

Financial Status of Social Security Program After the Social Security Amendments of 1977

by A HAEWORTH ROBERTSON*

The Social Security Amendments of 1977 resulted in substantial improvement in the current and projected financial condition of the OASDI program. This article reviews the causes of the recent operating deficits, describes the effects of the amendments that most influence the program's financial status, and gives projections of income and expenditures under the new law. The revised benefit formula eliminates the "over indexing" expected to occur under the old provisions and results in stable earnings-replacement ratios under practically all future economic conditions. About one-half of the long range actuarial deficit was resolved by this step alone. Increases in the contribution and benefit base, along with tax rate reallocations and increases, prevent the imminent depletion of the OASI and DI trust funds. Increased income due to the higher wage bases is partially offset in later years, however, by greater benefit payments based on the increases in the coverage of total earnings. Overall, under the new law the OASDI program is projected to be financed adequately for about 50 years but significant operating deficits are expected after that. The financial condition of the hospital insurance program was substantially unchanged by the amendments, however, and the HI trust fund is expected to be exhausted in 1988.

THE SOCIAL SECURITY AMENDMENTS of 1977 (P.L. 95-216), passed by Congress on December 15, 1977, and signed by the President on December 20, 1977, made important revisions in the social security program. These amendments are generally considered to be the most significant social security legislation since 1972—possibly since 1950.

This article reviews the financial condition of the program before the adoption of the new legislation and comments briefly on the revisions with the greatest impact on the financial condition of the program. Projected expenditures and income under the revised law are presented—for the old-

age, survivors, and disability insurance programs and for the Medicare programs.

FINANCIAL CONDITION BEFORE AMENDMENTS

As background against which to consider the new legislation, it may be helpful to review briefly the nature and seriousness of the program's financial problems before the adoption of the new legislation.

There are four social security trust funds—one each for the old-age and survivors insurance (OASI) program, the disability insurance (DI) program, the hospital insurance (HI) program, and the supplementary medical insurance (SMI) program. These trust funds are managed by a Board of Trustees consisting of the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health, Education, and Welfare. Once each year the Trustees issue a report on the financial condition of the various portions of the social security program.

Consider first the annual report of the old-age and survivors insurance and the disability insurance programs combined (OASDI). Beginning with the report issued in 1975 it was forecast that OASDI expenditures would exceed income each and every year in the future with the amount of the deficits growing steadily in the future. This has in fact been the case. Outgo exceeded income by \$1.5 billion in calendar year 1975 and \$3.2 billion in 1976. The 1977 OASDI Trustees Report estimated that outgo would exceed income by \$5.6 billion in 1977, \$6.9 billion in 1978, \$7.9 billion in 1979, and so on. This report estimated that, on the average, total outgo over the next 75 years would be about 75 percent greater than scheduled tax income. These were very significant financial problems.

What are the reasons that the OASDI portion of the program has been paying more in benefits than it has been collecting in income since 1975?

* Chief Actuary, Social Security Administration. This article has been adapted from a paper prepared for the April 1978 issue of the *CLU Journal* (American Society of Chartered Life Underwriters).

This situation is primarily a result of the following factors

Higher than anticipated inflation in recent years, triggering corresponding automatic benefit increases (and the concurrent lack of growth in real wage levels)

Unemployment rates that have been greater than expected, resulting in decreased tax income

Higher than expected disability insurance expenditures

For the future, the long-range deficits projected in recent OASDI Trustees Reports were due in part to the factors above but resulted primarily from the following two additional causes

First, a technical flaw in the 1972 automatic adjustment provisions of the Social Security Act would have caused future benefit levels to grow more rapidly than wages, if average wages and the Consumer Price Index behave in the future as now forecast. This flaw, if unremedied, would have meant eventually that a majority of beneficiaries would be receiving more in retirement benefits than they earned while they were working, with consequently higher program costs.

Second, after the turn of the century the people who were born during the post World War II "baby boom" will be retiring while the people born during the current "baby bust" will be of working age. As a result, there will be only about 2 workers for each beneficiary, compared with the current ratio of about 3 to 1. Since OASDI is financed on a "current cost" basis—that is, contributions of current workers are used to pay the benefits of current beneficiaries—expenditures as a percentage of taxable payroll will be much higher after the turn of the century than at present.

With respect to the HI program, recent Trustees Reports estimated that outgo would begin to exceed income in the mid-1980's with the situation steadily worsening thereafter. Reasons for the projected financial problems of the HI program were the same as for the OASDI program (except that the technical flaw in the 1972 automatic adjustment provisions had no effect). In addition, inflation in hospital costs has been greater than inflation in other costs of living in the recent past, a phenomenon not expected to be improved significantly in the near future unless controlling legislation is enacted.

Long-range cost projections are not published by the Trustees for the SMI program (Projections are made for only 3 years). If long-range projections were made, however, they would indi-

cate a steadily increasing cost in the future for many of the same reasons the HI costs are projected to increase.

