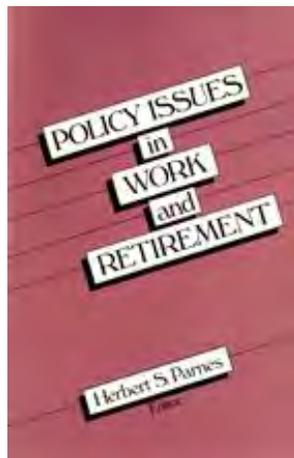

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Chapter 8 Financing Options for Social Security

Alicia H. Munnell

Social security is the mainstay of the economic security of the elderly. In 1982 the aged, the disabled, their dependents and survivors will receive \$156 billion in cash benefits from the Old-Age, Survivors, and Disability Insurance (OASDI) program and another \$34 billion of medical care under the Hospital Insurance (HI) program. Approximately 90 percent of persons aged 65 and over are social security recipients, and for two-thirds of these recipients social security benefits account for more than half of total income.¹ With such enormous dependence on social security, any significant change in the program could affect the work and retirement patterns of older people.

In recent years, workers and beneficiaries alike have begun to question whether the system can continue to provide its current level of support. The widespread concern is a response to the repeated short-run financial crises and to the large deficits projected after the turn of the century as the baby boom retires. Confidence in the program can be restored only by bringing revenues and costs into balance so that the immediate shortfall is eliminated and the financial integrity of the system is insured for the long run. This paper explores possible solutions to both the current and projected deficits.

I. The Social Security Program Today

In 1982, the social security program covers 90 percent of the working population, including the self-employed. At present, the only significant categories of workers excluded from the program are civilian employees of the federal government under a retirement system of their own, 30 percent of state and local government workers, low-paid or very irregularly employed farm and domestic workers, and unpaid family workers. Railroad employees are also not covered directly, but their plan is thoroughly integrated with social security.

The social security system consists of three programs which are financed through separate trust funds. The Old-Age and Survivors Insurance (OASI) program, which pays benefits to retired workers, their dependents and survivors, is the largest program and will dispense \$138 billion in benefits to almost 32 million beneficiaries in 1982 (see table 1). The Disability Insurance (DI) program, which pays benefits to disabled workers and their dependents, will pay \$18 billion to roughly 4 million beneficiaries in 1982. The third program, Hospital Insurance (HI) or Medicare, pays benefits to workers covered by OASDI and the railroad retirement program. Benefit payments from this fund will be \$34 billion in 1982.

Benefits Provisions

Old-age benefits are payable at age 65 to fully insured workers, that is, to workers who have one quarter of earnings in covered employment for each year since 1950 (or, if later, age 21) and the age of 62. Early retirement is possible as early as age 62 with reduced benefits. Disability benefits are payable to workers who have one quarter of coverage between 1950 (or age 21) and the onset of the disability.

Table 1
**Benefits and Beneficiaries under Old-Age and Survivors Insurance (OASI),
 Disability Insurance (DI) and Hospital Insurance (HI), Selected Years 1950-1982**

| Year | Benefits (\$ billions) | | | | Beneficiaries (millions) | | | |
|------|------------------------|------|------|-------|--------------------------|-----|-------|-------------------|
| | OASI | DI | HI | Total | OASI | DI | Total | HI |
| 1950 | 1.0 | — | — | 1.0 | 2.9 | — | 2.9 | — |
| 1960 | 10.7 | .6 | — | 11.3 | 13.7 | .5 | 14.2 | — |
| 1970 | 28.8 | 3.1 | 5.1 | 37.0 | 22.6 | 2.6 | 25.2 | 20.4 ^a |
| 1980 | 105.1 | 15.4 | 25.1 | 145.6 | 30.4 | 4.7 | 35.1 | 27.6 ^a |
| 1982 | 138.5 | 17.7 | 35.1 | 191.3 | 31.5 | 4.4 | 35.9 | 28.5 ^a |

SOURCES: U.S. Department of Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: GPO, 1982), Table 20, p. 51; Table 22, p. 54; Table 28, p. 65; Table A3, p. 84; Table A4, p. 86; U.S. Department of Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund* (Washington, DC: GPO, 1982), Table 6, p. 29; U.S. Department of Health and Human Services, Social Security Administration, Division of Medicare Cost Analysis, unpublished data.

a. This figure represents both aged and disabled beneficiaries. As of July 1, 1973 hospital insurance protection was extended to disabled persons entitled to monthly benefit payments under social security because of their disability.

The monthly benefits awarded to retired and disabled workers are computed in three stages. The first is the calculation of the worker's average indexed monthly earnings (AIME). To compute this figure, taxable wages in each year between 1950 (or age 21) and age 62 are revalued to reflect the increases in the average wage level and then the revalued earnings are averaged over the period, excluding five years of lowest earnings.

The second stage involves the calculation of the worker's primary insurance amount (PIA)—the benefit payable to a fully insured worker retiring at age 65. In 1982 this amount is determined by applying the following three bracket formula to the worker's AIME:

- 90 percent of the first \$230 of AIME
- 32 percent of AIME between \$230 and \$1,388
- 15 percent of AIME over \$1,388

Since the formula multiplies each successive increment of the worker's AIME by a declining percentage, low-wage workers receive a higher percentage of their pre-retirement earnings in benefits than high-wage workers. To maintain the progressivity and to insure that the average worker in each successive cohort receives the same replacement rate (benefit as a percent of pre-retirement earnings), the bend points in the benefit formula, that is, the amounts \$230 and \$1,388, are increased each year to reflect the average increase in wages in employment covered by social security.

The third stage in the benefit calculation is the determination of the actual benefit paid. This amount usually depends on the relation of the wage earner to the individual drawing the benefit and the age at which he claims it. A fully insured worker retiring at 65 receives a monthly benefit equal to 100 percent of his primary insurance amount; however, a worker can retire as early as 62, with an actuarial reduction in benefits of 5/9 of 1 percent for each month before the age of

65. A dependent spouse, a child, or dependent grandchild receives a benefit of up to 50 percent of the worker's primary insurance amount. If the worker dies, the widow or widower receives 100 percent of his primary insurance amount, while a surviving child or grandchild receives 75 percent. Dependents and survivors can also claim reduced benefits earlier than 65.²

Since social security payments are meant to replace earnings lost because of retirement or disability, the amount of earned income a person can receive while collecting social security benefits is limited until he reaches 72. This limit is known as the retirement, or earnings, test and is indexed to keep pace with the level of wages. For 1982, a beneficiary can earn up to \$6,000 annually with no reduction in benefits. After that, a dollar of benefits is withheld for each \$2 of earnings over \$6,000.³

Social Security Taxes

The social security system is financed on a pay-as-you-go basis. Payroll tax contributions from the 115 million covered workers finance the benefits for the 36 million retired and disabled workers and their dependents and survivors. In 1982, the tax rate for retirement, survivors and disability insurance is 5.4 percent each for the employee and employer on the first \$32,400 of wage income, with the ceiling scheduled to rise automatically with the wage level. Hospital insurance contributions raise the overall payroll tax rate to 6.7 percent each for the employee and employer.

Since social security benefits are funded essentially by the current flow of payroll taxes, the trust funds are designed only to provide a buffer against brief unanticipated economic fluctuations. The funds usually hold substantially less than one year's benefits, but a small trust fund should not be a source of concern in a social insurance program. A

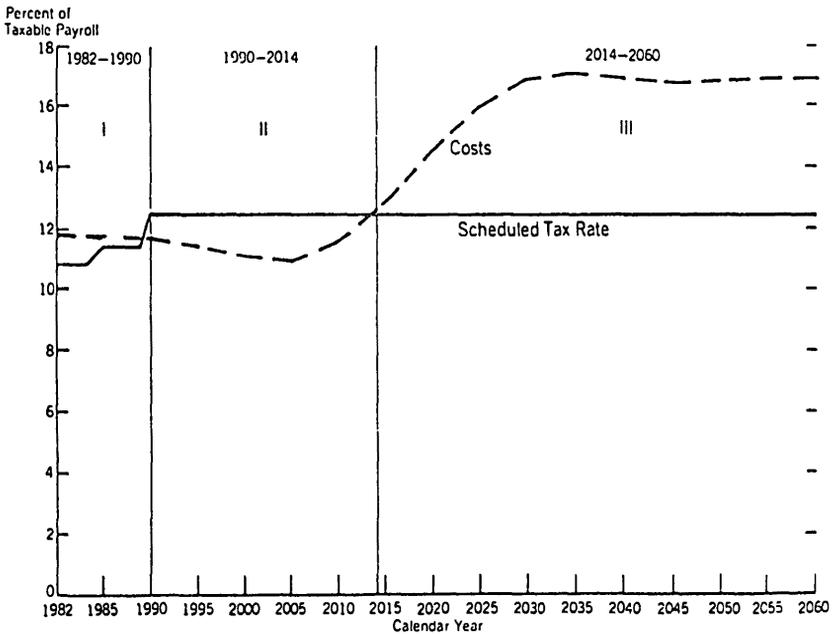
private pension plan must have sufficient assets to meet all prior and current commitments because it cannot be certain of receiving future premiums. In contrast, the social security program, which relies on the government's tax powers to meet its obligations, can continue to levy taxes on future generations of workers to pay social security taxes. However, pay-as-you-go financing can lead to short-run problems if economic fluctuations adversely affect receipts or outlays. Long-run financing problems can also arise if the size of the beneficiary population increases relative to the working population. The social security system now faces both of these difficulties.

