax Rate b/ in 2045	11	18	21	27	34	41	32	41

SOURCE: Lawrence H. Thompson, An Analysis of the Issues Involved in Securing Constant Replacement Rates in the Social Security OASDI Program (Appendix I), Office of Income Security Analysis, U. S. Department of Health, Education, and Welfare.

a/ Ratio of the constant dollar value of the primary insurance amount (PIA) to the constant dollar value of earnings in the year before retirement for a man retiring at age 65 years who had always earned the median wage.

b/ Combined employer/employee tax rate needed to fund benefit payments on a current cost basis.

It should be noted that the rate of increase in wages inherently tends to reduce the replacement rate, and to some extent, this works to offset the effect of the overadjustment for price changes. 5/ This occurs because the benefit rate table is progressive, providing for lower replacement rates at higher levels of earnings. As a result of this offsetting effect of wage increases, replacement rates can even decline in the future under certain combinations of wage rates and price increases. Such an outcome is illustrated by Case A in Table 10, where the replacement rate declines to 30 percent by the year 2045 under the conditions of an inflation rate of 0.5 percent and wage rate increases of 2.5 percent a year. With higher rates of inflation and money wage increases (going from Case A to Case F), but with real wage increases staying the same, the automatic benefit provision raises the benefit rates in the benefit table by an amount that more than compensates for the dampening effect of rising wages. Thus, replacement rates rise.

The importance of wage increases in dampening the rise in replacement rates can be seen by comparing Cases C and G, and D and H. For the same rate of price increase, replacement rates rise more sharply when the rate of wage increase is lower.

At the time the 1972 amendments were drafted, future price and wage increases in the neighborhood of those applying to Cases A and B were deemed plausible. In these ranges, replacement rates would be relatively stable. The automatic provision for indexing future benefits received little attention because combinations of wage and price increases that cause great instability were not seriously considered. Since then, the rate of inflation has risen appreciably and the rate of growth in real wage rates has fallen. A situation close to Case H would not be regarded as totally implausible now. But because there is much uncertainty about the economic forecast, the future growth of benefits and replacement rates is highly uncertain.

5/ Another offsetting effect is produced by the lengthening in the wage-averaging period, which increases by one year until the early 1990s. As the number of years of earnings mounts, more years in the past are included, and since these are generally years of lower earnings, the average monthly earnings (AME) on which benefits are based tend to be pulled down.

The extreme sensitivity of social security benefits to the rate of price and wage increases is widely believed to be undesirable, both because it can treat workers of different generations in a capricious manner and because it allows for the system to be controlled by the vagaries of the economy rather than by the conscious actions of policymakers.

OPTIONS FOR REVISING THE BENEFIT STRUCTURE

Because of the potentially serious fiscal consequences of the current overindexed system, there has been considerable interest in adopting a new procedure to adjust the benefits of present and future retirees for inflation. Any change in the benefit adjustment mechanism, though, is likely to affect the amount of benefits received and of taxes paid by future beneficiaries and workers. Therefore, implicit in any such mechanism are value judgments regarding the distribution of resources between different generations of workers and retirees, and among those working and those retired at any given time.

Judgments regarding the distribution of resources may be reflected in the replacement rate -- the ratio of benefits to a measure of pre-retirement earnings. As discussed above, under the present coupled system, the relation between benefits and earnings is not under control and varies erratically with rates of price and wage increases. Under a system that corrects the overindexing flaw, the relationship between benefits and earnings could be determined as a policy objective.

There are many ways to correct the provision in current law that leads to overindexing. One approach, originally suggested by the report of the Quadrennial Advisory Council on Social Security, is represented by the "Social Security Benefit Indexing Act" (H.R. 14430), proposed by the Ford Administration in 1976. 6/ Another approach is represented by the Hsiao proposal (H.R. 12334), named for William Hsiao who directed a panel established to advise the Congress on social security. Like the current law, both the Ford Administration and Hsiao proposals provide for increases in benefits that keep pace with the cost of living for persons already retired. The two proposals offer different answers, however, to the question

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6/ The Carter Administration has recently made a similar proposal. See Appendix B.

of how fast future benefits should grow relative to the average earnings of future generations of new retirees. (The precise equity implications of either plan involve highly complex considerations, which should be taken into account by writers of legislation in this area. 7/ While this report cannot treat all the relevant technical issues fully, the interested reader will find some further discussion of these topics in Appendix A.)

Roughly speaking, the Ford Administration's proposal provides increases in the social security benefits of successive generations of new retirees that keep pace with increases in the standard of living of the working population.

The Ford proposal uses a procedure that aims to keep the replacement rate constant through time for retiring workers with the same relative income position, regardless of the real level of income achieved. For example, a worker retiring in the year 2050 who had always earned the median wage would enjoy the same replacement rate as the median-wage worker retiring in the year 1978, even though economic growth is likely to have raised the median wage and made the worker of the year 2050 very much richer in real terms. Hence this approach is sometimes described as one that maintains constant replacement rates.

A numerical (and highly simplified) example can clarify this approach (see Table 11). Again, the example deals with the hypothetical male retiree who had always earned the median wage. A

7/ A framework for analyzing the equity implications of different benefit structures is developed in Dean Leimer and Ronald Hoffman, "Designing an Equitable Intertemporal Social Security Benefit Structure," Office of Research and Statistics, Social Security Administration, November 1976. That paper emphasizes the nature of the components of a benefit structure required to insure the equitable treatment of beneficiaries within and between successive beneficiary populations. The framework indicates how a benefit structure can be designed to insure that its operational characteristics accurately reflect underlying value judgments concerning the equitable distribution of benefits. Also see "A Framework for Analyzing the Equity of the Social Security Benefit Structure," U.S. Department of Health, Education, and Welfare, Social Security Administration, Office of Research and Statistics, Studies in Income Distribution (forthcoming).

worker fitting this description and retiring in 1976 would have had wages in the year before retirement of about $8,600 and received a social security benefit of about $3,600 if he did not have a dependent spouse. This retiree's replacement rate was therefore 42 percent ($3,600 ÷ $8,600 x 100). If real wages grew by 2 percent a year, the median-wage worker retiring in the year 2050 would reach a pre-retirement wage of $37,200 in terms of today's purchasing power. Because the Ford Administration's proposal seeks to keep the replacement rate constant for workers with the same relative income standing, this worker would receive an annual benefit of $16,400 ($37,200 x 0.44). 8/

While the Ford Administration's proposal seeks to maintain constant replacement rates for workers at the same relative income positions, the social security benefit structure is progressive and provides for lower replacement rates at higher levels of earnings. Over time, as earnings rise, more workers would shift into the upper brackets of the benefit rate table where replacement rates are lower. Therefore, if the table were not adjusted, replacement rates on average would fall. To prevent this, the Ford proposal provides for an automatic adjustment in the table to compensate for the increase in wages in the economy. 9/ As a result of this adjustment, larger proportions of future retiring workers do not move into the upper brackets of the benefit rate table as the level of earnings rises; thus, replacement rates for the workers with the same relative income standing are held constant.