AMENDMENTS MOST SIGNIFICANTLY AFFECTING FINANCIAL CONDITION

The changes brought about by the Social Security Amendments of 1977 that will have the most significant impact on the financial condition of the program are (1) a revised (or "decoupled") benefit formula, (2) an increase in the contribution and benefit base, and (3) an increase in tax rates.

Revised Benefit Formula

The OASDI benefit formula was revised (or "decoupled") so that future generations of workers would not receive progressively higher levels of retirement benefits, in relation to their pre-retirement earnings, than today's generation receives. This revision is generally viewed as a correction of the 1972 automatic adjustment provisions so that they will work as intended when they were adopted in 1972. To achieve this goal, however, a different method of computing average wages and a different benefit formula have been adopted. The changes may therefore be more far-reaching than is generally recognized. A description of the revised method of computing benefits is given in the preceding article.

This change in the method of determining benefits has no effect on persons already receiving benefits. It will not affect anyone becoming eligible for benefits before January 1979. A transitional provision included in the amendments is intended to ensure that benefit levels for retiring workers will not change abruptly from the old law to the new, but a minor technical amendment may be necessary to provide a smoother transition.

Table 1 indicates the approximate effect the revised method of determining benefits will have on future generations of retiring workers. It shows the dollar amount of benefits, as well as the replacement ratios (the ratio of the first year's benefit to the worker's earnings in his last year before retirement) for different generations retiring at age 65.

The figures for 1978 and later are based upon

TABLE 1—Old-age, survivors, and disability insurance ¹ Projected benefits and replacement ratios after the 1977 amendments for persons retiring at age 65 in future years

Calendar year of retirement	Earnings in previous year ²			Annual benefit amount for workers with earnings ³			Replacement ratio (percent) for workers with earnings ⁴		
	Low	Average	Maximum	Low	Average	Maximum	Low	Average	Maximum
1979	\$5,721	\$10,572	\$17,700	\$3,142	\$4,932	\$6,165	59.6	46.7	34.8
1980	5,682	11,396	22,800	3,375	5,315	6,699	59.4	46.6	29.3
1981	6,085	12,205	25,900	3,635	5,740	7,251	59.7	47.0	28.0
1982	6,475	12,986	29,700	3,485	5,438	6,809	53.8	41.9	22.9
1983	6,863	13,766	31,800	3,607	5,643	7,207	52.6	41.0	22.8
1984	7,258	14,557	33,900	3,841	6,010	7,798	52.9	41.3	23.0
1985	7,675	15,394	36,000	4,099	6,409	8,390	53.4	41.6	23.3
1990	10,100	20,359	47,700	5,451	8,519	11,509	53.7	41.8	24.1
1995	13,424	26,825	63,000	7,198	11,243	15,605	53.6	41.8	24.8
2000	17,753	35,609	83,400	9,519	14,870	21,427	53.6	41.8	25.7

¹ Replacement ratios for disabled or deceased workers with similar earnings histories would be slightly higher in most cases.

² Low earnings are defined as \$1,600 in 1976, with preceding and succeeding values following the trend of the average first quarter earnings in covered employment. "Average earnings" are four times the average first quarter earnings for all workers in covered employment (\$9,266 in 1976). "Maximum earnings" are the amount of the contribution and benefit base in each year. In each case it is assumed that the worker has had an unbroken pattern of earnings at the relative level indicated.

³ Based on the assumption that the worker retires at age 65 in January of the specified year. Annual amounts shown include the effect of the benefit increase for the following June.

⁴ Replacement ratios calculated as the ratio of (a) the annual benefit amount in the first year of retirement to (b) the worker's earnings in his last

year before retirement.

⁵ Based on benefit formula in effect before the 1977 amendments. The new benefit computation provisions become effective for persons reaching age 62 in 1979 or later (or becoming eligible for disability or survivor benefits in 1979 or later). Benefits for retirees aged 65 will be computed under the old formula until 1982.

⁶ Determined under the 5-year transitional provisions. Retirees in 1979-83 will receive the greater of the amount determined under the amendments or what they would have received under the old benefit formula in effect for January 1979. In this case the "frozen law guarantee" amount is projected to be greater.

⁷ Replacement ratios for workers with maximum earnings will eventually reach a stable ultimate value of 28 percent. An explanation of the causes of this pattern, appears below.

the economic assumptions used for the 1977 Trustees Reports. Benefits and replacement ratios are shown for three types of workers. Those with low, average, and "maximum" wage histories. It has been assumed in each case that the worker had an unbroken pattern of earnings throughout his working lifetime at the relative level indicated.

It is recognized that there are few "typical" employees with steady wage histories in the specified categories and that benefits are not based on a worker's earnings in his last year before retirement but rather on his average earnings during most of his participation in the program. Replacement ratios are defined here in relation to earnings in the last year before retirement only for convenience of presentation.