II. Financing Social Security: An Overview

The trustees of the social security program each year prepare a report on the condition of and prospects for the OASI, DI and HI funds, both in the near and distant future.⁴ Figure 1 compares the cost of the combined OASI and DI funds measured as a percentage of covered payrolls with the scheduled contribution rates for the employer and employee. The projections are based on the more pessimistic of the two central assumptions, II-B, in the trustees' 1982 report, and are shown through 2060, the end of the period for which official estimates are available.⁵

The easiest way to understand the OASDI financing situation is to divide the figure into three separate time periods—1982-1990, 1990-2014, and 2014-2060. In the first period, assuming a continuation of current law, OASDI has a considerable shortfall. Between now and 1985, expenditures substantially exceed income. Present law provides for borrowing from the hospital insurance fund during 1982, but without a continuation of the borrowing provision or additional income of some other source, the OASI fund would not be able to pay benefits after mid-1983. The scheduled

Figure 1
Estimated OASDI Costs as Percent of Payroll
and Scheduled Tax Rates
Intermediate Assumption II-B^a, 1982-2060



SOURCE: 1982 Annual Report of the Board of Trustees of the Federal Old Age and Survivors Insurance and Disability Insurance Trust Funds (GPO, 1982), Table 27, p. 64.

a. Under Intermediate II-B assumptions, the ultimate percentage rates of increase for fertility, real wages and CPI are 2.1, 1.5 and 4.0 respectively.

1985 increase in the contribution rate brings the income and expenditure lines closer together, but the OASDI program continues to run a deficit.

In marked contrast to the first period, the outlook for OASDI financing is very favorable for the period 1990-2014. Under the II-B assumptions, annual expenditures as a percent of payroll will be less between 1990 and about 2010 than they will be in 1990, the beginning of the period. With the scheduled 1990 increase in the contribution rate, income increases at the very time expenditures decrease. As a result, the trust funds accumulate surpluses rapidly, reaching 177 percent of the next year's outgo by 2010.⁶

The primary reason for the decline in expenditures beginning in 1990 is demographic. The low fertility rates during the 1930s are reflected in a considerable reduction in the rate of increase in the population over 65 during the 1990s. While the average annual increase in the number of persons over 65 will be about 600,000 during the 1980s, the net increase will drop to around 300,000 a year between 1995 and 2005 in spite of the improvement in the mortality rate. At the same time, the baby boom generation born after World War II will be swelling the labor force so that the ratio of workers to beneficiaries, now roughly 3 to 1, is estimated to remain stable for the next 30 years. With a stable ratio of workers to beneficiaries, even modest productivity gains will reduce the cost of social security as a percent of payroll.

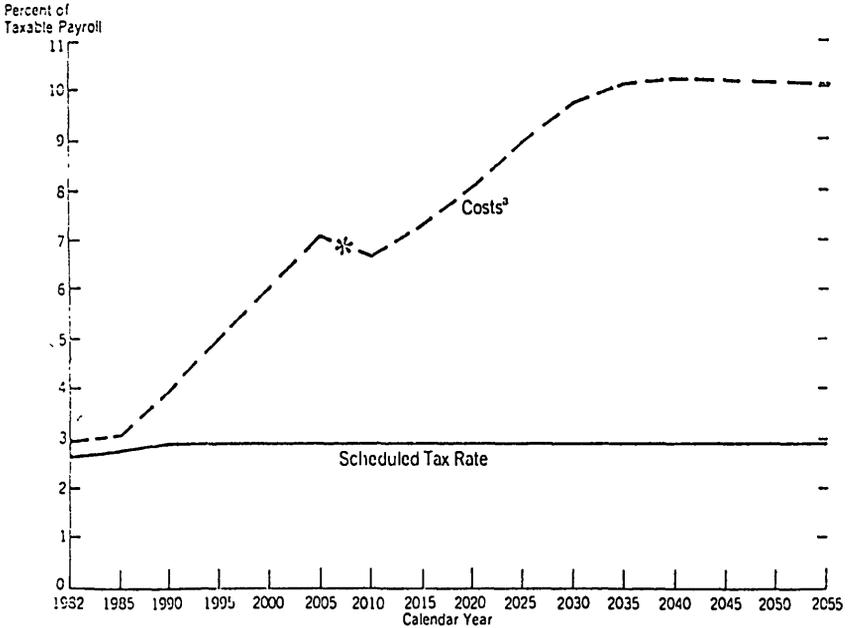
The third period is characterized by rapidly rising costs as the baby boom generation starts to retire. At the same time, the growth in the labor force slows markedly, reflecting the precipitous decline in the fertility rate which began in the mid-1960s. These two factors cause the ratio of workers to beneficiaries to decline from its current level of 3 to 1 to a ratio of 2 to 1. With a pay-as-you-go system, the decline in this crucial ratio produces a substantial increase in costs as a

percentage of payrolls. Despite the increasing gap between costs and revenues, however, the large accumulated trust funds are sufficient under the II-B assumptions to carry the OASDI program through 2025.⁷

Figure 2 compares income and expenditures for the Hospital Insurance program from now until the year 2060. Because of the great uncertainty about the nature of the hospital system in the distant future, the Trustees traditionally have made cost estimates for HI for only 25 years as compared to 75 years for OASDI. However, projected costs for the entire 75-year period have been prepared by the Senate Finance Committee.⁸ Under the HI program, expenditures consistently exceed contributions as a percentage of payroll. With unconstrained growth, which allows the hospital cost increases to match the increase in wages, the contribution rates scheduled under current law are clearly inadequate.

The following discussion of social security financing focuses primarily on the cash benefit program, OASDI, but it is necessary to consider the financial health of the HI program in evaluating alternative proposals for the short run, such as an extension of interfund borrowing, and for the long run, such as increase in payroll tax contribution rates.

Figure 2
Estimates HI Costs as Percent of Payroll
and Scheduled Tax Rates^a
Intermediate Assumption II-B, 1982-2055



SOURCES: *1982 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund* (GPO, 1982), Table 8, p. 37; Senate, Committee on Finance, *Staff Data and Materials Related to Social Security Financing*, Committee Print, 97 Cong. 1 Sess. (GPO, September 1981), Table 15, p. 31.

a. Costs for years after 2005 are prepared by Senate Finance Committee and are based on the assumption that medical care unit cost increases after the year 2005 will be equal to average wage increases in covered employment.

III. Short-Run Financing Problems and Options: 1982-1990

Under current law the OASI trust fund, the largest of the social security trust funds, will be unable to pay all benefits on time by July 1983. All three funds, OASI, DI and HI, together will be exhausted by the end of 1984. The immediacy of the projected shortfall has caused many to characterize the social security program's short-run problems as catastrophic and the press constantly refers to the impending "bankruptcy" of the system. In fact, the magnitude of the deficits forecasted for the next eight years is relatively small, less than 4 percent of annual outlays over the period, and numerous options are available for restoring solvency. This section explores the origins of the current deficits and some of the options available for reestablishing financial balance.

Origins of the Current Deficits

In 1977 Congress undertook an important restructuring of the social security program in order to insure its solvency. The congressional action was a response to dire predictions in the 1977 Trustees' report regarding both the short-run and long-run financing of social security. The report warned that the disability fund would be depleted by early 1979 and the OASI fund would be empty by the early 1980s. The short-run deficits were attributable to the high unemployment and inflation that accompanied the 1973-75 recession and to a continuing rapid increase in disability beneficiaries that would have depleted DI trust fund revenues even without the downturn in the economy. In addition, the 1977 report indicated that a significant long term deficit had emerged as a result of lower fertility rate assumptions and increasing replacement rates (the ratio of benefits to preretirement earnings) due to an overindexed benefit formula.

To restore solvency, the 1977 Amendments changed the way benefits were calculated in order to stabilize replacement rates, increased the payroll tax contribution rate, and raised the taxable earnings base. The legislation also reallocated the share of the payroll tax slated for DI trust fund. The principal changes in the financing provisions are shown in table 2. The largest increase in the tax rate occurred in January 1981, when the rate rose 0.52 percent for both employees and employers to a level 0.35 above what it would have been without the change in the law. The maximum wage base on which the tax is levied also increased substantially. For the years 1979 through 1981, the provision for automatic indexing of the base to changes in average wages was suspended and a series of large ad hoc increases was substituted. The consequence of the increases in the rate and base is that the maximum tax in 1982 was about 40 percent higher than the maximum tax under the old law. In view of the substantial increase in revenues and the reduction in benefit growth from correcting the overindexing, the Acting Commissioner of Social Security predicted that “with the signing of the Social Security Amendments of 1977 into law, the Congress and the President have assured the financial soundness of the social security program for the next 50 years.”