At the same time, however, this procedure implies that retiring workers with the same absolute level of real earnings will obtain successively higher replacement rates over time as the average level of earnings in the economy increases and their relative standings fall. Going back to the numerical example of Table 11, the new retiree whose pre-retirement earnings had only kept pace with inflation (i.e., had real earnings in 2050 remaining at the 1976 median of $8,600) would receive a benefit in the year 2050 of $8,600 in terms of today's purchasing power. The replacement rate would be 100 percent (150 percent if he had a dependent wife), and the worker would be enabled at the least to maintain his standard of living upon

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8/ Because of technicalities in the procedure, the replacement rate increases slightly.

9/ The wage-indexing procedure for achieving this result is explained in Appendix A.

TABLE 11 (PART ONE). PROJECTED CONSTANT DOLLARS BENEFITS (EXCLUDING SPOUSE BENEFIT) FOR NEW RETIREES UNDER THE FORD AND HSIAO PROPOSALS: FOR REPRESENTATIVE AVERAGE WORKER AND WORKER WITH SAME LEVEL OF REAL EARNINGS a/

		REPRESENTATIVE AVERAGE WORKER b/			
Year of Retirement	Earnings of Year Before Retirement	Annual Benefit c/		Replacement Rate d/	
		Ford e/	Hsiao	Ford e/	Hsiao
1976	8,600	3,612	3,612	42	42
1990	11,348	4,993	3,858	44	34
2000	13,833	6,087	4,288	44	31
2030	25,056	11,025	6,264	44	25
2050	37,232	16,382	8,563	44	23

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

a/ Earnings in constant (1975) dollars; benefits in constant (1976) dollars.

b/ New retiree (age 65) who had earned the median wage each year of his working life. Median wage rises 2 percent a year faster than prices.

c/ Primary insurance amount (PIA).

d/ PIA as a percent of earnings in the year preceding retirement.

e/ These simulations are based on a modified theoretical system described in the 1976 trustees' report, which is very close to the Ford proposal.

TABLE 11 (PART TWO).

Year of Retirement	Earnings of Year Before Retirement	WORKER WITH SAME LEVEL OF REAL EARNINGS f/ Annual Benefit c/ Ford e/	Hsiao	Replacement Rate d/ Ford e/	Hsiao
1976	8,600	3,612	3,612	42	42
1990	8,600	4,902	3,698	57	43
2000	8,600	5,590	3,784	65	44
2030	8,600	7,138	3,784	83	44
2050	8,600	8,600	3,784	100	44

c/ See Part One.

d/ See Part One.

e/ See Part One.

f/ New retiree (age 65) with the past wage history of the median worker retiring in 1976 (adjusted for inflation).

retirement even if he were solely dependent upon social security. This is not now the case for new retirees with earnings of $8,600, and a replacement rate of 42 percent. Of course, the worker retiring with earnings of $8,600 in 2050 would be much poorer relative to the median wage worker in 2050 because economic growth would have raised the median earnings to $37,200 in real terms.

In contrast to the Ford Administration's proposal, the Hsiao proposal seeks to maintain constant replacement rates for new retirees with the same absolute real level of earnings, regardless of their relative position in the distribution of income. Thus, the Hsiao formula does not adjust the benefit rate table fully for increases in the level of wages. (It adjusts only for the inflation component, and not for the productivity component of wage increases.) With economic growth, therefore, more workers will move into higher real earnings brackets where replacement rates are lower. As a result, the average real benefit of successive generations of new retirees will rise as their earnings rise, but not as fast as earnings -- i.e., the average replacement rate will fall. For workers with the same real earnings histories, however, replacement rates are constant into the future.

In other words, under the Hsiao proposal, the current relationship between a particular earnings level (adjusted for inflation) and the benefits it yields is frozen. Under the Ford Administration's proposal, this relation is altered in order to compensate for the progressivity in the benefit schedule, which would lead to a decline in replacement rates on average as more and more workers shift into higher earnings brackets.

These relationships are also illustrated in the hypothetical examples of Table 11. Under the Hsiao approach, the worker retiring in the year 2050 with real earnings of $8,600 in the year before retirement would get roughly what he gets today ($3,800 in constant dollars.) 10/ The average worker retiring in 2050, of course, would receive more because his real earnings would be higher ($37,200). His annual benefit would rise to $8,600, but the implied replacement rate would decline to 23 percent ($8,600 ÷ $37,200 x 100).

10/ Because of technicalities in the procedure, the replacement rate increases slightly.

LONG-TERM COSTS UNDER THE FORD ADMINISTRATION AND HSIAO ALTERNATIVES

Because it provides for higher replacement rates than the Hsiao proposal, the Ford Administration's proposal would obviously entail higher future expenditures relative to expected taxable payroll. Under the central assumptions of the 1976 trustees' report -- a 4 percent inflation rate, a 1.75 percent average rate of growth in real wages, and an average of 1.9 births per woman -- the Ford proposal would result in expenditures estimated at 19 percent of taxable payroll by the year 2030. This figure should be compared to 26 percent under the present coupled system, and 13 percent under the Hsiao proposal (Table 12). 11/ While changes in the assumptions could produce substantial shifts in the level of expenditures for all systems, the ranking of the Hsiao, Ford, and current law systems is likely to remain the same. 12/

As scheduled under current law, taxes over the period 1976-2050 average 10.9 percent (see Table 12). Under the assumptions given, expenditures would still greatly exceed revenues under the Ford proposal, although not as much as under the current overindexed system. The Hsiao proposal can essentially be funded with current tax rates and a slight increase in the taxable maximum.

The increased burden associated with the Ford proposal could be funded out of increased payroll taxes, although under current cost funding, taxes might have to rise to 19 percent of taxable payroll by the year 2030. General revenues would be an alternative source of funding and would involve raising equally huge sums. The considerations mentioned in Chapter III involved in raising revenues by either method apply here as well.