The new benefit formula was designed by Congress in such a way that, eventually, replacement ratios for retiring workers at age 62 will be about 5 percent lower (relatively) than they would have been in 1979 under the old benefit formula. Congress also chose to index the earnings histories of workers (by the trend of average earnings in covered employment) up to the time the worker is initially eligible for benefits rather than to the time of actual retirement. Although this procedure is simpler administratively, it leads to replacement ratios for retirees at age 65 that are about 5 percent lower than replacement ratios at age 62 (before the actuarial reduction for early retirement). Thus, as table 1 illustrates, for suc-

cessive generations of workers retiring at age 65 with earnings below the maximum wage base, replacement ratios will stabilize within about 10 years at levels approximately 10 percent lower (relatively) than the levels in 1979.

The future pattern of replacement ratios for the "maximum" wage earner is somewhat different from that of persons earning less than the maximum amount of wages subject to taxes (the "contribution and benefit base"). Specifically, as the ad hoc increases in the contribution and benefit base occur in 1979-81 (as described below), the replacement ratio will decrease rapidly. After 1981, it will rise slowly as benefit levels for the "maximum" worker begin to reflect the higher covered earnings that result from the base increases. After the turn of the century, benefit levels will be based on a lifetime of earnings at the higher level and the replacement ratio will stabilize at its ultimate value.

A second effect of the new benefit computation procedure will be the significant reduction in the variation of replacement ratios depending on the age of the worker. Before the amendment, young disabled workers or the survivors of young deceased workers received a much greater benefit than their older counterparts with similar recent earnings histories despite the fact that the older worker had participated in the program for a longer period. The new law eliminates most of this unintentional inequity. Benefits for "early

retirement" between ages 62 and 65 will continue to be actuarially reduced. The revised method of computing benefits eliminated about one-half of the deficit that had been projected over the next 75 years.

Increase in Contribution and Benefit Base

Under the old law, the maximum amount of earnings used for computing benefits and assessing taxes (\$16,500 in 1977) would have increased automatically in the future in accordance with the increase in average wages in covered employment. The new law provides for supplemental increases in the wage base from 1979 to 1981. Specifically, the wage base under the old law was estimated to have become \$21,900 in 1981, but it will be \$29,700 under the new law.

One effect of this change will be that the taxable payroll will be higher. Under the old law, approximately 85 percent of the total payroll in covered employment was subject to tax. Under the new law, after 1980 about 91 percent of the total payroll will be subject to tax. The increased taxable payroll will bring additional income into the system. Furthermore, since benefits are based on the average amount of wages on which taxes are paid, in the future some persons will receive larger benefits because larger amounts of wages have been credited to them. Raising the contribution and benefit base thus increases income to the trust funds each year in the future and increases benefit payments by relatively small amounts during the next few years and increasingly larger amounts in the later years.

Approximately 15 percent of the workers covered by the program will pay more in taxes and receive larger benefits as a result of the change in the contribution and benefit base. During the next 75 years, on the average, approximately one-half of the increased tax income resulting from the higher wage base will be required to pay the additional costs due to higher benefits. The net effect will be to reduce the future deficits by approximately 0.5 percent of taxable payroll. Table 2 compares the contribution and benefit base amounts specified in the new law for 1978-81 with the estimated amounts that would have occurred automatically under the old law.

TABLE 2—Old-age, survivors, disability, and hospital insurance Contribution and benefit base before and after the 1977 amendments

Calendar year	Before amendments ¹	After amendments ²
1977	\$16,500	\$16,500
1978	17,700	17,700
1979	18,900	22,900
1980	20,400	25,900
1981	21,900	29,700
1982	23,400	-

¹ For 1979 and later (determined by the automatic provisions of the old law), estimates based on the intermediate set of assumptions shown in the 1977 Annual Reports of the Board of Trustees of the Social Security Trust Funds.

² Base for 1979-81 specified in the new law. Beginning in 1982, the amounts will be determined automatically under the new law on the basis of the annual increase in average earnings in covered employment.

Increase in Tax Rates

The third major change made by the new law is the increase in the social security tax rates in the future. For both employees and employers the total tax rate under old-age, survivors, disability, and hospital insurance was 5.85 percent in 1977. Under the old law it was already scheduled to increase to 6.05 percent in 1978 and to rise in steps thereafter to 6.45 percent in 1986 and to 7.45 percent in the year 2011. The new law does not raise tax rates above those already scheduled until 1979, at which time the total tax rate is increased to 6.13 percent of taxable payroll, thereafter it is to be further increased, reaching 7.15 percent in 1986 and 7.65 percent in 1990. Tax rates for the self-employed increase gradually, from 7.90 percent in 1977 to 10.75 percent in 1990.