Less than three years later, however, the Trustees, in their 1980 report, again warned that as early as mid-1981 the OASI trust fund would not be able to pay retirement benefits as they came due. The obvious question is what changed in the intervening years to so dramatically revise the outlook for social security financing during the 1980s. The answer lies primarily in the poor performance of the economy.

Table 3 compares the assumptions underlying the 1977 Trustees’ report to actual experience and to the assumptions underlying the 1980 Trustees’ report. The 1977 projections were made on the traditional assumption that the rate of wage increase would equal the rate of increase in prices plus

Table 2
Social Security Financing Provisions Before and After the 1977 Amendments

| Year | Tax rates ^a (percent) | | | | | | Taxable base | | Maximum tax | |
|----------------|----------------------------------|-------|------|---------|-------|------|--------------|---------------------|-------------|---------|
| | Old law | | | New law | | | Old law | New law | Old law | New law |
| | Total | OASDI | HI | Total | OASDI | HI | | | | |
| 1977 | 5.85 | 4.95 | 0.90 | 5.85 | 4.95 | 0.90 | b | \$16,500 | \$965 | \$965 |
| 1978 | 6.05 | 4.95 | 1.10 | 6.05 | 5.05 | 1.00 | b | 17,700 | 1,071 | 1,071 |
| 1979 | 6.05 | 4.95 | 1.10 | 6.13 | 5.08 | 1.05 | 18,900 | 22,900 ^c | 1,144 | 1,404 |
| 1980 | 6.05 | 4.95 | 1.10 | 6.13 | 5.08 | 1.05 | 20,400 | 25,900 ^c | 1,234 | 1,588 |
| 1981 | 6.30 | 4.95 | 1.35 | 6.65 | 5.35 | 1.30 | 22,200 | 29,700 ^c | 1,399 | 1,975 |
| 1982 | 6.30 | 4.95 | 1.35 | 6.70 | 5.40 | 1.30 | 24,300 | 32,400 | 1,531 | 2,171 |
| 1983 | 6.30 | 4.95 | 1.35 | 6.70 | 5.40 | 1.30 | 26,400 | 35,100 ^d | 1,663 | 2,352 |
| 1984 | 6.30 | 4.95 | 1.35 | 6.70 | 5.40 | 1.30 | 28,200 | 37,500 ^d | 1,777 | 2,512 |
| 1985 | 6.30 | 4.95 | 1.35 | 7.05 | 5.70 | 1.35 | 30,600 | 40,500 ^d | 1,928 | 2,855 |
| 1986 | 6.45 | 4.95 | 1.50 | 7.15 | 5.70 | 1.45 | 33,000 | 43,800 ^d | 2,079 | 3,132 |
| 1987-89 | 6.45 | 4.95 | 1.50 | 7.15 | 5.70 | 1.45 | — | — | — | — |
| 1990-2010 | 6.45 | 4.95 | 1.50 | 7.65 | 6.20 | 1.45 | — | — | — | — |
| 2011 and after | 7.45 | 5.95 | 1.50 | 7.65 | 6.20 | 1.45 | — | — | — | — |

SOURCES: U.S. Department of Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: GPO, 1982), Table E2, p. 105; John Snee and Mary Ross, "Social Security Amendments of 1977: Legislative History and Summary of Provisions," *Social Security Bulletin* 41, no. 3 (March 1978), Table 4, p. 18.

- a. For employees and employers, each. Tax rates for the self-employed are approximately one and one-half times those for nonself-employed.
- b. There is no provision in the "old-law" for the taxable base amount in 1977 or 1978.
- c. Amount represents ad hoc increase specified by Social Security Amendments of 1977.
- d. The taxable base amounts will be determined automatically on the basis of the annual increase in average earnings in covered employment.

Table 3
Comparison of Assumptions Underlying Trustees' 1977 Projections
with Actual Experience and with Trustees' Assumptions^a

| Year | Percentage increase in | | | | | | | | | | | |
|------|------------------------|--------|-----------------------------|------------------|------------------|------------------|-------------------------------------|--------|------------------|-------------------|--------|------------------|
| | CPI | | Wages in covered employment | | | | Real wage differential ^c | | | Unemployment rate | | |
| | 1977 Trustees | Actual | 1980 Trustees | 1977 Trustees | Actual | 1980 Trustees | 1977 Trustees | Actual | 1980 Trustees | 1977 Trustees | Actual | 1980 Trustees |
| 1977 | 6.0 | 6.5 | -- | 8.4 | 8.0 | -- | 2.4 | 1.5 | -- | 7.1 | 7.0 | -- |
| 1978 | 5.4 | 7.7 | -- | 8.1 | 8.2 | -- | 2.7 | 0.6 | -- | 6.3 | 6.1 | -- |
| 1979 | 5.3 | 11.3 | -- | 7.8 | 8.8 ^b | -- | 2.5 | -2.6 | -- | 5.7 | 5.9 | -- |
| 1980 | 4.7 | 13.5 | 14.2 | 7.1 | 8.6 ^b | 9.6 | 2.4 | -4.9 | -4.6 | 5.2 | 7.2 | 7.2 |
| 1981 | 4.1 | 10.3 | 9.7 | 6.4 | 8.6 ^b | 9.5 | 2.3 | -1.7 | -0.2 | 5.0 | 7.6 | 7.9 |
| 1982 | 4.0 | -- | 9.0 | 6.0 | -- | 10.9 | 2.0 | -- | 1.9 | 5.0 | -- | 7.3 |
| 1983 | 4.0 | -- | 8.6 | 5.75 | -- | 9.9 | 1.75 | -- | 1.3 | 5.0 | -- | 6.6 |
| 1984 | 4.0 | -- | 8.2 | 5.75 | -- | 9.4 | 1.75 | -- | 1.2 | 5.0 | -- | 6.2 |
| 1985 | 4.0 | -- | 7.8 | 5.75 | -- | 9.1 | 1.75 | -- | 1.3 | 5.0 | -- | 5.9 |

SOURCES: U.S. Department of Health, Education and Welfare, Social Security Administration, *1977 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: GPO, 1977), Table 25, p. 45; U.S. Department of Health and Human Services, Social Security Administration, *1980 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, Table 10, p. 41; U.S. Department of Health and Human Services, Social Security Administration *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: GPO, 1982), Table 10, p. 32.

a. The 1980 assumptions are based on the intermediate alternative assumptions in the Trustees Report.

b. Estimates.

c. The difference between the percentage increase in average annual wages in covered employment and the percentage increase in the annual CPI.

1 or 2 percent for productivity growth. Since the 1977 projections, however, the traditional relationship between prices and wages has been reversed, with price increases exceeding wage growth. The projected balance in the trust funds is extremely sensitive to the assumed values of these economic variables. The rate of wage growth approximately determines the rate at which revenues grow, while the rate of increase in the CPI determines the rate at which benefit expenditures increase, since benefits are indexed to the CPI. Moreover, the higher unemployment predicted in the 1980 report further worsened the financial outlook since it implied that fewer people would contribute revenue into the trust funds and that more people, finding themselves unemployed, would be likely to take an early retirement or apply for disability benefits.

Despite the deteriorating economic conditions, however, the balance in the DI trust fund increased after 1977, due primarily to a tremendous reduction in the rate at which the eligible population was granted DI benefits. In 1975 the number of disability awards per 1,000 insured workers was 7.11, and in 1977, when the amendments were passed allocating a larger fraction of the combined OASDI tax rate to the DI program, the rate was still 6.54.¹⁰ By 1978, however, it had fallen to 4.36 and, under the 1980 Trustees' intermediate assumptions, was forecasted to remain at about that level through 1982.

Since the Trustees sounded the initial alarm in their 1980 report, the economy has continued to weaken. Two legislative changes, however, have extended until July 1983 the date on which the OASI system will no longer be able to pay benefits on a timely basis. The Omnibus Reconciliation Act of 1981, which was signed into law on August 13, 1981, reduced benefits by about 2 percent through the elimination of students' benefits, capping family benefits for disabled workers and lowering Medicare costs.¹¹ Amendments to the

Omnibus Reconciliation Act, passed on December 29, 1981, authorized borrowing among the OASI, DI and HI trust funds until January 1983. However, a provision that permits borrowing for deficits up to six months in advance will insure sufficient revenues to carry the OASI fund through June 1983.

In addition to the legislation that extended the life of the OASI fund, the short-run financial health of the HI fund was improved by the Medicare provisions included in the Tax Equity and Fiscal Responsibility Act of 1982, which the President signed into law on August 20, 1982. To increase revenues for the HI program, the legislation extends the social security hospital insurance tax to federal employees. On the expenditure side, the new law substantially restricts Medicare reimbursement to hospitals. Over the three-year period, fiscal 1983-1985, the Tax Equity Act will increase revenues in the HI fund by about \$10 billion.