11/ The Hsiao proposal incorporates a higher taxable maximum, however, than do other systems, resulting in a taxable wage base that is 3 percent larger. When OASDI expenditures are expressed as a percent of total earnings in covered employment for all three systems, the difference between the Hsiao system and the others is very slightly decreased.

12/ For example, estimates of the Social Security Administration indicated that the assumptions of the 1977 trustees' report result in slightly higher long-term expenditures as a percent of payroll for all three systems, while the relative differences between them remain about the same.

TABLE 12. PROJECTED OASDI EXPENDITURES AS A PERCENTAGE OF TAXABLE EARNINGS UNDER THE CURRENT COUPLED SYSTEM AND THE FORD ADMINISTRATION AND HSIAO PROPOSED ALTERNATIVES a/

Year	Expenditures as a Percent of Taxable Earnings: Present Coupled System	Ford Administration Proposal	Hsiao Proposal	Combined OASDI Tax Rate Schedule Under Current Law
1976	10.8	10.8	10.8	9.9
1980	10.7	10.7	10.6	9.9
1990	12.1	11.8	10.5	9.9
2000	13.4	12.4	10.0	9.9
2010	16.0	13.4	10.0	9.9
2020	21.3	16.5	11.5	11.9
2030	26.0	18.9	12.5	11.9
2040	27.4	18.9	11.9	11.9
2050	28.6	18.8	11.3	11.9
Average 1976 to 2050	18.9	15.0	11.0	10.9

SOURCE: Social Security Administration.

a/ The underlying assumptions are a 1.75 percent rate of growth in real wages, a 4 percent inflation rate, and a fertility rate of 1.9. Only earnings in covered employment that are at or below the taxable maximum are included in the base. The Hsiao proposal incorporates a higher taxable maximum resulting in a tax base that is 3 percent higher.

Another alternative is to reduce or restrict benefits for particular categories of individuals. For example, it has been suggested that the age of retirement be raised, that the minimum benefit be abandoned, and that the spouse benefit and/or the student benefit be reduced or eliminated. 13/ Some selective benefits reductions may be widely supported. Others are, however, controversial and raise more profound problems about the structure of the system.

THE COST OF WAITING

The projected costs of OASDI benefits (see Table 13) seem to indicate that we will not have a problem under the current over-indexed system until close to the turn of the next century when benefits begin to rise significantly. But it would be a mistake to infer that decoupling can be postponed with no significant effects. The decoupling procedure must be started within the next few years if larger costs later on are to be avoided. This occurs because replacement rates for new retirees start to rise, but there is a lag of about a decade between the time when the first workers retire at the higher replacement rates and when the bulk of retirees receive benefits at the higher rate. Thus, actions affecting replacement rates now will not influence total costs for many years.

As indicated in Table 13, the difference between decoupling in 1977 versus waiting until 1987 would increase the costs of a system such as the Hsiao proposal by 1.1 percent of payroll by 1990 and by 2 percent by 2020. The costs of the Ford-proposed system would also be increased, although not by nearly as much.

OTHER OPTIONS

There are, of course, many possible ways to restructure social security benefits. Some would combine the features of the two proposals discussed above. For example, the average replacement rate could be allowed to decline at first as in the Hsiao proposal, but after reaching a particular level, it could be maintained at a constant average rate. The Ford Administration's proposal seeks to

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13/ For a discussion of the student benefit and proposals to modify it, see Social Security Benefits for Students, CBO Background Paper, May 1977.

TABLE 13. PROJECTED OASDI EXPENDITURES AS A PERCENT OF TAXABLE PAYROLL UNDER THE FORD AND HSIAO PROPOSALS INTRODUCED AT DIFFERENT TIMES a/

Year	Ford Administration's Proposal		Hsiao Proposal	
	Date of Introduction		Date of Introduction	
	1978	1988	1977	1987
1980	10.7	10.7	10.7	10.7
1990	11.8	12.0	10.5	11.6
2000	12.4	12.8	10.0	11.7
2010	13.4	13.8	10.0	11.8
2020	16.5	17.0	11.5	13.5
2030	18.9	19.5	12.5	14.5
2040	18.9	19.4	11.9	13.5
2050	18.8	19.3	11.3	12.7
Average 1976-2050	15.0	15.4	11.0	12.5

SOURCE: Social Security Administration.

a/ Projections assume a 1.75 percent growth rate in real wages, a 4 percent inflation rate, and a fertility rate of 1.9.

maintain the average replacement rate at the level reached at the time of decoupling. By the late 1970s, however, the average replacement rate is likely to be around 45 percent, which is very high by historical standards. As indicated in Chapter II (see Table 4), the replacement rate for the median-wage earner averaged around 30 percent over the 20 years prior to 1972.

Under the Hsiao proposal, the average replacement rate eventually levels off at the point where most workers are in the highest earnings bracket, with a replacement rate of about 23 percent. Since most workers would have the same replacement rate at that stage, the benefit schedule would have effectively lost its progressivity. Those observers who prefer to have the welfare

functions of social security served by a separate means-tested program are likely to prefer such a proportional benefit structure. Others, however, may seek to preserve progressivity.

Another decision would then have to be made: whether to preserve the progressivity in the benefit structure for workers retiring at the same time, or whether to adopt a structure in which replacement rates are constant for all levels of earnings. In the latter case of a proportional benefit structure, replacement rates would also be constant through time for each new generation of retirees.

One advantage cited for the Hsiao proposal is that it does permit greater flexibility later on. It is always easier to make the program more generous rather than less if future circumstances should require or permit a change. In fact, it may sometime be considered desirable to share any increase in benefits between those who are already retired and those who are coming up for retirement. Under both the Ford and Hsiao systems, the benefits of those who are already retired rise by only the rate of inflation which typically increases by less than the standard of living of the average worker. Another proposal that could be more readily funded under a Hsiao type system is the removal of the retirement test, which would enable potential beneficiaries to collect full benefits after the age of 65 years, regardless of their earnings.

THE ROLE OF SOCIAL SECURITY AND LONG-RUN CONSIDERATIONS

The choice of a decoupling proposal can have important effects on the future role of social security.

Social security is sometimes viewed as one component of a three-part income system for the aged; social security can be said to serve as a compulsory retirement program, which insures that the great mass of individuals will reach retirement with a modest retirement income -- one related to past earnings. For persons whose social security pension does not provide what society considers an adequate standard of living, there is a second category of income: a basic grant given by a federally guaranteed income program, such as

Supplemental Security Income (SSI), which provides benefits according to need (i.e. needs-tested). 14/ A third tier of retirement income is provided through the private savings and pensions of individuals.