Table 3 lists the tax rates scheduled under the new law as well as those applicable under the old law. Although the amendments did not raise the total tax rate scheduled for 1978, the allocation of the taxes among OASI, DI, and HI was changed in order to prevent the depletion of the DI trust fund in late 1978 or early 1979.

These tax-rate and wage-base increases have frequently been described as causing a tripling of social security taxes during the next 10 years. The following statements help put these tax increases in proper perspective.

Under the old law, tax income during the 10-year period 1978-87 was projected to be \$1,646 billion. Under the new law, tax income during this period is projected to be \$1,873 billion—an increase of \$227 billion, or about 14 percent.

A person who has earnings equal to or greater than the taxable wage base in each year will have his

TABLE 3—Old-age, survivors, and disability insurance and hospital insurance Tax rates (percent of taxable payroll) before and after the 1977 amendments

Calendar year	Employees and employers, each						Self-employed					
	Before amendments			After amendments			Before amendments			After amendments		
	Total	OASDI	HI	Total	OASDI	HI	Total	OASDI	HI	Total	OASDI	HI
1977	5.85	4.95	0.90	5.85	4.85	0.90	7.90	7.00	0.90	7.90	7.00	0.90
1978	6.05	4.95	1.10	6.05	5.05	1.00	8.10	7.00	1.10	8.10	7.10	1.00
1979-80	6.05	4.95	1.10	6.13	5.08	1.05	8.10	7.00	1.10	8.10	7.05	1.05
1981	6.30	4.95	1.35	6.65	5.35	1.30	8.35	7.00	1.35	9.30	8.00	1.30
1982-84	6.30	4.95	1.35	6.70	5.40	1.30	8.35	7.00	1.35	9.35	8.05	1.30
1985	6.30	4.95	1.35	7.05	5.70	1.35	8.35	7.00	1.35	9.90	8.55	1.35
1986-89	6.45	4.95	1.50	7.15	5.70	1.45	8.50	7.00	1.50	10.00	8.55	1.45
1990-2010	6.45	4.95	1.50	7.65	6.20	1.45	8.50	7.00	1.50	10.75	9.30	1.45
2011 and after	7.45	5.95	1.50	7.65	6.20	1.45	8.50	7.00	1.50	10.75	9.30	1.45

taxes increased from \$965.25 to \$3,045.90 between 1977 and 1987, but his taxes would have risen in any case to \$2,012.40 under the old law. The number of persons affected by such a large increase is less than 10 percent of those covered by the social security program.

Taxes have been increased—and they have been increased substantially—but not by as much as has sometimes been implied.

PROJECTED INCOME AND OUTGO UNDER NEW LAW

Projections of income and outgo for the social security trust funds have been prepared, and the results of these projections are presented briefly below. The assumptions and methodology used in making the projections are the same as those set forth in the 1977 OASDI, HI, and SMI annual Trustees Reports, and reference should be made to these reports for a more thorough description of the subject of financing. The technical note at the end of this article summarizes some of the more important assumptions on which the estimates and projections shown here are based.

OASDI Income and Outgo, 1977-87

Table 4 shows the projected income and outgo under the new law for the combined OASI and DI trust funds for the period 1977-87. The data reflect both tax income and interest earnings on the trust funds. It may be noted that outgo is projected to continue to exceed income until 1980, when the effect of the increases in the tax rates and the contribution and benefit base will

cause the combined funds to begin to grow. Not until 1981, however, will the funds begin to grow in relation to the level of outgo.

OASDI Income and Outgo, 1977-2051

To facilitate the presentation of long-range cost estimates, expenditures are expressed here in terms of a percentage of the total income subject to the social security tax—that is, as a percentage of taxable payroll. This procedure avoids the difficulties created by the changing value of the dollar and allows a direct comparison to be made between projected expenditures and the tax rates scheduled in the law.