The most recent projections for the short-run status of the OASI, DI and HI programs are presented in table 4. These projections are based on the 1982 Trustees' II-B assumptions, modified to take account of the 7.4 percent cost-of-living adjustment awarded in July 1982, the transfers under the interfund borrowing provisions, and the HI revenue increases and cost reductions from the Tax Equity Act. The obvious question, however, is whether these projections are reliable, particularly in view of the past experience with over-optimistic assumptions.

Table 5 presents forecasts of the change in the consumer price index, the average wage, the real wage differential and the unemployment rate from the 1982 Trustees' report and three independent forecasters, Chase Econometrics, Data Resources, Inc. (DRI) and the Wharton model. The table shows that the figures on which the Trustees based their projections are in the same range as the private forecasters for

Table 4
Estimated Operations of the OASI, DI, HI, and OASDHI Trust Funds
Under Intermediate Assumptions, II-B, 1977-1990
(billions of dollars)

| Fund performance | Actual | | | | |
|---|--------|-------|-------|-------|-------|
| | 1977 | 1978 | 1979 | 1980 | 1981 |
| Income | 72.4 | 78.1 | 90.3 | 105.8 | 125.4 |
| Disbursements | 75.3 | 83.1 | 93.1 | 107.7 | 126.7 |
| Fund at end of year | 32.5 | 27.5 | 24.7 | 22.8 | 21.5 |
| Fund as percentage of total expenditures during year ^c | 47 | 39 | 30 | 23 | 18 |
| Income | 9.6 | 13.8 | 15.6 | 13.9 | 17.1 |
| Disbursements | 11.9 | 13.0 | 14.2 | 15.9 | 17.7 |
| Fund at end of year | 3.4 | 4.2 | 5.6 | 3.6 | 3.0 |
| Fund as percentage of total expenditures during year ^c | 48 | 26 | 30 | 35 | 21 |
| Income | 15.9 | 19.2 | 22.8 | 26.1 | 35.7 |
| Disbursements | 16.0 | 18.2 | 21.1 | 25.6 | 30.7 |
| Fund at end of year | 10.4 | 11.5 | 13.2 | 13.7 | 18.7 |
| Fund as percentage of total expenditures during year ^c | 66 | 57 | 54 | 52 | 45 |
| Income | 97.9 | 111.1 | 128.7 | 145.8 | 178.2 |
| Disbursements | 103.2 | 114.3 | 128.4 | 149.2 | 175.1 |
| Fund at end of year | 46.3 | 43.2 | 43.5 | 40.1 | 43.2 |
| Fund as percentage of total expenditures during year ^c | 50 | 41 | 29 | 29 | 23 |

(continued)

| Fund performance | Projected ^a | | | | | | | | |
|---|------------------------|---------------------|-------|-------|-------|--------|--------|--------|--------|
| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 |
| | | OASI ^b | | | | | | | |
| Income | 137.7 | 136.5 | 149.2 | 167.3 | 180.9 | 194.5 | 209.1 | 223.9 | 257.0 |
| Disbursements | 141.9 | 156.5 | 173.0 | 190.9 | 208.5 | 226.3 | 244.5 | 263.2 | 282.2 |
| Fund at end of year | 17.3 | -2.6 | -26.4 | -50.0 | -77.6 | -109.4 | -144.9 | -184.2 | -209.3 |
| Fund as percentage of total expenditures during year ^c | 15 | 11 | -2 | -14 | -24 | -34 | -45 | -55 | -65 |
| | | DI ^b | | | | | | | |
| Income | 16.6 | 26.1 | 29.6 | 37.5 | 42.0 | 46.5 | 51.3 | 56.5 | 69.6 |
| Disbursements | 18.1 | 19.0 | 19.9 | 21.3 | 22.7 | 24.2 | 25.8 | 27.6 | 29.4 |
| Fund at end of year | 1.6 | 8.7 | 18.4 | 34.6 | 53.8 | 76.1 | 101.6 | 130.4 | 170.6 |
| Fund as percentage of total expenditures during year ^c | 17 | 8 | 44 | 86 | 152 | 222 | 294 | 368 | 443 |
| | | HI ^b | | | | | | | |
| Income | 32.6 | 44.0 | 48.4 | 54.5 | 63.2 | 68.5 | 73.8 | 78.9 | 83.8 |
| Disbursements | 35.6 | 40.8 | 46.3 | 51.9 | 58.8 | 66.9 | 76.0 | 86.1 | 96.8 |
| Fund at end of year | 15.8 | 19.0 | 21.0 | 23.6 | 28.0 | 29.7 | 27.4 | 20.2 | 7.2 |
| Fund as percentage of total expenditures during year ^c | 53 | 39 | 41 | 41 | 40 | 42 | 39 | 32 | 21 |
| | | OASDHI ^b | | | | | | | |
| Income | 187.0 | 206.6 | 227.2 | 259.3 | 286.1 | 309.5 | 334.2 | 359.3 | 410.5 |
| Disbursements | 195.6 | 216.3 | 239.2 | 264.1 | 290.0 | 317.5 | 346.4 | 376.9 | 408.4 |
| Fund at end of year | 34.6 | 25.0 | 13.0 | 8.2 | 4.3 | -3.7 | -15.9 | -33.6 | -31.5 |
| Fund as percentage of total expenditures during year ^c | 22 | 16 | 10 | 5 | 3 | 1 | -1 | -4 | -8 |

SOURCES: U.S. Department of Health and Human Services, Social Security Administration, Office of the Actuary, Health Care Financing Administration, Bureau of Data Management and Strategy, "Estimated Operations of the OASI, DI and HI Trust Funds Under the Laws Amended by the Tax Equity and Fiscal Responsibility Act of 1982," mimeographed (September 17, 1982), Table 3, p. 5; U.S. Department of

Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund* (Washington, DC: GPO, 1982), Table 10, p. 39; U.S. Department of Health and Human Services, Social Security Administration, *Summary of the 1982 Annual Reports of the Social Security Boards of Trustees* (Washington, DC: GPO, 1982), Table 4, p. 6; U.S. Department of Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: GPO, 1982), Table 20, p. 51.

- a. Based on Social Security Administration and Health Care Financing Administration estimates of impact of H.R. 4961, "Tax Equity and Fiscal Responsibility Act of 1982" on operations of the OASI, DI and HI Trust Funds under Intermediate Assumptions II-B of the 1982 *Trustees Report*, which were adjusted for OASI and DI to reflect the actual 7.4 percent benefit increase for 1982. The estimated operations for OASI, OASDI, and OASDHI and HI combined in 1983 and later are theoretical since, following the expiration of the present law interfund borrowing authority, the OASI Trust Fund would become depleted in July 1983 when assets would become insufficient to pay benefits when due. Authority for interfund borrowing among the OASI, DI and HI Trust Funds through December 31, 1982 was provided under H.R. 4331. The interfund borrowing provisions are contained in section 201(1) of the Social Security Act.
- b. The income figures for 1982, and the end-of-year asset figures for 1982 and later, reflect the transfer of funds from the DI and HI Trust Funds to the OASI Trust Fund under the interfund borrowing authority provided by Public Law 97-123. Under Intermediate Assumptions II-B a total of \$11.7 billion would be transferred to OASI in 1982, \$6.2 billion from DI and \$5.5 billion from HI.
- c. Ratio of trust fund amount at beginning of year to total amount of outgo during year.

Table 5
Comparison of Projections for Change
in Selected Economic Variables, 1981-1984

| Selected variables | 1981 | 1982 | 1983 | 1984 |
|---|------|------|------|------|
| Percentage increase in CPI | | | | |
| Trustees | 10.3 | 6.9 | 7.9 | 7.4 |
| Chase | 10.3 | 6.5 | 6.3 | 6.4 |
| DRI | 10.3 | 6.3 | 6.0 | 6.3 |
| Wharton | 10.3 | 6.1 | 6.1 | 5.7 |
| Percentage increase in wages in covered employment | | | | |
| Trustees | 8.6 | 6.6 | 8.1 | 8.1 |
| Chase | 9.7 | 7.4 | 5.2 | 5.1 |
| DRI | 9.6 | 7.9 | 7.2 | 7.7 |
| Wharton | 9.6 | 7.6 | 6.4 | 6.2 |
| Real wage differential ^a | | | | |
| Trustees | -1.7 | -.3 | .2 | .7 |
| Chase | -.6 | .9 | -1.1 | -1.3 |
| DRI | -.7 | 1.6 | 1.2 | 1.4 |
| Wharton | -.7 | 1.5 | .3 | .5 |
| Unemployment rate | | | | |
| Trustees | 7.6 | 9.1 | 8.5 | 8.0 |
| Chase | 7.6 | 9.4 | 9.4 | 8.6 |
| DRI | 7.6 | 9.4 | 9.1 | 8.5 |
| Wharton | 7.6 | 9.3 | 9.0 | 8.5 |

SOURCES: U.S. Department of Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: GPO, 1982), Table 10, p. 32; *Chase Econometrics, U.S. Macroeconomic Forecasts and Analysis*, Table 1.1, 1.2, 17.3, pp. D-1, D-2, D-33, D-34; Data Resources Inc., *Review of the U.S. Economy*, Table 10.4, p. 1.72; Wharton EFA, Inc., "The Wharton Quarterly Model," Table 1, p. 1.

a. The difference between the percentage increase in average annual wages in covered employment and the percentage increase in the annual CPI.

prices and wages, but are consistently more optimistic for the unemployment rate.¹² If, indeed, the unemployment rate averages one-half to 1 percent higher than the Trustees predicted, the financial picture will be bleaker than the estimates shown in table 4. Hence, any package of reforms designed to restore short-run financial solvency must provide enough of a cushion to enable the funds to pay benefits on a timely basis even if the economic conditions turn out to be worse than those anticipated in the 1982 Trustees' report.

