

1981 ANNUAL REPORT
FEDERAL OLD-AGE AND SURVIVORS INSURANCE
AND DISABILITY INSURANCE TRUST FUND

COMMUNICATION

FROM

THE BOARD OF TRUSTEES
FEDERAL OLD-AGE AND SURVIVORS IN-
SURANCE AND DISABILITY INSURANCE
TRUST FUND

TRANSMITTING

THE 1981 ANNUAL REPORT OF THE BOARD, PURSUANT TO
SECTION 201(c) OF THE SOCIAL SECURITY ACT



JULY 8, 1981.—Referred to the Committee on Ways and Means
and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE

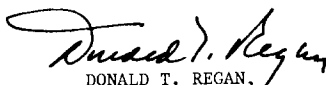
LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Old-Age and Survivors Insurance
and Disability Insurance Trust Funds
Washington, D.C., July 2, 1981


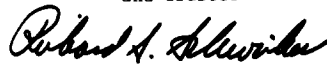
THE SPEAKER OF THE HOUSE OF REPRESENTATIVES
Washington, D.C.

SIR: We have the honor to transmit to you the 1981 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund (the 41st such report), in compliance with the provisions of section 201(c) of the Social Security Act.

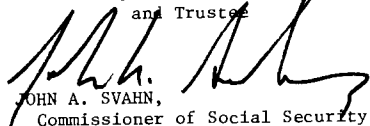
Respectfully,



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Secretary of the Treasury,
and Managing Trustee of the Trust Funds


RAYMOND J. DONOVAN,
Secretary of Labor,
and Trustee

RICHARD S. SCHWEIKER,
Secretary of Health and Human Services,
and Trustee



JOHN A. SVAHN,
Commissioner of Social Security,
and Secretary, Board of Trustees

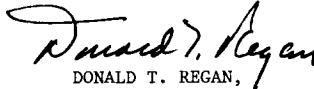
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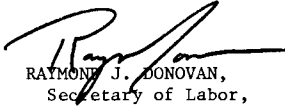
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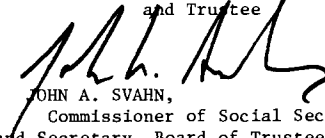
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**1981 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF
THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE
TRUST FUND AND THE FEDERAL DISABILITY
INSURANCE TRUST FUND**

I. THE BOARD OF TRUSTEES

The Federal Old-Age and Survivors Insurance Trust Fund, established on January 1, 1940, and the Federal Disability Insurance Trust Fund, established on August 1, 1956, are held by the Board of Trustees under the authority of section 201(c) of the Social Security Act. The Board is comprised of three members, who serve in an ex officio capacity. The members of the Board are the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. The Secretary of the Treasury is designated by law as the Managing Trustee. The Commissioner of Social Security is Secretary of the Board. The Board of Trustees reports to the Congress once each year, in compliance with section 201(c)(2) of the Social Security Act. This report is the annual report for 1981, the 41st such report.

II. HIGHLIGHTS

This section summarizes the more important developments since the 1980 Annual Report was issued and describes the major features of this year's report. Later sections discuss these topics in more detail.

Financial status of the trust funds

As discussed in last year's annual report, without corrective legislation in the very near future, the Old-Age and Survivors Insurance Trust Fund will be unable to make benefit payments on time beginning in the latter half of 1982. Under present law, and on the basis of any reasonable set of economic assumptions, the expenditures of the OASI program will continue to exceed the program's payroll tax and other income through at least 1985. To date, benefit payments have been made on a timely basis by drawing down the assets of the OASI Trust Fund to cover the shortfall. This, of course, is the fund's purpose: to act as a contingency reserve during temporary periods when outgo exceeds income. At this time, however, the assets of the OASI Trust Fund have been reduced to such a low level that they will not be able to continue making up the difference for much longer. If assets are allowed to decline to the point where their amount at the end of a particular month is less than the benefit payments falling due on the third of the following month, inability to pay all benefits on time for that month would result. This condition is expected to occur for the OASI program in the latter half of 1982 unless income to the program is increased or its benefits are reduced. The following section highlights the financial condition of the program in more detail.