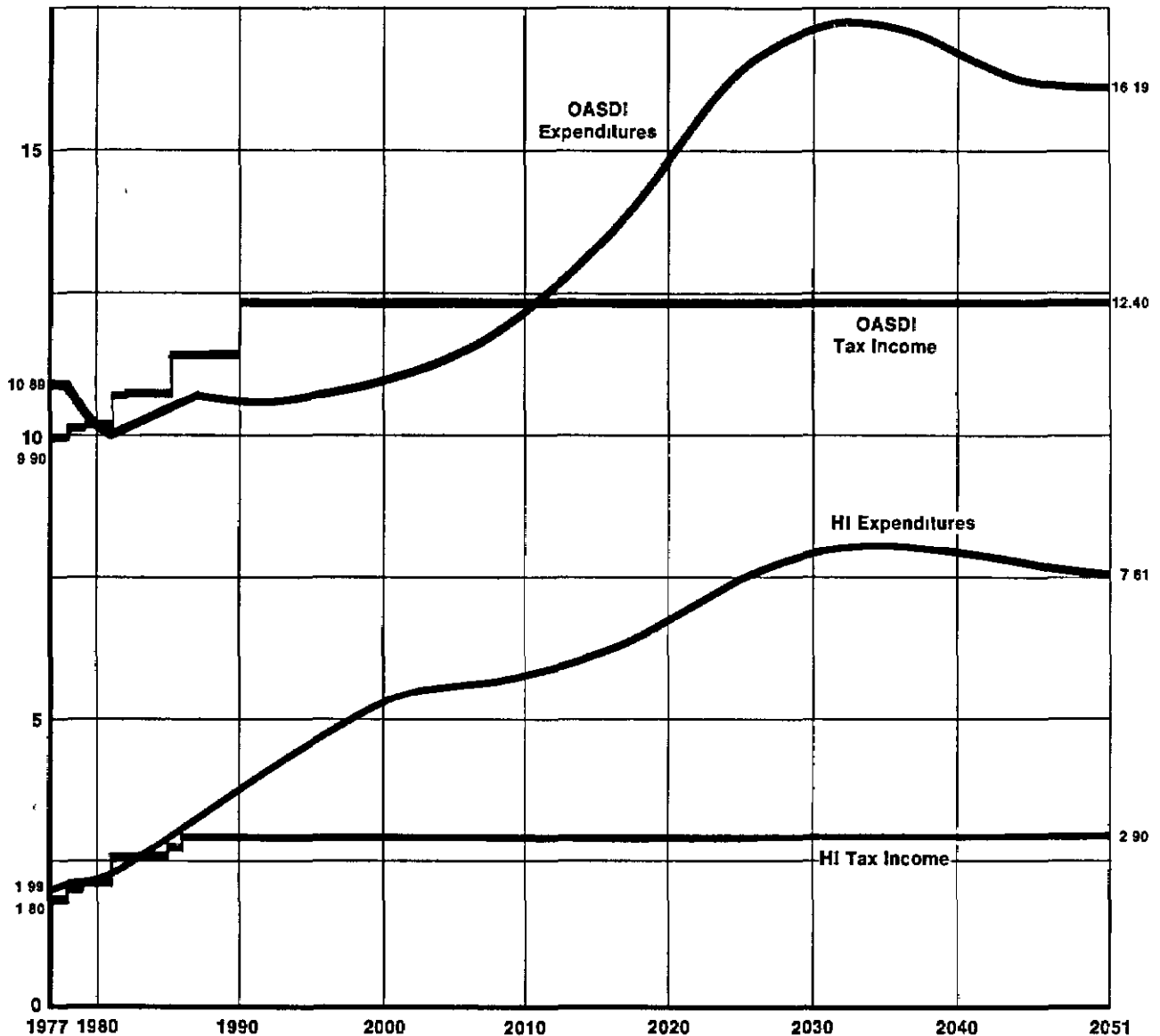
Chart 1 shows the projected expenditures and tax income under the new law, separately for the OASDI and the HI programs, for 1977-2051. Table 5 gives a numerical comparison of the

TABLE 4—Old-age, survivors, and disability insurance. Projected income, expenditures, and level of combined OASI and DI trust funds after the 1977 amendments

Calendar year	Income	Expenditures	Difference	Funds at beginning of year	
				Total amount	As percent of outgo during year
1977	\$82.1	\$87.6	-\$5.5	\$41.1	47
1978	92.4	97.2	-4.8	30.8	37
1979	106.5	106.9	-0.4	30.8	29
1980	119.1	117.1	2.0	30.4	26
1981	137.1	127.4	9.7	32.4	25
1982	150.2	138.3	11.9	42.0	30
1983	161.3	149.2	12.1	53.9	36
1984	172.9	161.2	11.7	66.0	41
1985	194.2	174.0	20.2	77.7	45
1986	209.0	187.6	21.4	97.9	52
1987	223.7	202.0	21.7	119.3	59

CHART 1—Projected expenditures and legislated tax income under new law, calendar years 1977-2051

Percent of
Taxable Payroll



average expenditures and tax income and the resulting differences for various periods. For convenience of presentation, the trust fund balances are ignored, since they normally represent only a small fraction of total expenditures over the years. The 75-year period shown is the approximate "maximum remaining lifetime" of current social security participants.