Financing Options in the Short Run

The options for restoring financial balance to the social security program fall into three categories: benefit reductions, tax increases, or transfers from general revenues. Since even an extension of interfund borrowing can insure the timely benefit payments only through mid-1984, legislative action is needed immediately.

Benefit Reductions. While no one would advocate abrupt changes in the level of social security benefits, several proposals are being advanced to modify the way in which benefits are increased to maintain a recipient's standard of living. Some of the specific options for indexing changes are listed in table 6, and estimates prepared by the Congressional Budget Office indicate that the savings over the next three years would range from about \$7 billion for a permanent shift in the cost-of-living adjustment from July to October to \$21 billion for eliminating the cost-of-living increase scheduled for July 1983.

In addition to the obvious need for revenues, many argue that reductions in cost-of-living adjustments are justified as an offset to what they believe has been overindexing of social security benefits in the last few years. The overindexing is attributable to a soon-to-be corrected flaw in the CPI that gives excessive weight to mortgage interest rates and housing

prices, components that have risen more rapidly than other prices in the recent past. If cost-of-living adjustments had been computed using an index that included a rental equivalence measure of housing costs, for example, benefits would now be 5 to 6 percent lower.¹³

Table 6
Social Security Outlay Savings
Under Different Cost-of-Living Adjustments (COLA)
Fiscal Years 1983-1985
(billions of dollars)

| Proposal | 1983 | 1984 | 1985 | Total 1983-1985 |
|---|-------|-------|-------|--------------------|
| Eliminate 1983 COLA | \$2.2 | \$9.2 | \$9.5 | \$20.9 |
| Delay COLAs from July to October | 2.2 | 2.1 | 2.8 | 7.1 |
| Cap COLAs at 4 percent | 0.6 | 2.7 | 4.4 | 7.7 |
| Set COLAs at growth in wages minus 1.5 percentage points ^a | 0.2 | 0.9 | 0.9 | 2.0 |

SOURCE: U.S. Congressional Budget Office, "Statement by Alice M. Rivlin before the National Commission on Social Security Reform," mimeographed (August 20, 1982), Table 4, p. 11.

a. This option would result in small savings in outlays in the short run because of projected low productivity growth. Over the longer run, however, outlays could be either higher or lower than under current law, depending upon the relative behavior of wages and prices.

However, even if a rental equivalence measure of housing cost had been used, benefit increases would still have outstripped the growth in wages in the last five years. Hence, many argue that social security beneficiaries have received a degree of protection from the effects of inflation that has not been available to the wage earner. Thus, a reduction in future cost-of-living adjustments is viewed by some as a means of equalizing the treatment of workers and retirees.

The disadvantage, of course, is that reductions in current law cost-of-living adjustments lower the real value of social security benefits over time. Such a reduction would increase the incidence of poverty among the aged, particularly the very old, and among the disabled.

Tax Increases. A second option that would improve social security trust fund balances would be to increase taxes. Three separate approaches are available: (1) move forward the effective date of scheduled payroll tax increases; (2) extend coverage to federal workers and the 30 percent of state-local employees not currently covered by social security; or (3) tax a portion of social security benefits under the personal income tax.

Payroll tax rate increases are scheduled under current law for 1985, 1986 and 1990. According to the CBO, moving the 1985 and 1986 rate increases to January 1, 1984 would generate an additional \$17 billion by the end of 1985. Moving all three scheduled increases to 1984 would generate \$46 billion (see table 7).

Extending coverage to some or all of those workers not currently covered by social security is another way of increasing taxes. Full and immediate coverage of all non-covered government employees would produce about \$46 billion by 1985. However, such a move may not be practical for political and constitutional reasons. Therefore, a more modest proposal such as extending coverage only to federal civil service employees may be more realistic.

The third approach would be to subject a portion of social security benefits—probably the half that is generally associated with the employer share of the payroll tax—to the personal income tax and to direct the \$18 billion in new receipts over the next three years to the social security trust funds. Taxing benefits is equivalent, of course, to a benefit

Table 7
Additional Trust Fund Revenues Under Various Tax Changes
Fiscal Years 1983-1985
(billions of dollars)

| Proposal ^a | 1983 | 1984 | 1985 | Total 1983-1985 |
|--|-------|--------|-------|--------------------|
| Payroll tax rate increase | | | | |
| a. Move 1985 and 1986 increases to January 1, 1984 | -- | \$10.8 | \$6.2 | \$17.0 |
| b. Move 1985, 1986, and 1990 increases to January 1, 1984 | -- | 22.8 | 23.3 | 46.1 |
| Extend Social Security coverage to federal, state and local government employees | | | | |
| a. New employees only | \$0.5 | 1.8 | 3.4 | 5.7 |
| b. All employees | 11.1 | 16.3 | 18.2 | 45.6 |
| Tax 50 percent of OASI benefits ^b | 4.5 | 6.5 | 7.0 | 18.0 |
| Tax 50 percent of OASI benefits for recipients with income above \$20,000 (individual)/\$25,000 (couples) ^b | 1.2 | 1.8 | 2.2 | 5.2 |

SOURCE: U.S. Congressional Budget Office, "Statement by Alice M. Rivlin before the National Commission on Social Security Reform," mimeographed (August 20, 1982), Table 5, p. 15.

a. Unless otherwise indicated, the effective date is January 1, 1983.

b. These estimates assume that the trust funds would receive the added revenues as income tax liabilities accrued, rather than when the income taxes were actually paid. Estimates are preliminary and subject to revision.

cut, but this approach would protect the poor elderly who do not pay taxes. Further protection could be gained for moderate income beneficiaries by imposing taxes only on those with incomes above a given level, such as \$20,000 for an individual and \$25,000 for a couple as in the taxation of unemployment benefits. While most experts acknowledge the desirability of taxing benefits, political opposition is so vehement that observers believe the proposal has little chance of success.

General Revenues. The third possible approach to increase social security revenues would be to transfer some funds from other parts of the budget. Such a transfer would, of course, require either an increase in other taxes, a reduction in other expenditures or a rise in the federal deficit.

The arguments for and against general revenue financing for social security rest in large part on one's view of the philosophical rationale of the social security program and its intended effect on the distribution of income. Some argue that social security is best construed as an annual tax-transfer program, which redistributes income from the relatively affluent wage earners to the relatively poor retired. The more common perspective sees social security in a lifetime framework, where payroll taxes are considered compulsory saving for retirement.

The annual view—that social security is part of the federal government's tax and transfer schemes—leads to an evaluation of the tax independent of the benefits, with the conclusion that the payroll tax clearly violates the ability-to-pay criterion for equitable taxation. The tax is levied without provision for the number of dependents, excludes income from capital, and exempts wages over the maximum. Advocates of the annual tax-transfer perspective would favor a more progressive source of revenue to finance social security. General revenues, most of which are derived from the

personal income tax, would be preferable on distributional grounds, since the income tax includes unearned as well as earned income in the tax base, applies progressive rates, and makes allowance for dependents.

In contrast, many argue that the present program is best understood as a lifetime compulsory saving program in which people are forced to save during their working years in exchange for guaranteed income in retirement. In this perspective, where benefits and taxes are considered jointly, the payroll tax (with an earned credit for low-wage workers) can be seen as an appropriate method of financing a compulsory saving program.

Since the present social security system is a compromise between a strictly wage-related saving scheme and a program of income redistribution, it could be argued that a rationale exists for supplementing payroll tax receipts with general revenues. And indeed, several precedents exist for the use of general revenues within the social security system, such as the gratuitous wage credit granted to servicemen, transitional benefits for certain uninsured people, and general revenue financing of some hospital payments.

Two quite different groups have argued against the introduction of general revenues. One group, comprising people associated with social security during its formative years, argues that a switch to general revenue financing might mean a break in the perceived link between individual contributions and benefits, thereby creating a situation where social security might be transformed into a means-tested program. This argument may have lost some of its force, however, since the principles of social security may now be well enough established for the program to withstand an infusion of general revenues without undermining the earned-right aspect.