Four sets of long-range financial projections are shown for the Old-Age, Survivors, and Disability Insurance program, to indicate future income and outgo under a broad range of assumptions which are described in the section entitled "Economic and Demographic Assumptions." As in recent annual reports, one set of assumptions is designated as "optimistic" and another is termed "pessimistic." The particular assumptions in each set are so characterized depending on whether they have a favorable or unfavorable effect on the financial status of the trust funds. This year, two alternative "intermediate" sets of assumptions are used: alternative II-A and alternative II-B. Alternatives II-A and II-B share the same demographic assumptions. However, alternative II-A assumes future economic performance resembling that of the more robust recent economic expansions; such performance would result from policies aimed at stimulating growth and lowering inflation. Alternative II-B assumes the adoption of policies which would result in an economic performance resembling less robust economic expansions. This presentation illustrates the beneficial effect on the financial status of the trust funds of higher real growth in wages, higher employment, and lower inflation for any given set of demographic assumptions. In addition, a fifth cost estimate is presented to show the effect of using "worst-case" economic assumptions over the short range (the next 6 years); these were used in developing the Administration's proposals to restore the financial solvency of the OASDI program.

The financial projections are described in detail for three time periods of particular interest—short range, medium range, and long range. The estimates for the various time periods can be summarized as follows:

- (a) Short range (1981-85)—Under all four sets of long-range assumptions and under the short-range “worst-case” economic assumptions, expenditures from the OASI Trust Fund are expected to exceed income in every year during this period. Under present law, the assets of the OASI Trust Fund would soon become insufficient to pay benefits when due. This would occur in the latter half of 1982 under each of the alternative sets of assumptions. Accordingly, changes in the law are needed so that OASI benefits will continue to be paid when due. In contrast, after 1981, the DI Trust Fund is projected to increase in every year throughout the projection period under all five sets of assumptions. Its rate of growth, however, would not be sufficient to offset the projected declines in the OASI Trust Fund, and the assets of both trust funds, if combined, would also become depleted under each set of assumptions. As noted in the concurrent 1981 Annual Report on the status of the Hospital Insurance Trust Fund, the assets of this fund are also expected to increase during the next several years. The projections of the operations of the HI Trust Fund, and of the OASI, DI, and HI Trust Funds combined, are summarized in Appendix G. Under the optimistic and the intermediate II-A assumptions, interfund borrowing (or a reallocation of tax rates among all three trust funds) would prevent the depletion of any of the trust funds in the short term. However, the margin over the minimum amount of combined assets required to prevent depletion is slim. If emerging economic conditions are somewhat less favorable, the funds could become depleted. Under the intermediate II-B, the pessimistic, and the “worst-case” assumptions, for example, the combined assets of all three trust funds are depleted during the short-range projection period.
- (b) Medium range (1981-2005)—Under the four alternative sets of long-range assumptions, average annual total costs for the OASDI program range from 9.99 to 12.55 percent of taxable payroll, while payroll tax income averages 11.94 percent of taxable payroll. Thus, the projected average actuarial balance ranges from a surplus of 1.95 percent of taxable payroll to a deficit of 0.61 percent of taxable payroll, depending on assumed economic growth and other factors over the next 25 years. Although a surplus is shown under all but the pessimistic assumptions, on average, for the next 25 years, this surplus reflects the short-range OASI deficits described above being more than counterbalanced by a subsequent period of significant financial surpluses.
- (c) Long range (1981-2055)—Over this 75-year period, annual costs for the OASDI program are projected to average from 10.99 to 18.50 percent of taxable payroll, depending on the particular trends assumed in the key economic and demographic factors. Since scheduled payroll tax income averages 12.25 percent of taxable payroll during this period, the projected long-range actuarial balance varies from a surplus of 1.25 percent of taxable