The extent to which retired individuals of the same generation depend on these three sources of income is affected by their incomes over their lifetimes as well as by the demands on that income and by habits of saving and spending. Retirees with higher lifetime incomes tend to save more in both absolute and relative terms, and as a result they retire with higher incomes from private savings and investments. How able and willing workers are to provide for their own retirement through savings, pensions, and investments affects how large compulsory savings through social security should be. The question then is whether the saving and spending habits of workers will change on average as their incomes rise in the future.

The Ford Administration and Hsiao proposals seem to reach different conclusions about this question. These differences stem from differences in the concept of what is an economic equal. The Ford Administration's approach assumes that economic circumstances are determined by the worker's relative place in the income distribution. By contrast, the Hsiao approach defines economic circumstances in terms of a specific, absolute standard of living.

The Hsiao approach implicitly views the average worker of the future as a richer man (or woman) if in fact economic growth has raised his standard of living. He is then expected to be relatively less dependent on social security benefits when he retires because he is more likely to have private pensions and savings. (Private pension income is also likely to be related to past earnings.) Thus, the Hsiao proposal allows the progressivity of the benefit structure to lower replacement rates for future generations as workers move up into high earnings brackets. If real wages rise at a rate of 2 percent a year, the earnings in the year before retirement of the same hypothetical worker would rise to $37,200 by the year 2050; the replacement rate for him would be 23 percent, compared to the current average of about 43 percent. The size of the benefit for this average worker, however, would still rise substantially in real terms -- from $3,600 annually in 1976 to $8,600 in 2050.

14/ See the discussion in the Report of the Consultant Panel on Social Security to the Congressional Research Service, August 1976, and also Alicia Munnell, The Future of Social Security, Brookings Institution, Washington, D.C., 1977.

The Ford Administration's approach, on the other hand, assumes that the average worker of the future will not adopt the savings behavior of relatively higher-income workers today, even though his income should reach much higher real levels. The average worker will therefore be as dependent on social security for post-retirement support in the year 2050 as the average worker is today. Thus, the Ford Administration's proposal provides the same replacement rate to the average worker in the year 2050 as to the average worker today; by the year 2050, however, such a worker will have earned four times the pre-retirement earnings of the current average amount. His guaranteed benefit would be $16,400 (in terms of the 1976 dollar).

Advocates of the Hsiao approach stress that the third tier of the three components of retirement income -- private savings and pensions -- is likely to grow in importance. Certainly the aim of the Employee Retirement Income Security Act of 1974 is to give greater assurance of financial protection to private employee pensions and to make private savings for retirement more attractive through the Individual Retirement Accounts. 15/ Moreover, higher levels of future income are likely to lead to greater private savings, particularly if guaranteed social security benefits are not so high and if the taxes to pay for benefits are also not so high.

Advocates of the Ford Administration's approach stress that rising income levels are not a guarantee of higher private savings. It is necessary, they contend, to maintain higher levels of compulsory savings, so that retirement incomes will keep pace with a rising standard of living.

A system as large and complex as social security, and one that affects so large a portion of the population, is bound to have problems, and problems are certain to prompt suggestions for structural or comprehensive reform.

In deliberations over such reforms, the Congress will inevitably confront proposals that would increase costs and others that would lower costs. For example, among the issues that have been raised is that of the spouse benefit, whereby wives without their own benefit (occasionally husbands) are entitled to benefits based on husbands' (occasionally wives') benefits, although no extra contributions are required. Some see this as an unfair transfer to the

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15/ See the discussion in Alicia Munnell, The Future of Social Security, Brookings Institution, Washington, D.C., 1977.

single-earner couple from both the two-earner couple and the single worker. Others feel that the wife who works in the home should receive a fuller entitlement to social security benefits in her own right. Depending on how the problem is perceived and resolved, the cost implications of reform differ widely.

Other questions much broader in scope have been raised about social security. There is, for example, some controversy over whether social security has had a detrimental effect on savings and capital formation. The question has also been raised whether the reduction in work among those 62 years and older, which seems in part to have resulted from the growth of social security, is altogether desirable. These are among questions that are likely to be debated both in the short run and over the next few decades.

APPENDIXES

APPENDIX A. NOTE ON INDEXING

Two proposals discussed in this paper provide alternative ways for calculating retirement benefits. The Ford Administration and the Hsiao proposals differ from each other and from the present system in the way the procedure for determining benefits adjusts for rising prices and wages in the economy.

The present benefit computation procedure has two steps. First, taxable monthly earnings are averaged over a specified number of years (currently 20 years for most workers) to determine average monthly earnings (AME). These AMEs are then applied to a benefit table, which works very much like the table for determining income taxes. The table gives the benefit as a percent of AME for each additional dollar of AME. These percentages may be called "marginal replacement rates." The average replacement rate in this case refers to the accumulated benefit calculated from the table as a percent of AME.

For a worker retiring at age 65, the table is roughly as follows:

AME Bracket	Marginal Replacement Rate
First $110	138 percent
Next $290	50 percent
Next $150	47 percent

-- and so on through five additional brackets with a rate of 22 percent applied to the last $100 of taxable AME. The formula is therefore progressive -- that is, the marginal replacement rate declines as the AME rises and so the average replacement rate is lower for workers with higher earnings.

If no adjustment were made for inflation, the progressivity in the benefit table could result in an erosion of the purchasing power of benefits. When the cost of living rises, wages generally

increase, too, either because of an explicit cost-of-living escalator or through market forces. (Historically, wages have increased by more than the cost of living because of productivity gains.) When wages rise, however, even if it were only because of inflation, the replacement rate falls and a given worker's benefit would not rise as fast as prices.

Under current law, an attempt is made to prevent inflation from eroding benefits by increasing the marginal replacement rates annually with increases in the CPI. This procedure will maintain a constant real benefit for those with a fixed AME, which is, of course, the situation for all persons who are already retired. The procedure overcompensates, however, for the effect of inflation on replacement rates for those who are still working and whose wages keep rising, and therefore results in benefits that rise faster than wages. This is the source of the overindexing problem.