More recent opposition to the use of general revenues stems from those who fear there would be more of a tendency to expand social security without the countervailing constituency created by the payroll tax. This view reflects the judgment that increases in social security benefits should have a low priority because of the more pressing needs for general revenues. The argument that general revenues should be used to finance the non-wage-related components of the program is also not very compelling to those who feel that the program should be divested of its welfare function and that benefits should be based primarily on the earnings record of each participant.

A limited use of general revenues has been advocated repeatedly in the form of the proposal to transfer all or some of the financing of hospital insurance to general revenues and credit the scheduled increases in the HI tax rate to the OASDI funds.¹⁴ Since hospital insurance benefits bear no direct relation to contributions or earnings in covered employment none of the program's underlying philosophies would be violated. However, opposition exists even to this limited proposal, because opponents fear that such a move might lessen the incentive to control the rapidly increasing costs of Medicare.

Summary

Establishing social security on a sound financial footing must be given a high priority in the next year. In view of the experience of underestimation of program costs during the last decade, the choice among solutions should be made at least partly according to the criterion that the program be sure of avoiding financial crises in the future. The pay-as-you-go nature of the program requires that workers whose taxes are supporting current retirees be certain of receiving benefits when they retire, a confidence that will be stronger if the program's ability to pay next year's benefits is not continually in doubt.

IV. Long-Run Financing Problems and Options: 2014-2060

The large deficits projected for social security as the baby boom population retires in the first half of the 21st century confront policymakers with fundamental decisions about the future of the program. The options include raising taxes to maintain current benefit levels for a significantly larger aged population or reducing benefits in an effort to avoid major cost increases. Benefits can be lowered either through across-the-board reductions in the replacement rate or through extending the age at which workers are eligible for full benefits.

The Problem in Perspective

According to the 1982 Trustees' Report, under the most reasonable economic and mortality assumptions, the cost of the Old-Age, Survivors and Disability Insurance portion of the social security program is projected to rise from the current level of 11 percent of taxable payrolls to about 17 in the year 2030, remaining at that level through 2060 (see table 8, II-B). The sharp increase in costs reflects the changing demographic structure of the population. The ratio of the beneficiary population to covered workers is projected to rise dramatically as the sizeable post-World War II baby boom starts reaching retirement age after 2010. At that time, the working population will be composed of the relatively small group born during the period of low fertility that began in the late 1960s. Assuming that the fertility rate will rise gradually from the current level of 1.8 to a long-run rate of 2.1, the Social Security Administration projects that the number of beneficiaries per 100 covered workers will rise from 31 in 1982 to 50 by 2030, an increase of about 60 percent (see table 9). Since the social security program is financed on a pay-as-you-go basis, with tax contributions by today's workers paying for benefits to today's beneficiaries,

Table 8
Long-Run Projected Costs of the Old-Age, Survivors and Disability Insurance Trust Funds
as a Percentage of Taxable Payroll, Under Alternative Assumptions^a
Selected Years, 1982-2060

| Year | Projected costs as percent of taxable payrolls under assumption | | | | OASDI tax rates scheduled under current law |
|-----------------------|---|----------------------|------|--------------------|---|
| | Optimistic I | Intermediate II-A | II-B | Pessimistic III | |
| 1982 | 11.6 | 11.5 | 11.8 | 11.8 | 10.8 |
| 1990 | 9.8 | 10.5 | 11.6 | 12.9 | 12.4 |
| 2000 | 9.2 | 10.0 | 11.0 | 12.8 | 12.4 |
| 2010 | 9.5 | 10.7 | 11.5 | 13.9 | 12.4 |
| 2020 | 11.7 | 13.5 | 14.4 | 18.2 | 12.4 |
| 2030 | 13.0 | 15.8 | 16.8 | 22.6 | 12.4 |
| 2040 | 12.1 | 15.6 | 16.8 | 24.8 | 12.4 |
| 2050 | 11.4 | 15.5 | 16.7 | 26.9 | 12.4 |
| 2060 | 11.2 | 15.6 | 16.8 | 28.5 | 12.4 |
| Average— 1982-2060 | 11.0 | 13.1 | 14.1 | 18.7 | 12.3 |

SOURCE: U.S. Department of Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: GPO, 1982), Table 29, pp. 67-68.

a. The assumptions (in annual percentage rates of increase) are:

| | Optimistic | Intermediate | | Pessimistic |
|------------|------------|--------------|------|-------------|
| | I | II-A | II-B | III |
| Fertility | 2.4 | 2.1 | 2.1 | 1.7 |
| Real wages | 2.5 | 2.0 | 1.5 | 1.0 |
| CPI | 2.0 | 3.0 | 4.0 | 5.0 |

the projected increase in the aged population relative to the working population implies a similar increase in OASDI cost from 11 to 17 percent of taxable payroll.

Table 9
Projected Beneficiaries per Hundred Covered Workers
Under Alternative Assumptions^a
Selected Years, 1982-2060

| Year | Projected beneficiaries per hundred covered workers under assumption | | | |
|------|---|--------------|------|-------------|
| | Optimistic | Intermediate | | Pessimistic |
| | I | II-A | II-B | III |
| 1982 | 31 | 31 | 31 | 31 |
| 1990 | 29 | 30 | 31 | 32 |
| 2000 | 30 | 31 | 32 | 34 |
| 2010 | 32 | 34 | 35 | 39 |
| 2020 | 38 | 43 | 43 | 51 |
| 2030 | 42 | 49 | 50 | 63 |
| 2040 | 40 | 50 | 50 | 70 |
| 2050 | 39 | 50 | 50 | 76 |
| 2060 | 38 | 50 | 50 | 80 |

SOURCE: U.S. Department of Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (GPO, 1982), Table 28, pp. 65-66.

a. The long-run ultimate levels of fertility under the alternative assumptions are;

| | Optimistic | Intermediate | | Pessimistic |
|-----------|------------|--------------|------|-------------|
| | I | II-A | II-B | III |
| Fertility | 2.4 | 2.1 | 2.1 | 1.7 |

Many view a combined employer-employee tax rate of roughly 17 percent as simply "too high," and considerable effort is currently directed toward devising alternative schemes to reduce long-run costs. The high rate, however, does not mean that the social security program will be any more generous in the future than it is today, but rather reflects the fact that after the turn of the century there will be a very large dependent aged population. These elderly and disabled people must receive support from some source—either social security, direct transfers from their children, private pension benefits or their own saving. Since the burden of a large dependent aged population is inescapable, a reduction in social security benefits may well lead to greater required expenditures for the elderly and disabled through other programs.

Moreover, those concerned about a combined employee and employer social security tax rate of 17 percent during the next century often ignore the fact that lower fertility results in fewer children per worker. If the economic burden on active workers is measured in terms of total dependents rather than just aged retirees, then the picture looks quite different. The total dependency ratio (the ratio of the number of people under age 20 and over age 65 per 100 people age 20-64) will be lower in the 21st century than it was in 1965 (see table 10). The rise in the aged will be more than offset by a decline in dependent children, thereby freeing resources which could be devoted to providing for the elderly.

Finally, while a projected tax rate of 17 percent represents a 60 percent increase over the current levy, it is considerably below the present payroll tax rates in many European countries. Austria, Italy, Sweden and the Netherlands all have rates for programs comparable to OASDI in excess of 20 percent of payroll. West Germany with 18 percent also already has a rate that exceeds the rate projected for the

United States as the baby boom retires after the turn of the century (see table 11).

Table 10
Actual Past and Projected Future Dependency Ratios
Selected Years, 1930-2060^a

| Year | Under 20 | 65 and over | Total |
|------|----------|-------------|-------|
| 1930 | 69.6 | 9.7 | 79.3 |
| 1940 | 58.5 | 11.7 | 70.2 |
| 1950 | 59.2 | 14.1 | 73.3 |
| 1960 | 74.1 | 17.4 | 91.5 |
| 1970 | 71.1 | 18.4 | 90.0 |
| 1980 | 55.8 | 19.5 | 75.3 |
| 1990 | 49.4 | 21.5 | 70.9 |
| 2000 | 47.9 | 22.6 | 70.5 |
| 2010 | 44.7 | 23.6 | 68.3 |
| 2020 | 46.2 | 30.3 | 76.5 |
| 2030 | 48.1 | 37.8 | 85.9 |
| 2040 | 47.6 | 38.0 | 85.6 |
| 2050 | 47.9 | 37.4 | 85.3 |
| 2060 | 47.9 | 37.9 | 85.8 |

SOURCES: U.S. Congress, House, Select Committee on Aging, Hearings before the Subcommittee on Retirement Income and Employment, *Social Security*, "Statement of Robert M. Ball," 94th Cong., 1st sess., 1975, p. 111. U.S. Department of Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: GPO, 1982), Table A1, p. 79.

a. The dependency ratio is the total number of people under 20 and over 64 per 100 people aged 20 to 64.