payroll under the optimistic assumptions to a deficit of 6.25 percent of taxable payroll under the pessimistic assumptions. Under alternatives II-A and II-B, respectively, average deficits of 0.93 and 1.82 percent of taxable payroll are projected. Under both sets of intermediate assumptions, this average reflects the near-term annual deficits, the projected surpluses in the remaining portion of the first 25-year period, and substantial deficits projected for the second and third 25-year periods. Projections for such distant periods are subject to considerable uncertainty and should be interpreted, not as precise forecasts of expected program operations, but as indications of how the trust funds would operate if the assumed economic and demographic conditions actually came to pass and if there were no future legislative changes in the program. The average actuarial balance in the third 25-year period, for example, ranges from a surplus of 0.48 percent of taxable payroll under the optimistic assumptions to a deficit of 13.03 percent under the pessimistic set. The projected average deficits for this period under the alternative II-A and II-B sets of assumptions are 3.39 and 4.41 percent of taxable payroll, respectively.

Trust fund operations during fiscal year 1980

- (a) The total assets of the OASI and DI Trust Funds declined by \$1.1 billion during fiscal year 1980, to \$32.2 billion on September 30, 1980. Income amounted to \$117.4 billion, and expenditures totaled \$118.5 billion. Disbursements from the OASI Trust Fund exceeded income by \$3.2 billion, and the assets of the OASI Trust Fund declined to \$24.6 billion by the end of the fiscal year. In contrast, the assets of the DI Trust Fund increased by \$2.1 billion, to \$7.7 billion on September 30, 1980.
- (b) The total number of persons receiving monthly benefits under the OASDI program was 35.4 million at the end of September 1980. An estimated 115 million workers had earnings in calendar year 1980 that were taxable and creditable toward benefits under the program.
- (c) The trust funds earned interest amounting to \$2.3 billion during fiscal year 1980. The effective annual rate of interest earned by the combined assets of the OASI and DI Trust Funds during the 12 months that ended June 30, 1980 was 8.4 percent. During this same period, the average interest rate on new securities purchased by the trust funds was 10.1 percent.
- (d) Administrative expenses for the OASDI program in fiscal year 1980 were \$1.5 billion, which represented 1.3 percent of total benefit payments made during the year.

Developments since the last annual report

- (a) An automatic cost-of-living benefit increase of 14.3 percent became effective for June 1980. (The published statement announcing the determination of this increase is shown in Appendix D.) An increase of 11.2 percent became effective for June 1981, as recently determined and announced.

(b) Effective for 1981, the contribution and benefit base was increased from \$25,900 to \$29,700. The annual exempt amount under the retirement earnings test was increased from \$5,000 to \$5,500 for beneficiaries aged 65 and over, and from \$3,720 to \$4,080 for beneficiaries under age 65. The amount of annual earnings required for a quarter of coverage was increased from \$290 to \$310. The published statement announcing these changes is shown in Appendix E.

III. SOCIAL SECURITY AMENDMENTS SINCE THE 1980 REPORT

Since the 1980 Annual Report was published, several amendments affecting the OASDI program have been enacted. The legislative changes with a significant effect on the program's financial status are briefly described below.

On October 9, 1980, Public Law 96-403 (the Reallocation of Social Security Tax Receipts Act) was signed into law. This act reallocates portions of the DI tax rate to the OASI Trust Fund for calendar years 1980 and 1981. (Total OASDI tax rates were not changed.) This adjustment was made to place the assets of the two trust funds, relative to outgo, on a more even basis during this period, and to allow additional time to resolve the impending OASI financial problems.

On October 19, 1980, Public Law 96-473 was signed into law. This amendment makes a number of modifications in the earnings-test provisions in order to correct certain inequities caused when the monthly earnings test was substantially eliminated by the Social Security Amendments of 1977. In addition, restrictions on Social Security benefits for certain inmates of penal institutions are provided.

On December 5, 1980, Public Law 96-499 (the Omnibus Reconciliation Act of 1980) was signed into law. This act limits benefit retroactivity, except for disability claims, and (with certain temporary exceptions) includes as "covered wages" any payment of employee Social Security taxes by employers.

Details of these amendments can be found in documents prepared by and for the Congress. In particular, estimates of the financial effects of the new provisions on the OASDI program are available in these documents. The financial projections shown in this report reflect the effects of these amendments.