For the OASDI program the tax income rises in steps in accordance with the scheduled in-

creases shown in table 3. The expenditures rise in dollar amounts but decline as a percentage of taxable payroll during the period 1979-81, reflecting the gradual expansion of the taxable payroll from 85 percent of total payroll in covered employment to 91 percent. Expenditures then begin going up slowly (primarily because of a projected rise in DI expenditures) until early in the 21st century when they show rapid growth as the children of the post-World War II "baby

TABLE 5—Old-age, survivors, and disability insurance and hospital insurance. Projected average tax income and expenditures as percent of taxable payroll¹

Period	OASDI			HI*		
	Tax income	Expenditures	Difference	Tax income	Expenditures	Difference
1977-2001	11.57	10.60	0.97	2.70	3.60	-0.90
2002-2026	12.40	13.46	-1.06	2.90	6.48	-3.58
2027-2051	12.40	16.69	-4.29	2.90	7.53	-4.63
1977-2051	12.12	13.58	-1.46	2.83	5.87	-3.04

¹ See table 6, footnote 1

* Based on assumption that after the year 2000, unit-cost increases for medical care would be equal to average wage increases in covered employment

boom" (which ended in the 1960's) begin reaching retirement age. When all the children of that period have reached retirement age, expenditures decline slightly and then level off.

As indicated by chart 1, tax income for OASDI is projected to exceed expenditures from 1980 until 2010. At this time, the combined OASDI and DI trust funds are projected to be equal to about 3 years' outgo. Thereafter, outgo exceeds tax income, requiring that the interest earnings on the trust fund, and later the principal of the trust fund itself, be used in order to make benefit payments. By the year 2025, the trust funds are projected to have fallen to the level of 1 year's outgo, thus requiring an increase in taxes at that time to preserve the trust funds' ability to act as contingency reserves.

The mention of specific years and specific trust fund amounts many years in the future may give a false impression of the precision with which long-range projections can be made. The following general statements more fairly portray the long-range financing picture for the OASDI program after the Social Security Amendments of 1977:

—Total income and total outgo are projected to be in approximate balance during the next 50 years (1977-2026).

—During the succeeding 25 years (2027-51), average expenditures are projected to be 16.69 percent of taxable payroll, or 35 percent greater than the scheduled tax income of 12.40 percent of taxable payroll.

—The projected annual expenditures are frequently averaged over the 75-year projection period and compared with the average scheduled tax income, with the difference of these two amounts referred to as the average "actuarial balance" or "actuarial deficit." The actuarial deficit after the 1977 amendments is 1.46 percent of taxable payroll. It was 8.20 percent before the amendments. Although this

reduction reflects a substantial improvement in the financial condition of the OASDI program, it should be noted that a substantial projected deficit of 4.29 percent of taxable payroll in the last third of the 75-year period remains unresolved. Casual references to the 1.46-percent actuarial deficit may tend to obscure the timing and magnitude of the remaining problem.

HI Income and Outgo, 1977-2051

Chart 1 and table 5 display projected expenditures and tax income under the new law for the HI program for the next 75 years. The annual Trustees Reports for this program normally show such projections for only a 25-year period. Since the demographic changes that cause the OASDI program costs to accelerate rapidly after the turn of the century will also cause the HI program costs to increase rapidly, estimates are presented here for the full 75-year projection period used for OASDI. To make these extended projections, it was assumed that after the year 2000, medical care unit-cost increases would be equal to average wage increases in covered employment.

For the HI program the tax income rises in steps in accordance with the scheduled increases shown in table 3. Projected expenditures as a percentage of taxable payroll go up steadily throughout the remainder of the century. During 1979-81 the increases are less pronounced than they would have been before the 1977 amendments because of the ad hoc wage base increases that produce a greater taxable payroll without affecting HI benefits. Expenditures continue rising in the 21st century, as the children of the post-World War II baby boom begin reaching retirement age and become eligible for HI benefits.

The amendment that raised the contribution and benefit base has the effect of increasing tax income to the HI trust fund. The law also lowered that portion of the total tax rate allocated to the HI trust fund, so that on balance the fund is projected to be in approximately the same financial condition under the new law as under the old law.

As indicated by the 1977 HI Trustees Report, as well as the data in chart 1, this financial condition is not good. Outgo is projected to exceed total income (including interest on the fund) beginning in the mid-1980's, and it is estimated that the trust fund will be depleted by about 1988.

The Administration has proposed to Congress that certain hospital-cost containment provisions be adopted in order to help hold down future increases in the cost of hospital care. If these provisions are adopted and if they operate as expected, the financial health of the HI program would be improved somewhat. If the provisions are not adopted, however, it seems likely that tax increases in addition to those called for by the Social Security Amendments of 1977 will be required in the mid-1980's to maintain the HI trust fund.

The possibility of enactment of legislation for hospital-cost containment and the possibility that the HI program will be absorbed by some form of national health insurance program within the next decade have tended to limit the emphasis on and the interest in the program's imminent financing problems. Of course, the HI financing problems would still require correction under a national health system.

It is the announced intention of the Administration to propose a national health insurance program to Congress in the near future. Consistent with this intention was the reorganization on March 14, 1977, of the Department of Health, Education, and Welfare that created the Health Care Financing Administration and abolished the Social and Rehabilitation Service. As a part of this reorganization, the administration of the Medicare program (formerly under the Social Security Administration) and of the Medicaid program (formerly part of the Social and Rehabilitation Service) was placed under the authority of the Health Care Financing Administration.