Once the projected cost increases for social security are placed in perspective, maintaining current benefit levels and raising the payroll tax becomes a reasonable option. The alternative is to lower future costs by reducing benefits.

Table 11
Employee-Employer Tax Rates by Type of Program
Selected Countries, 1981

| Country | All social security programs | | | Old age, invalids, and survivors insurance | | |
|----------------|------------------------------|----------|-------|--|----------|--------------------|
| | Employer | Employee | Total | Employer | Employee | Total |
| Austria | 27.80 | 15.90 | 43.70 | 11.35 | 9.75 | 21.10 |
| Belgium | 27.77 | 10.10 | 37.87 | 8.86 | 6.25 | 15.11 ^b |
| Canada | 4.49 ^a | 3.95 | 8.44 | 1.80 | 1.80 | 3.60 |
| France | 37.41 | 10.14 | 47.55 | 8.20 | 4.80 | 13.00 ^c |
| West Germany | 17.95 | 16.45 | 34.40 | 9.25 | 9.25 | 18.50 |
| Italy | 47.57 | 7.45 | 55.02 | 17.31 | 7.15 | 24.46 |
| Japan | 12.22 | 9.85 | 22.07 | 5.30 | 5.30 | 10.60 |
| Netherlands | 29.58 | 28.07 | 57.65 | 12.90 | 22.00 | 34.90 ^d |
| Sweden | 35.05 | .15 | 35.20 | 21.15 | — | 21.15 |
| Switzerland | 8.24 | 9.48 | 17.72 | 4.70 | 4.70 | 9.40 |
| United Kingdom | 13.70 | 7.75 | 21.45 | Not available on a comparable basis | | |
| United States | 11.35 | 6.65 | 18.00 | 5.35 | 5.35 | 10.70 |

SOURCE: U.S. Department of Health and Human Services, Social Security Administration, Office of International Policy, unpublished data.

a. Excludes work injury insurance.

b. Invalidity pensions financed through sickness insurance.

c. Invalidity and survivors benefits financed through sickness insurance.

d. Disability insurance also includes work-injury compensation.

Proposals to Reduce the Long-Run Deficit

Two major approaches have been proposed to reduce long-run social security costs—lowering replacement rates and extending the retirement age.

Lowering Replacement Rates. The specific suggestions for reducing replacement rates include the proposal by the 1976 Consultant Panel on Social Security¹⁵ to index the benefit formula by prices rather than wages and the Reagan Administration's proposal to make a one-time ad hoc adjustment in the benefit formula.

The price indexing proposal involves reducing replacement rates by changing the method for adjusting the benefit formula. As noted earlier, the current formula consists of three brackets which apply declining percentages to increasing amounts of the worker's average indexed monthly earnings (AIME). The amounts separating the individual's AIME into intervals, that is, \$230 and \$1,388 in 1982, are called "bend points." Under current law, these bend points are increased automatically each year to reflect the growth in average wages. By adjusting the formula in this fashion, replacement rates remain constant over time. In other words, a worker with a history of average earnings retiring in the year 1990 will receive a benefit equal to the same percentage of his pre-retirement wages as a similarly situated worker retiring today. In contrast, if the bend points in the social security benefit formula were adjusted by prices rather than wages, the progressivity of the benefit structure would lead to lower replacement rates for future generations of workers as they moved up into higher real earnings brackets.

While the price indexing proposal would substantially cut costs, it would also create significant hardship for tomorrow's elderly. The problem arises because the rationale for price indexing is based on two fundamental assumptions, both of which are questionable.

The first assumption is that people's absolute level of real income rather than their position in the income distribution determines acceptable and desired standards of living. For example, under price indexing, a worker in 2060 with annual pre-retirement earnings of \$15,000 in 1982 dollars would be assumed to have the same spending and saving habits and, therefore, retirement needs as a worker retiring today with earnings of \$15,000; therefore, the worker retiring in 2060 would be given the same real pension amount as a worker retiring today. In fact, a worker retiring in 2060 will not have the same spending and saving habits as the worker earning the same real income today because he will be much poorer relative to the average.

The second assumption is that lower replacement rates in the future will be acceptable since individuals will be much better off, save more on their own and receive much greater private pension benefits. In fact, lower paid workers are simply not able to save for retirement since their incomes are barely adequate to cover current consumption. Even middle income workers are unlikely to undertake retirement saving because the widespread myopia with respect to retirement needs that provided the initial justification for the social security program will in all likelihood persist.

At first blush, a new emphasis on private pension plans may seem an appealing alternative to substantial increases in the payroll tax. Private pension benefits have increased dramatically as a source of retirement income, and private plans may meet a larger portion of the income needs for some groups of future retirees. The private pension system should not be viewed as a panacea, however, since it is plagued with problems of its own. The private system is incapable of offsetting the impact of inflation or of protecting workers who change jobs frequently. Moreover, less than half of the private nonfarm workforce is currently covered by private plans and pension benefits are concentrated

among highly paid people; low-wage workers receive almost no private pension benefits.

Because industries with traditionally high pension coverage, such as manufacturing (see table 12), are expected to employ a declining share of workers, the percentage of the workforce covered by pension plans is not expected to increase significantly in the future. The people without pension coverage will continue to be primarily lower paid employees, precisely those people who are incapable of saving on their own. For these individuals, social security will remain the sole source of support in retirement. Lowering social security replacement rates for these workers through price indexing, on the assumption that such a reduction will be acceptable because they will have higher real incomes, will simply force a substantial portion of future retirees to suffer a dramatic decline in economic well-being upon retirement.

Most of the problems associated with reducing replacement rates by price indexing are equally applicable to lowering benefit levels through a one-time adjustment of the bend points in the benefit formula.¹⁶ The only factor in favor of an ad hoc adjustment is predictability so that corporations and the pension industry will know the level of protection to be provided by social security in order to establish meaningful private pension benefits and realistic integration provisions. Under the price indexing proposal future replacement rates are not predictable but rather depend on the rate of growth of real wages. For example, in the absence of productivity growth, replacement rates would remain constant for the average worker; with positive real wage growth they would decline; and with price increases in excess of wage growth, as has been the case in the last few years, replacement rates would actually rise.

The advantage of price indexing over an ad hoc adjustment is that it allows for a more gradual reduction in replace-

ment rates. Avoiding abrupt changes in the level of benefits is essential in order to provide people with enough time to revise their saving plans in response to the lower levels of replacement under social security. Lowering replacement rates, however, either through price indexing or by adjusting the benefit formula may be an inferior option to extending the age at which individuals are eligible for full benefits.

Table 12
The Percentage of All Workers Covered by a Pension Plan
By Age Group and Industry, 1979

| Industry | Age group | |
|----------------------|--------------------|--------------------------|
| | 25-64 (percent) | 16 and over (percent) |
| Mining | 74 | 70 |
| Construction | 46 | 37 |
| Manufacturing | 73 | 66 |
| Transportation | 70 | 66 |
| Trade | 41 | 29 |
| Finance | 58 | 50 |
| Services | 36 | 30 |
| All private, nonfarm | 55 | 46 |

SOURCE: President's Commission on Pension Policy, *Coming of Age: Toward a National Retirement Income Policy* (Washington, DC: Government Printing Office, 1981), Table 11, p. 27.

Extending the Retirement Age. While 65 was the most acceptable age for retirement when social security was established in 1935, dramatic changes in the characteristics of the elderly population and the economy argue for postponing retirement past age 65 in the 21st century. Tomorrow's elderly will have improved life expectancy, better health, and more education than those retiring today. Older workers will also be in greater demand as the growth in the labor force slows and as an increasing proportion of

employment is generated by the service industries where the work is less physically stressful.