IV. NATURE OF THE TRUST FUNDS

The Federal Old-Age and Survivors Insurance Trust Fund was established on January 1, 1940 as a separate account in the United States Treasury. All of the financial operations of the OASI program are handled through this fund. The Federal Disability Insurance Trust Fund is another separate account in the United States Treasury and thus a fund entirely separate from the OASI Trust Fund; it was established on August 1, 1956. All of the financial operations of the DI program are handled through this fund.

The major sources of receipts of these two funds are (1) amounts appropriated to each of them under permanent appropriation on the basis of contributions paid by workers and their employers, and by individuals with self-employment income, in work covered by the OASDI program and (2) amounts deposited in each of them representing contributions paid by or on behalf of workers employed by State and local governments and by such employers with respect to wages covered by the program. All employees, and their employers, in employment covered by the program are required to pay contributions with respect to their wages. Employees are required to pay contributions with respect to cash tips, but employers are required to pay contributions on only that part of tip income deemed to be wages under the Federal minimum wage law. All covered self-employed persons are required to pay contributions with respect to their covered self-employment income.

In general, an individual's contributions are computed on annual wages or self-employment income, or both wages and self-employment income combined, up to a specified maximum annual amount. The contributions are determined first on the wages and then on any self-employment income within the annual maximum amount. An employee who pays contributions on wages in excess of the annual maximum amount (because of employment with two or more employers) is eligible for a refund of the excess employee contributions on the income tax form. The amount of benefits that an individual (or his or her spouse and children) may become entitled to under the OASDI program is based on the amount of the individual's taxable earnings in each year. In computing benefits for persons who first become eligible in 1979 or later, the earnings in each year are indexed to take account of increases in average wage levels. The maximum amount of earnings taxable in a year is also the maximum amount of earnings creditable toward benefits in that year (the contribution and benefit base).

The contribution rates applicable to taxable earnings in each calendar year, and the allocation of the rates between the two trust funds, are shown in Table 1. For 1982 and later, the rates shown are those scheduled in present law. The contribution and benefit bases are also shown in Table 1. The bases for 1975-78 were determined under the automatic-increase provisions in section 230 of the Social Security Act. The bases for 1979-81 are specified in the law, as amended in 1977. The automatic-increase provisions will again be applicable after 1981.

TABLE 1.—CONTRIBUTION AND BENEFIT BASE AND CONTRIBUTION RATES

Calendar years	Contribution and benefit base	Contribution rates (percent of taxable earnings)					
		Employees and employers, each			Self-employed		
		OASDI	OASI	DI	OASDI	OASI	DI
1937-49.....	\$3,000	1,000	1,000	—	—	—	—
1950.....	3,000	1,500	1,500	—	—	—	—
1951-53.....	3,600	1,500	1,500	—	2,2500	2,2500	—
1954.....	3,600	2,000	2,000	—	3,0000	3,0000	—
1955-56.....	4,200	2,000	2,000	—	3,0000	3,0000	—
1957-58.....	4,200	2,250	2,000	0.250	3,3750	3,0000	0.3750
1959.....	4,800	2,500	2,250	.250	3,7500	3,3750	.3750
1960-61.....	4,800	3,000	2,750	.250	4,5000	4,1250	.3750
1962.....	4,800	3,125	2,875	.250	4,7000	4,3250	.3750
1963-65.....	4,800	3,625	3,375	.250	5,4000	5,0250	.3750
1966.....	6,600	3,850	3,500	.350	5,8000	5,2750	.5250
1967.....	6,600	3,900	3,550	.350	5,9000	5,3750	.5250
1968.....	7,800	3,800	3,325	.475	5,8000	5,0875	.7125
1969.....	7,800	4,200	3,725	.475	6,3000	5,5875	.7125
1970.....	7,800	4,200	3,650	.550	6,3000	5,4750	.8250
1971.....	7,800	4,600	4,050	.550	6,9000	6,0750	.8250
1972.....	9,000	4,600	4,050	.550	6,9000	6,0750	.8250
1973.....	10,800	4,850	4,300	.550	7,0000	6,2050	.7950
1974.....	13,200	4,950	4,375	.575	7,0000	6,1850	.8150
1975.....	14,100	4,950	4,375	.575	7,0000	6,1850	.8150
1976.....	15,300	4,950	4,375	.575	7,0000	6,1850	.8150
1977.....	16,500	4,950	4,375	.575	7,0000	6,1850	.8150
1978.....	17,700	5,050	4,275	.775	7,1000	6,0100	1,0900
1979.....	22,900	5,080	4,330	.750	7,0500	6,0100	1,0400
1980.....	25,900	5,080	4,520	.560	7,0500	6,2725	.7775
1981.....	29,700	5,350	4,700	.650	8,0000	7,0250	.9750
Changes scheduled in present law:							
1982-84.....	(¹)	5,400	4,575	.825	8,0500	6,8125	1,2375
1985-89.....	(¹)	5,700	4,750	.950	8,5500	7,1250	1,4250
1990 and later.....	(¹)	6,200	5,100	1,100	9,3000	7,6500	1,6500