SMI Income and Outgo, 1977-2051

The SMI portion of Medicare is an optional program available to most persons aged 65 and over and to certain disabled persons. About 95 percent of those eligible for this program have elected to participate.

The cost of SMI benefits was met originally by premiums paid by the participants and approximately matching payments from general revenues. At the present time, however, about 70 percent of the total cost is being paid from general revenues because, by law, premiums have not been permitted to rise as rapidly as total costs have risen. The percentage of the total cost paid

by general revenues can be expected to increase in the future.

The SMI Trustees Report normally shows projected expenditures for only a 3-year period. The same demographic changes in the population that cause the projected OASDI and HI program costs to accelerate rapidly after the turn of the century will also cause the SMI program costs to increase rapidly. For purposes of illustration here, expenditures have therefore been projected for the next 75 years. The SMI program is not financed by payroll taxes, but its cost for comparative purposes has been computed as a percentage of the payroll that is taxable for HI purposes. On this basis, the expenditures under SMI are projected to increase from the equivalent of 0.85 percent of taxable payroll in 1977 to 2.52 percent in 2050. The progression of expenditures during this period is shown in table 6.

Income and Outgo under OASDI and HI Combined, 1977-2051

Table 6 displays expenditures and tax income and the difference between the two for the OASDI, DI, and HI programs (separately and combined) for selected years. The data indicate that total expenditures for these three programs will rise from 12.88 percent of taxable payroll in 1977 to 16.24 percent in the year 2000 and 23.84 percent in 2025, remaining at approximately that level thereafter. The total tax rate, on the other hand, is scheduled to increase from 11.70 percent of taxable payroll in 1977 to only 15.30 percent by 1990, remaining level thereafter. Projected expenditures are higher than scheduled tax income beginning in the mid-1990's, with the deficit growing larger with time. During 1977-2001, average OASDHI expenditures are projected to be 14.20 percent of taxable payroll, almost exactly equal to the scheduled average tax income of 14.27 percent. From 2002 to 2051, average expenditures are projected to be 22.09 percent of taxable payroll, or about 44 percent greater than the scheduled average tax income of 15.30 percent.

SUMMARY AND CONCLUSIONS

The Social Security Amendments of 1977 made important revisions in the social security pro-

TABLE 6—Old-age, survivors, and disability insurance and hospital and supplementary medical insurance Projected tax income and expenditures as percent of taxable payroll¹

Year	OASDHI, total			OASI			DI			HI			SMI expenditures ²
	Tax income	Expenditures	Difference ³	Tax income	Expenditures	Difference ³	Tax income	Expenditures	Difference ³	Tax income	Expenditures	Difference ³	
1977	11 70	12 88	-1 18	8 75	9 39	-0 64	1 15	1 50	-0 35	1 80	1 99	-0 19	0 85
1980	12 26	12 33	-0 07	8 66	8 63	0 03	1 50	1 48	0 02	2 10	2 22	-0 12	0 96
1985	14 10	13 43	0 67	9 50	8 79	0 71	1 90	1 66	0 24	2 70	2 98	-0 28	1 28
1990	15 30	14 34	0 96	10 20	8 71	1 49	2 20	1 87	0 33	2 90	3 76	-0 86	1 64
1995	15 30	15 27	-0 03	10 20	8 68	1 52	2 20	2 07	0 13	2 90	4 52	-1 62	1 90
2000	15 30	16 24	-0 94	10 20	8 63	1 57	2 20	2 34	-0 14	2 90	5 27	-2 37	2 00
2025	15 30	23 84	-8 54	10 20	13 49	-3 29	2 20	2 91	-0 71	2 90	4 74	-1 84	2 63
2040	15 30	23 78	-8 48	10 20	13 35	-3 15	2 20	2 82	-0 62	2 90	4 71	-1 81	2 52

¹ The effective taxable payroll is slightly different for OASDI and HI because of the tax treatment of self-employed persons but the comparisons are not materially affected. In 1977, taxable payroll represented about 85 percent of total earnings in covered employment. In 1981 and later the corresponding proportion will be approximately 91 percent.

² Negative figures indicate deficits.

³ Expenditures are approximately equal to total income from premiums

and general revenue for SMI that program is not financed by payroll taxes but its cost is shown here for comparison as a percentage of payroll taxable for HI purposes. Data after 1977 based on unpublished estimates.

⁴ Based on unpublished estimates. For this comparison, it was assumed that after the year 2000, unit cost increases for medical care would be equal to average wage increases in covered employment.

gram. The full effect of these amendments will not be realized until many years in the future.

The most significant amendment was the change in the method of determining OASDI benefits so that future generations would not receive progressively higher levels of benefits in relation to their preretirement earnings than today's generation receives. This action (frequently referred to as "decoupling") corrected the "overindexing" possible under the old law under certain economic conditions and eliminated about one-half of the future deficits.