Increasing the earnings brackets in the formula according to increases in the CPI will prevent both replacement rate and real benefits from eroding with inflation. That is, if inflation should increase by 10 percent in a year, for instance, the AME brackets in the table shown above would rise 10 percent, changing the values from $110 to $121, from $290 to $319, from $150 to $165, and so on. Thus, workers whose earnings were increased as a result of inflation alone would not move up the schedule into brackets in which replacement rates are lower. This is the approach of the Hsiao proposal. (The proposal also indexes the AME for inflation for more complicated reasons, which are below.)

The Hsiao proposal would allow replacement rates to decline if this simply came about because wages, hence the AME, rose by more than the rate of inflation (i.e., because of productivity). The Ford proposal, however, seeks to prevent the replacement rate from declining as a result of productivity wage increases. Thus, the Ford proposal increases the brackets in the table according to the increase in average wages. If average wages rose by 12 percent (2

percent more than the rate of inflation), therefore, the brackets in the table above would increase by 12 percent -- i.e., the $110 would rise to $123, $290 to $325, and so on. For AMEs that increased by the average increase in wages, replacement rates would remain constant. 1/

Both proposals also make adjustments for the way the AME is calculated. Because wages are averaged over a long period, past rates of inflation and economic growth affect the AME. This effect is especially important because the number of years over which wages are averaged is scheduled to increase each year until the early 1990s, when all retiring workers will be required to average wages over 35 years. As the averaging period lengthens, more years of low earnings will be included and these extra years are likely to be years farthest in the past.

On average, money wages increase over a working life for three reasons: prices rise, economic growth raises all wage levels, and individuals gain more experience and skill with age. The Hsiao proposal would index wages included in the AME by a price index (the CPI) so that wages would be expressed in terms of dollars of constant purchasing power. Therefore, wages in past years that are low because of subsequent inflation would not lower the AME. The Ford proposal would index wages included in the AME calculation by a wage index so that wages would be expressed in terms of a constant standard of living. Therefore, wages in past years that are low because of subsequent inflation and economic growth would not lower the AME.

Both wage indexing and price indexing of wages for the AME calculation partly mitigate the dampening effect on the AME of lengthening the averaging period. (Wage indexing has a stronger mitigating effect than price indexing.)

1/ Since the average covered wage can increase for reasons other than productivity (for example, because an increase in the proportion of teenagers in the work force reduced the average wage), a simple index may not in fact accurately adjust for productivity. To do this would require the construction of a wage index that was not affected by changes in the skill mix of the labor force.

The effect of choosing one AME indexing scheme over the other can have a sizable influence on the determination of benefits among individuals who vary considerably in the patterns of their earnings histories. (Women, for example, tend to have interrupted work histories and consequently different lifetime earnings profiles from men's.) The choice of wage or price indexing with respect to the brackets also has a powerful effect on the average replacement rate and future costs of the system.

Considerations in Developing a New Benefit Computation System

There has been a substantial amount of material written on the subject of indexing, some of it highly technical, that should be considered by those who will write legislation in this area. While this paper cannot cover all of these topics, some general points are particularly important.

It is essential to develop a comprehensive framework for analyzing the equity implications of social security benefit structures. 2/ There are five tasks that require explicit recognition:

- Indexing to determine how workers who retire during the same year should be positioned relative to each other. In practice, this involves how the AME is calculated and depends on considerations such as the choice of a method for indexing past earnings and the choice of an averaging period.

- Establishing the pattern of benefit awards at retirement within each retirement cohort. This involves the determination of the marginal replacement rates that correspond to each bracket of the AME in the benefit table.

2/ Such a framework is developed in Dean Leimer and Ronald Hoffman, "Designing an Equitable Intertemporal Social Security Benefit Structure," Office of Research and Statistics, Social Security Administration, November 1976. Also see, "A Framework for Analyzing the Equity of the Social Security Benefit Structure," U.S. Department of Health, Education, and Welfare, Social Security Administration, Office of Research and Statistics, Studies in Income Distribution (forthcoming).

- Indexing to determine how successive generations of retiring workers will be positioned relative to each other. This refers to the question of who will be treated as equals when retiring workers belonging to different cohorts are compared. Technically, this involves the choice of an index for indexing the AME through time.

- Indexing to determine how benefits should be related to the AME for different generations of workers retiring in the future. In practice, this involves the choice of an index for adjusting the brackets in the benefit rate table through time.

- Indexing to adjust benefits after retirement. In a coupled system, the same schedule would be used for indexing the benefits of those already retired as for those coming up for retirement. In a technically decoupled system, separate procedures would be used for the two groups.

There also appears to be some confusion in current policy discussions about the extent to which changes in the replacement rate through time can be planned and about the effect of a particular pattern of replacement rates on the predictability of future program costs. In general, pre-planned control of the pattern of replacement rates through time is possible only if the definitions of the replacement rate (in particular, the denominator, or "replacement rate base") and the groups of workers for whom the pattern is to be controlled are consistent with the specifications of the benefit structure components. For example, it is inconsistent to determine a retiree's benefits on the basis of indexed AME and to define the replacement rate as the ratio of benefits to final year earnings. For example, the Ford Administration proposal does not insure that the aggregate average benefit rate for each successive cohort is constant over time. Nor does the Ford Administration proposal guarantee constant average benefit rates for workers in the same relative position judged on their indexed AME (or in their respective beneficiary cohorts).

The relationship between the specifications of the benefit structure components and the predictability of future program costs are also more complex than is often recognized. In particular, there generally is not a precise correspondence between pre-planned control of the pattern of replacement rates through time and the predictability of future implicit tax rates.

APPENDIX B. NOTE ON PRESIDENT CARTER'S PROPOSALS FOR FINANCING THE OASDI PROGRAMS

On May 9, 1977, the Administration introduced a new plan for funding the short-term deficit as well as a proposal for correcting the overadjustment for inflation that is part of the current law.

The Administration's proposal for raising revenues in the near term introduces several features not contained in current policy or legislation. First, it explicitly defines a target level for the amount of balances to be held in the trust funds. Second, it proposes three mechanisms for raising revenues that have not been used before to finance the OASDI programs:

- A tax on all earnings above the currently scheduled taxable maximum, to be paid only by employers,
- A direct transfer from general revenues, and
- A transfer from the Hospital Insurance (HI) trust funds.

For future financing, the Administration also proposes to advance the date of the OASDI tax rate increase now scheduled for the year 2011 up to a two-stage increase in 1985 and 1990.