Although most of the startling gains in life expectancy during this century are attributable to a substantial reduction in neonatal mortality and elimination of childhood diseases, the life expectancy of older workers has also increased significantly (see table 13). As a result, workers will have at least as many years left after age 68 during the first half of the next century as they did after age 65 in the early years of social security. Actuaries at the Social Security Administration recently calculated the retirement age that would be equivalent to retiring at age 65 in 1940. Under any of four measures, the 1980 equivalent to age 65 retirement was 69 years and the 2000 equivalent was more than 71 years.¹⁷

The projected health of tomorrow's elderly is equally as important as longevity in assessing their ability to work past age 65. Current studies reveal that a large majority of the elderly who are under 70 appear free of physically disabling limitations.¹⁸ This may be attributable partly to the significant progress that has been made in treating arthritis and cardiovascular diseases, two of the most serious barriers to good health at older ages. Most of the evidence indicates that increased life expectancy will be accompanied by a corresponding increase in the physical well-being of the aged.¹⁹

Older workers after the turn of the century will also be better educated than their counterparts today. The baby boom generation has already achieved a higher level of formal schooling than any previous generation. In 1979, about 85 percent of those aged 22 to 29 had graduated from high school, compared to only 50 percent of the same age group in 1950 and 60 percent in 1960. Over half of those aged 25 to 29 in 1979 had some college education, compared with less than 20 percent of the same age group in 1950. Improved education and training will enable them to adapt to the changing technological demands of the workplace.²⁰

Table 13
Life Expectancy at the Age of 65, by Sex
Selected Years, 1930-2060^a

| Year | Male | Female | Both sexes |
|-------------------|------|--------|------------|
| 1930 ^b | 11.8 | 12.8 | 12.3 |
| 1940 | 12.0 | 13.7 | 12.9 |
| 1950 | 12.9 | 15.4 | 14.2 |
| 1960 | 13.0 | 16.1 | 14.6 |
| 1970 | 13.2 | 17.2 | 15.2 |
| 1980 | 14.3 | 18.7 | 16.5 |
| 1990 | 15.3 | 20.3 | 17.8 |
| 2000 | 15.8 | 21.1 | 18.5 |
| 2010 | 16.1 | 21.6 | 18.9 |
| 2020 | 16.4 | 22.0 | 19.2 |
| 2030 | 16.7 | 22.4 | 19.4 |
| 2040 | 17.0 | 22.8 | 19.9 |
| 2050 | 17.3 | 23.2 | 20.3 |
| 2060 | 17.6 | 23.6 | 20.6 |

SOURCES: U.S. Department of Health and Human Services, Social Security Administration, Office of the Actuary, *Social Security Area Population Projections, 1981*, Actuarial Study no. 85 (July 1981), Table 18, p. 42; U.S. Department of Health and Human Services, Social Security Administration, Office of the Actuary, unpublished data.

a. Intermediate alternative life expectancy rates.

b. Data based on the average of deaths over a three-year period, 1929-31, as a percentage of the population in the census year.

The changing conditions in the labor market will most likely lead also to an increased demand for older workers. The growth in the labor force will taper off at the turn of the century, since the low birth rates of today will result in considerably fewer new workers. Unlike the past when the rapid growth in the supply of workers strained the nation's capacity to provide enough new jobs, the new environment should create a tight labor market where the experience and skill of older workers will be in increasing demand. Their employment will be further facilitated by the long term shift in the

industrial structure from mining and manufacturing where health hazards are relatively high, to trade and services, where older workers can perform with less strain and threat to their health.

In recommending an increase in the retirement age, however, it is essential to remember that some older workers will not be able to engage in gainful employment past age 62 and must have access to some form of income support. If they are prevented from working by physical disability, the appropriate way to provide for them is an expanded disability insurance program. While current law makes some allowance for age in determining disability by applying a more liberal test to those aged 50 or older, more explicit recognition of the interaction of age and physical impairment may be required.

In addition, some older workers may not be able to find jobs because they have been displaced by automation. These aged will not have access to disability insurance and may face a severe loss of income as a result of extending the social security retirement age. The changing characteristics of the workplace, however, indicate that the number of healthy unemployed aged may be quite small. While retraining older workers is generally considered impractical today, restructuring jobs for older employees may become economical in the tight labor markets forecasted after the turn of the century. However, it may be necessary to establish an expanded unemployment insurance program for older workers.

The issues raised by the older disabled worker and the worker displaced by technology highlight the potential dangers in raising the age at which full social security benefits are available. Unless some provision is made for these workers, the costs of later retirement will be borne by the most disadvantaged aged. Expanding the disability program, however, necessarily reduces the cost savings of ex-

tending the retirement age. After adjusting for increased disability outlays, proposals which involve a gradual increase of the retirement age from 65 to 68 yield a long term reduction in costs of about 1 percent of taxable payroll.²¹ The major reductions would come after the turn of the century when the new retirement pattern would lead to a cost saving of about 1.6 percent of taxable payroll. With the retirement age at 68 rather than 65, costs in the year 2030 would be 15.4 rather than 17 percent of taxable payroll.

Summary

A large dependent elderly population creates an inescapable burden which is reflected in the required increase in the social security tax to about 17 percent of payroll after the turn of the century. The first question is whether to schedule future tax increases to cover these costs or to reduce benefits as the baby boom generation retires. If benefits are to be lowered, a second question is whether to reduce replacement rates or extend the retirement age. Several arguments can be marshalled for maintaining current benefit levels and raising taxes. (1) Higher social security taxes in the next century will be offset by a decline in the resources required for the clothing, feeding and education of children. (2) The scheduled tax rates, while high by current U.S. standards, are actually lower than the current payroll tax levy in many European countries. (3) Finally, if the large elderly dependent population is not supported through social security, the working population will probably end up providing equivalent support through some other program, in light of the historical inability of people to save for retirement and the inadequacies of the private pension system.

We may be unwilling, however, to commit the working population in the 21st century to transferring 17 percent of their payroll to the retired and disabled. In that case the relative merits of alternative approaches to reducing long-

run costs become important. The improved life expectancy and health of the elderly and the likelihood of increased pressure for older workers to remain in the labor force argue for raising the retirement age, provided that expanded disability benefits are available for those too incapacitated to work. The alternative of lowering replacement rates in a society where only half the workers have private pension coverage will cause a significant portion of workers, primarily those with low earnings, to suffer a disastrous decline in income after retirement.

NOTES

1. U.S. Department of Health and Human Services, Social Security Administration, Office of Research and Statistics, *Income of the Population 55 and Over, 1978*, prepared by Susan Grad, Staff Paper no. 41 (Washington, DC: GPO, 1981), Table 32, p. 54.
2. Wives, divorced wives and husbands are eligible for permanently reduced benefits at age 62. Widows, divorced widows and widowers can receive permanently reduced benefits as early as age 60.
3. Workers retiring before age 65 can only earn \$4,440 without a reduction in benefits.
4. The following discussion is based on an analysis of social security's financing problems presented in Robert M. Ball, "The Financial Condition of the Social Security Program," mimeographed (Washington, DC, April 1982).
5. U.S. Department of Health and Human Services, Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: GPO, 1982) (hereafter cited as *1982 Trustees Report*).
6. *1982 Trustees Report*, p. 71.
7. *Ibid.*

8. U.S. Congress, Senate, Committee on Finance, *Social Security Financing*, Committee Print no. 97-8, 97th Cong., 1st sess. (Washington, DC: GPO, 1982).
9. John Snee and Mary Ross, "Social Security Amendments of 1977: Legislative History and Summary of Provisions," *Social Security Bulletin* 41, no. 3 (March 1978): 3-20.
10. Mordechai E. Lando, Alice V. Farley and Mary A. Brown, "Recent Trends in the Social Security Disability Insurance Program," *Social Security Bulletin* 45, no. 8 (August 1982), Table 3, p. 7.
11. See U.S. Congressional Budget Office, "Statement by Alice M. Rivlin before the National Commission on Social Security Reform," mimeographed (August 20, 1982), p. 6 (hereafter cited as "Statement by Alice M. Rivlin").
12. In part, the discrepancy may be due to the fact that the Trustees' set of assumptions was developed slightly earlier than the other forecasters.
13. "Statement by Alice M. Rivlin," p. 12.
14. This proposal was advanced by the 1979 Advisory Council of Social Security. Moreover, previous Advisory Councils, beginning in 1965, have recommended using general revenues to finance some portion of HI.
15. *Report of the Consultant Panel on Social Security to the Congressional Research Service*, 94th Cong., 2d. sess. (Washington, DC: GPO, 1976).
16. In May 1981, President Reagan proposed a plan under which the bend points would be adjusted to reflect only 50 percent of the increase in average wages over a five-year period. This proposal, however, was never submitted to Congress.
17. U.S. Department of Health and Human Services, Social Security Administration, "Equivalent Retirement Ages: 1940-2050," prepared by Francisco R. Bayo and Joseph F. Faber, Actuarial Note no. 105 (Washington, DC: GPO, 1981).
18. University of Massachusetts and Joint Center for Urban Studies of M.I.T. and Harvard University, *Understanding the Health and Social Service Needs of People Over Age 65*, prepared by L.G. Branch and submitted in partial fulfillment of grants 90-A-641/01 and 90-A-641/02 from the U.S. Department of Health, Education and Welfare, Administration on Aging (1977).

19. See discussion in National Commission of Social Security Reform, *Social Security in America's Future—Final Report of the National Commission on Social Security* (Washington, DC: GPO, 1981), pp. 124-126 (hereafter cited as *Final Report of National Commission on Social Security*).
20. U.S. Bureau of the Census, Population Division, *Education*, Special Report P-E, no. 5B, Table 5 (Washington, DC: GPO, 1950); U.S. Bureau of the Census, Population Division, *Educational Attainment*, Report PC (2), no. 5B (Washington, DC: GPO, 1960), Table 1; U.S. Bureau of the Census, Population Division, *Educational Attainment in the United States: March 1979 and 1978*, Current Population Report P-20, no. 314 (Washington, DC: GPO, 1980), Table 2, pp. 20-28.
21. For example, see *Final Report of the National Commission on Social Security*, Table 5-2, p. 125.