Another far-reaching change was the expansion of the contribution and benefit base so that benefits payable to many persons in future generations will be related to a larger proportion of the person's earnings. In the future, about 91 percent of the aggregate earnings of persons covered by the social security program will be taken into account in determining benefits, instead of the present 85 percent. This change may appear small, but it is in fact a significant expansion of income security protection for the 15 percent of the population in the higher earnings brackets.

The other important action taken was the raising of taxes to place the OASDI program in closer financial balance, at least for the near term. Future tax income will be greater both because of the increased tax rates and because of the increased wage base to which the tax rates will be applied. Pending these increases, not effective until 1979, portions of the OASI and HI tax rates have been reallocated to the DI trust fund to prevent its depletion in late 1978

or early 1979. The most significant aspect of these amendments is not the particular methods employed to increase the tax income, since these methods may well be revised before they take effect. It is instead the expression of congressional intent to do what may be necessary to sustain the social security program and thus provide much needed assurance to the public.

The Social Security Amendments of 1977 did not attempt to solve all the financial problems of the program. In particular, they postponed the resolution of two potential problem areas:

—For OASDI, the long-range financing problem beginning in the year 2011 when the children of the post-World War II baby boom begin to reach age 65.

—For HI, the short-range financing problem caused by the continuing rapid escalation of hospital costs and the long range problem caused by the aging of the post-World War II generation.

Technical Note

The data shown here are based on assumptions and methodology explained in detail in the 1977 Annual Reports of the Board of Trustees of the Federal Old-Age, and Survivors Insurance Trust Fund, Disability Insurance Trust Fund, Hospital Insurance Trust Fund, and Supplementary Medical Insurance Trust Fund. Because the future cannot be predicted with certainty, long-range projections are made on the basis of alternative assumptions to determine how the social security

program would operate under future conditions that might reasonably be expected to develop

The figures used here are based on the alternative II or "intermediate" assumptions from the 1977 Trustees Reports, including assumptions that

—mortality rates will decline overall by about 18 percent from 1976 to 2050

—the fertility rate will continue to decrease (from its estimated level in 1976 of 1.74 children per woman), going down to 1.65 children per woman in 1980, then the rate is assumed to increase gradually, reaching 2.1 by 2005 and remaining level thereafter

—disability incidence rates will continue increasing, reaching an ultimate level in 1986 that is 33 percent greater than the estimated 1977 level

—labor force participation rates for women will

increase to an ultimate level that is 13 percent greater than the 1976 level

—after 1981, the Consumer Price Index will increase by 4 percent annually

—after 1982, average wages in covered employment will rise by 5¼ percent annually

—the unemployment rate for the total labor force will be 5 percent after 1980

—hospital costs will increase by about 15 percent annually for the next 5 years, after 10 years the annual increase is assumed to be about 10 percent

Assumptions were also made concerning other variables, such as the timing pattern of fertility, migration levels, insured status, disability termination rates, marital status, administrative expenses, and interest rates

Notes and Brief Reports

Workers' Compensation Coverage, Benefits, and Costs, 1976*

Reflecting the improving economy, the number of workers covered by workers' compensation programs in an average week increased to 69.1 million in 1976. This 31-percent rise from the number a year earlier roughly paralleled growth in employment throughout the civilian labor force (3.4 percent) during the same period.

Benefits paid to workers and the cost of the program to employers both rose substantially, as they have for several years. In 1976, benefits totaled nearly \$7.5 billion and program costs, including sales expenses, profits, and costs of administration, amounted to \$10.9 billion. The latter figure represents a notable rise of almost \$2 billion or almost 23 percent over 1975 costs. The increase in costs from 1974 to 1975 was 13 percent. The 1976 rate of growth was more than double the average rate during 1970-75. Most of the growth in costs was explained by the continued rise in statutory benefits payable for

medical care and in indemnity awards and by continued inflation. During 1976, for example, the medical care component of the Consumer Price Index rose 9.5 percent.

COVERAGE

The number of workers protected by workers' compensation laws rose in 1976 by 2.1 million. In 1975, in contrast, it had fallen by 800,000 as a result of the national economic decline that year. In 1976, the proportion of all employed wage and salary workers covered by the laws rose to 88.5 percent, one percentage point higher than in 1975. This proportion has been growing since 1971.

The 1976 advance in coverage was consistent with a turnabout in the economy. Statutory extensions of coverage also had an impact during the year. Though an estimated 200,000 workers were added by law in 1976 to the covered work force, the impetus toward new statutory coverage has clearly slowed down in the past few years. In 1976 (and again in 1977) a few States actually made minor additions to the provisions excluding certain workers from protection. As the proportion of workers protected becomes rather high, of course, those still left out tend to be persons

* By Daniel N. Price, Division of Retirement and Survivors Studies, Office of Research and Statistics, Social Security Administration