The Administration's proposal for correcting the overadjustment for inflation is essentially like the Ford proposal, although there are some differences in technical details. The President's decoupling proposal is projected to reduce outlays by 0.5 percent of taxable payroll averaged over the next 25 years and by 4 percent of taxable payroll averaged over the next 75 years. Assuming that all the other funding proposals will be enacted, the combined proposals would result in an average surplus of 0.5 percent of taxable payroll over the next quarter century, although they would still leave an average deficit of 3 percent of taxable payroll over the 50-year period starting in the year 2001.

The remainder of this note provides more detailed analysis of the proposal for raising revenues.

FINANCING OASDI DURING THE NEXT FIVE YEARS

The size of the deficit to be funded over the next five years can be larger or smaller depending on how large the balances in the trust funds are desired to be. The higher the target amount and the more quickly it is to be reached, the larger will be the immediate deficit and the need for additional revenues.

The Administration aims to maintain reserves in the trust funds equal to 33 percent of a year's outlays. That target is designed to meet the criterion that the trust funds should be large enough to weather a recession almost as severe as the current one, up to the point where unemployment drops below 6 percent, without having to raise taxes. If the OASDI trust funds were totally self-sufficient, reserves equal to half of annual outlays would be needed. The Administration has proposed a new plan, however, whereby funds from general revenues would be transferred to social security during periods when unemployment exceeds 6 percent of the labor force. During a deep recession, this transfer would increase income to the trust funds by enough so that initial reserves of 33 percent of outlays would be sufficient. By the time unemployment fell below 6 percent, the reserves would be very low and so a tax increase would presumably be required to build up the reserves once more to the 33 percent level.

Table B-1 shows how the size of the deficit varies according to how the deficit is defined. In the first row, the deficit is defined simply as the excess each year of expected outlays over revenues anticipated under current law. If this deficit were closed, the balances in the trust fund would be maintained at the level reached by the end of 1977 -- $35.5 billion. This fixed dollar reserve would decline as a percent of outlays, however, since outlays are rising each year. The reserves would decline from 36 percent of a year's outlays at the start of 1978 to 25 percent at the start of 1982. The larger deficit under the second definition is the excess of expected outlays over expected revenues plus the amount needed to maintain balances of 33 percent of outgo -- the goal set by the Carter plan.

The third definition of the deficit specifies that balances are maintained at 50 percent of outgo. As indicated in the table, the accumulated deficit over the five-year period 1978-1982 increases from $50 billion under the first definition to $91 billion under the third definition.

TABLE B-1. PROJECTIONS OF THE SHORT-TERM OASDI DEFICIT DEFINED THREE DIFFERENT WAYS: IN BILLIONS OF DOLLARS

Definition of Deficit	1978	1979	1980	1981	1982	Total 1978-1982
Additional Revenues Needed to Cover Outgo a/	6.9	7.9	9.1	11.5	14.9	50.3
Balances when gap is closed b/	35.5	35.5	35.5	35.5	35.5	--
Additional Revenues Needed to Maintain Trust Fund Balances at 33 Percent of Outgo a/	6.8	11.4	12.7	15.2	18.9	65.0
Balances when gap is closed b/	35.4	38.9	42.5	46.2	50.2	--
Additional Revenues Needed to Maintain Trust Fund Balances at 50 Percent of Outgo a/	25.1	13.2	14.6	17.1	20.9	90.9
Balances when gap is closed b/	53.7	59.0	64.5	70.1	76.1	--

a/ Calculated from estimates of income, disbursements, and funds at the end of the year under current law and alternative II economic assumptions made by the 1977 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds.

b/ Balances in the combined OASDI trust funds at the end of the year.

Table B-2 shows how the Carter plan proposes to fund the $65 billion five-year deficit resulting from adoption of the 33-percent goal for the OASDI trust funds starting in 1978.

COMPONENTS OF THE PLAN

Transfer from General Revenues

The Administration has proposed that a transfer from general revenues totalling $14.1 billion be made in the years 1978, 1979, and 1980. The transfer is intended to compensate retrospectively for payroll tax receipts lost as a result of unemployment exceeding 6 percent of the labor force during the period 1975-1978. Since the Administration is expecting unemployment to fall below 6 percent in

TABLE B-2. PROJECTIONS OF THE CARTER PROPOSAL FOR INCREASING OASDI REVENUES: IN BILLIONS OF DOLLARS

	1978	1979	1980	1981	1982	Total 1978-1982
Additional Revenues Needed to Maintain Funds at 33 Percent of Outgo a/	6.8	11.4	12.7	15.2	18.9	65.0
Sources of Additional Revenues b/						
Transfer from general revenues	6.5	4.3	3.3	--	--	14.1
Transfer from HI to OASDI	1.6	2.0	2.3	4.8	5.4	16.1
Increase in employer's tax base	--	2.6	6.1	10.3	11.4	30.4
Increase in employee's tax base	--	0.5	0.6	1.1	1.3	3.5
Increase tax rate for self-employed	--	0.1	0.3	0.4	0.4	1.2
Change in dependency test	0.1	0.3	0.5	0.7	1.0	2.6
Total additional revenues	8.2	9.8	13.1	17.3	19.5	67.9

a/ See Table B-1.

b/ Estimates from "Social Security Financing Proposals," HEW News, U. S. Department of Health, Education, and Welfare, May 9, 1977.

1979, they do not anticipate that any additional general revenue payments would be generated.

The Administration is not now requesting a change in the law to allow for this form of general revenue funding beyond 1980, although the Administration has indicated that it would be a useful financing mechanism on a permanent basis. The Advisory Council on Social Security, which convenes every four years, will next report in 1978; a decision about a permanent change is to be postponed until the Advisory Council has had a chance to consider the issue.

If the Administration plan were made permanent, it would result in an automatic transfer from general revenues to the OASDI trust funds whenever unemployment exceeded 6 percent. The amount of the transfer would be based on an estimate of the reduction in payroll tax receipts resulting from the excess unemployment. With such a mechanism, social security would no longer be a completely self-financing system. Eventually, the amount that has to be raised through payroll tax increases would be reduced and replaced by the funds obtained through increases in personal or corporate income taxes or from a reduction in federal expenditures on other programs.

Whether the distributional effects of this change in the sources of funding are progressive or regressive would depend on how the general revenue transfer were ultimately paid for. 1/

The Administration has pointed out that this limited form of general revenue funding may not be subject to some of the objections raised about other forms of general revenue funding. Because the transfer would be confined to periods of high unemployment, it would be less likely to provide incentives for relaxed fiscal discipline -- i.e., granting benefit increases without providing explicit financing for them. Nor would it necessarily lead to a weakening of the so-called "earned right" principle.

Shift Funds from HI to OASDI

The Administration proposes to shift a portion of the revenues that will be raised by scheduled increases in the HI tax rate into the OASDI trust funds. An increase in the combined employer/employee HI tax of 0.4 percent of taxable earnings is now scheduled for 1978. Half of this increase would be shifted into OASDI. Out of the employer/employee HI tax increase of 0.5 percent scheduled for 1981, 40 percent would be shifted into OASDI. By 1982, therefore, this shift would provide the equivalent of an OASDI tax increase of 0.4 percent of taxable earnings paid by employers and employees combined.

The ultimate source of financing of this proposed shift depends on the actual pattern of HI expenditures. Under current law, the HI trust fund will stay roughly at a constant level of annual outgo up to the early 1980s, according to the Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund (assuming all HI tax increases are used by HI and not transferred elsewhere); after that, it will decline rapidly and become depleted by the late 1980s. Over the period 1977-2001, the average cost of the program is projected to exceed the average income by an average of 1.2 percent of taxable payroll. The Administration, however, proposes to contain the rate of increase of hospital costs and thereby to restrain HI outgo. If the cost containment proposal is not enacted, or if it is not as effective as the Administration

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1/ For a discussion of the distributional effects see Chapter II of the text.

anticipates, and if the shift of funds from HI to OASDI is made, the HI fund could face exhaustion earlier than the HI Board of Trustees projects. Depending on these various contingencies, therefore, the shift could result in some amount of general revenue funding of the HI program.

Increase in the Employer's Tax Base

Historically, employer and employee have paid an equal OASDHI tax on the employee's earnings up to a maximum dollar amount. The taxable maximum, or tax base, is $16,500 in 1977 and it is scheduled to rise automatically each year roughly according to increases in average wages.

The Administration is proposing to eliminate any ceiling on taxable earnings for determining the employer's share of the tax. Thus, the employer would pay taxes on the entire payroll although the employee would continue to pay taxes only on the portion below the taxable maximum. Benefits at retirement are now based on taxable earnings. The Administration proposes to base benefits on the employee's taxable earnings not on the higher base taxable to the employer.

The new employer tax on earnings above the taxable maximum is to be phased in gradually with incremental increases in the employer's tax base. By 1981, the full amount would be imposed, and from that time on, the new employer tax would be the major source for funding the deficit, providing (as indicated in Table B-2) close to 60 percent of the deficit.

The new employer tax would not be evenly distributed among employers since firms and industries differ widely in the proportion of their work force with earnings above the maximum. In general, workers with annual earnings that exceed the present taxable maximum are those with high levels of education or other training. Therefore, firms using a production technology that requires a highly educated or skilled labor force would be much more heavily taxed than the average. By contrast, firms with a less-skilled labor force, and also those employing more part-time workers, would be relatively unaffected.

On average, about 15 percent of all covered workers earn more than the taxable maximum. How this percentage varies from industry

to industry can be seen in the following examples, in which the proportion of employees above the maximum is estimated to be: 2/

- 31 percent in the manufacture of office, accounting, and computing machines,
- 5 percent in shoe manufacturing,
- 24 percent in chemical manufacturing,
- 18 percent in mining,
- 5 percent in department stores and other general merchandising establishments.

Since about 40 percent of college teachers earn more than the maximum, and since faculty salaries make up a substantial portion of the costs of higher education, colleges and universities would be another hard-hit group.

Who would ultimately bear the burden of the employer tax is difficult to predict. Firms affected by the tax are likely to raise their prices, which could well depress the demand for their goods or services; as a result, such firms could resort to cutting back production and the size of their work force. Alternatively, they could try to keep wage increases below what they would have been and thus shift the tax to their workers. In the long run, firms can try to change production processes to use more unskilled workers and part-time workers. They could also accept lower profits, which would be unlikely except in the shortest run since the option is usually available to close down and open a new business from which profits would be higher. Any of these adjustments is likely to involve reallocation of workers and other resources.

2/ These estimates are derived from data on the distribution of earnings by industry reported in the 1970 Census of Population. The census earnings data were projected to 1977 using the assumption that the structure of relative wages within each industry remained the same. Note that the percents given above refer to the worker's total earnings from all jobs during the year. Because some workers (about 10 percent) work for more than one employer during the year, the percent of a firm's employees with earnings above the maximum may be somewhat smaller than the percentages reported above, particularly in industries with high turnover.

The tax rate to be applied to the employer tax on earnings above the maximum includes the HI tax rate. The intention, however, is to transfer this additional income from the HI trust fund to OASDI.

Increase in Employee's Tax Base

The Administration's plan includes a proposed increase in the amount of earnings on which employees pay taxes, but this is relatively small. As indicated in Table B-2, this provision would increase revenues by an estimated $3.5 billion accumulated over the five years, 1978-1982.

The proposal stipulates that the taxable wage base would be increased by $600 above the expected automatic increase in 1979, 1981, 1983, and 1985. The proposed tax base and the tax base under current law are as follows:

Projected Maximum Earnings Taxable to Employees

	Present law	Administration's Proposal	Percent of Increase
1977	$16,500	$16,500	---
1978	17,700	17,700	---
1979	18,900	19,500	3.2%
1980	20,400	21,000	2.9
1981	21,900	23,100	5.5
1982	23,400	24,600	5.1
1983	24,900	26,700	7.2
1984	26,400	28,200	6.8
1985	27,900	30,300	8.6

As a result of the proposed change, the proportion of covered workers with their total earnings below the taxable maximum would rise slightly, from 85 percent in 1977 to 87 percent in 1983, and would remain at 87 percent through 1985.

The proposed increase in the employee's tax base would automatically lead to increased benefits for workers at the taxable maximum and therefore to increased outlays, although the effect would not be significant for a number of years.

Increase the Tax Rate for the Self-Employed

The self-employed consist largely of people who run farms and businesses or have independent professional practices (e.g., physicians, lawyers). The self-employed now pay an OASDI tax of 7 percent on their earnings (up to the taxable maximum). This tax rate is close to 71 percent of the rate paid by employers and employees combined. The Administration is proposing to raise the tax on the self-employed to 7.5 percent starting in 1979, which would bring it up to almost 76 percent of the combined employer-employee rate. Between 1950 and 1972, the self-employed rate had been 75 percent of the combined rate, so this proposal would come close to restoring that relationship. The increased tax receipts are expected to total $1.2 billion over the period 1978-1982.

Even if the tax rate for the self-employed is raised to 7.5 percent, they would still be at an advantage compared to other workers.

Many economists believe that the employer's share of the social security tax is ultimately shifted back to workers, who effectively pay the tax through wage increases that are lower than they would otherwise have been. 3/ A self-employed person, however, would be entitled to the same amount of benefits as a wage earner with equivalent earnings even though the total tax contributions of the self-employed would be lower. Thus, the return to social security tax payments would be greater for the self-employed.

Change in the Dependency Test

Until recently, the husband of a worker eligible for social security could only receive a spouse benefit if he could prove that he was dependent on his wife for his financial support. Under current law, however, wives have not been required to prove financial dependence to qualify for spouse benefits. A recent Supreme Court decision (Califano v. Goldfarb) has held that this unequal treatment of husbands and wives is discriminatory.

3/ See Alicia Munnell, The Future of Social Security, Brookings Institution, Washington, D.C., 1977 (pp. 86-88).

As a result of this decision, the Social Security Administration must now permit husbands to receive spouse benefits on the same basis as wives do. Most husbands would not qualify for spouse benefits because their own benefits exceed one-half of their wives'. (A spouse cannot collect both the spouse benefit and his or her own benefit as a worker). Some husbands have, however, had low earnings in covered employment because most of their earnings during their lifetimes were in uncovered employment (e.g. federal employment). In such cases, husbands often were ineligible if a dependency test were applied, since their total incomes, including their earnings in uncovered employment, would have been too high. This group would gain from the Supreme Court decision. The resulting additional costs have been estimated by the Social Security Administration to be about $500 million in 1978, rising slowly thereafter.

Under the legislation proposed by the Administration, spouses' benefits for both husbands and wives would be subject to a dependency test. 4/ The test would compare the income of the husband and wife over the three years preceding the first spouse's retirement and only the spouse with the lower income could qualify for the spouse benefit. 5/ As a consequence of the new test, some wives who would have become eligible for spouse benefits could lose their eligibility and most husbands who would have gained eligibility for spouse benefits under the Supreme Court decision are likely to lose them. 6/ The savings attributed to the provision are estimated to be roughly equal to the costs added to the program by the court decision.

4/ It should be noted that this provision does not deal with the broader issue of the equity of spouses' benefits when wives with considerable work experience in covered employment are compared to wives with little or no covered work histories.

5/ The dependency test could be repeated if it should happen that at the second spouse's retirement, the determination of the recipient of the spouse benefit were to change.

6/ The relationship between a husband's and a wife's income in the three years preceding retirement does not necessarily reflect the relationship of their incomes over their lifetimes. For example, a wife's earnings might exceed her husband's during the three year period if he were working part-time (e.g. because he was unemployed or disabled), although prior to that time his earnings could have always exceeded hers.

Funding OASDI Over the Next Twenty-Five Years and in the Longer Run

The Administration proposes to extend the short-run financing provisions described above into the future, except for the special general revenue funding, which is terminated in 1980. Under present law, in the period 1977-2001, the deficit -- defined as the difference between projected expenditures and projected receipts as a percent of taxable payroll -- is estimated to average 2.3 percent of taxable payroll (Table B-3). The funding provisions described above would reduce the deficit by an amount equal to 1.3 percent of taxable payroll on average. Thus, an average deficit of 1 percent of taxable payroll would remain over the next 25 years.

TABLE B-3. THE CARTER PROPOSAL FOR FUNDING THE 25-YEAR DEFICIT IN OASDI: AVERAGES OVER THE PERIOD 1977-2001

	Percent of Taxable Payroll
Deficit Under Present Law a/	-2.3
Additional Revenue by Source	
Provisions in short-run proposal b/	1.3
Carter decoupling plan	0.4
Increase in tax rate c/	1.1
Total Additional Funds	2.8
Net Change (surplus)	+0.5

a/ Difference between projected expenditures as a percent of taxable payroll and projected revenues as a percent of taxable payroll, both assuming the provisions of current law. This is the average deficit over the 25-year period.

b/ Includes the provisions shown in Table B-2 and described in the text.

c/ Two-step tax rate increases: 0.5 percent of taxable payroll (employer-employee combined) in 1985 and 1.5 percent in 1990.

Two additional proposals have been made by the Administration to reduce the 25-year deficit by an additional 1.5 percent of taxable payroll. One is a two-step tax rate increase that would increase the tax on employers and employees combined by 0.5 percent of taxable payroll in 1985, and by another 1.5 percent in 1990. Thus, the OASDI tax rate would rise from its present level of 9.9 percent to 11.9 percent by 1990. This is the rate now scheduled under current law to go into effect in the year 2011.

The other provision, which would further narrow the 25-year deficit, is the result of adopting a decoupling plan that would correct the overadjustment for inflation in current law. The Carter decoupling plan is similar to the Ford proposal described in Chapter III and Appendix A. Both proposals use the same formula for determining the benefits awarded to future generations of new retirees. The proposals differ only in some technical details of the method. 7/

The Social Security Administration has estimated the annual costs of the OASDI program under the Carter proposal to be about 12 percent of annual taxable payroll averaged over the 25-year period starting in 1979. OASDI costs as a percent of taxable payroll, however, are estimated to rise after the turn of the century, reaching about 19 percent by the year 2030. The average for the 50-year period, 2004-2053, is estimated at close to 17 percent of taxable payroll.

These cost estimates are roughly the same as those implied by the Ford proposal. Under both plans, the level of benefits provided to future retirees would represent a savings compared to the current system, which overadjusts for inflation (assuming the demographic and economic projections of the 1977 trustees' report). The benefits provided under both plans, however, would require an increasing share of future tax dollars (whether from payroll or income taxes) as the ratio of retired beneficiaries to workers rises, as anticipated, in the future.

7/ One technical difference is that covered earnings for determining benefits would be indexed up to age 62 instead of up to the actual age of retirement of the worker. (See Appendix A for a discussion of indexing.) Another is that the transition period from the current system to the decoupled system would be reduced to 5 years from 10 years.

If all the Administration proposals for the 25-year period were extended into the 75-year period 1977-2051, projected expenditures would still exceed receipts by an average of 1.9 percent of taxable payroll. Thus, the Carter proposal would fund about three-quarters of the 75-year deficit, which is estimated to average 8.2 percent of taxable payroll under current law.

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