¹Subject to automatic increase.

All contributions are collected by the Internal Revenue Service and deposited in the general fund of the Treasury as internal revenue collections, except for amounts received under State agreements (to effectuate coverage under the program for State and local government employees), which are deposited directly in the trust funds. The internal revenue collections are immediately and automatically appropriated to the trust funds on an estimated basis. The exact amount of contributions received is not known initially, because contributions under the OASDI and HI programs and individual income taxes are not separately identified in collection reports received by the Department of the Treasury. Periodic adjustments are subsequently made to the extent that the estimates are found to differ from the amounts of contributions actually payable as determined from reported earnings. Adjustments are also made to account for any refunds to workers who paid contributions on wages in excess of the contribution and benefit base.

Another source of income to the trust funds is interest received on investments held by the trust funds. That portion of each trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration is invested, on a daily basis, in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below), in obligations

guaranteed as to both principal and interest by the United States, or in certain federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. These obligations may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust funds. The Act provides that these obligations shall bear interest at a rate equal to the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest-bearing obligations of the United States then forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such calendar month.

The income and expenditures of the trust funds are also affected by the provisions of the Railroad Retirement Act which provide for a system of coordination and financial interchange between the Railroad Retirement program and the OASDI program. Under these provisions, transfers between the Railroad Retirement Account and the trust funds are made on an annual basis in order to place each trust fund in the same position as it would have been if railroad employment had always been covered under OASDI.

Several other provisions in the Social Security Act also affect the income and expenditures of the trust funds. Income is affected by provisions for (1) annual reimbursements from the general fund of the Treasury to the OASI and DI Trust Funds for any cost arising from the granting of noncontributory wage credits for military service, according to periodic determinations made by the Secretary of Health and Human Services; (2) annual reimbursements from the general fund of the Treasury to the OASI Trust Fund for any costs arising from the special monthly cash payments to certain persons who reached age 72 before 1968, almost all of whom are not eligible for cash benefits under other provisions of the OASDI program, and (3) the receipt of unconditional money gifts or bequests made for the benefit of the trust funds or any activity financed through the funds. In addition to the payment of benefits from the trust funds, the following expenditures are authorized: (1) costs of vocational rehabilitation services furnished to disabled persons receiving benefits because of their disability, which may not exceed a specified percentage of the benefits certified for payment to these types of beneficiaries in the preceding year; (2) expenses incurred by the Department of Health and Human Services and by the Department of the Treasury in carrying out the provisions of title II of the Social Security Act and the provisions of the Internal Revenue Code relating to the collection of contributions; and (3) expenditures for construction, rental and lease, or purchase contract of office buildings and related facilities for the Social Security Administration.

The net worth of facilities and other fixed capital assets is not carried in the statements of the operations of the trust funds presented in this report. This is because the value of fixed capital assets does not represent

funds available for benefit or administrative expenditures, and therefore is not viewed as being a consideration in assessing the actuarial status of the trust funds.

**V. SUMMARY OF THE OPERATIONS OF THE OLD-AGE AND
SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST
FUNDS, FISCAL YEAR 1980**

A. OLD-AGE AND SURVIVORS INSURANCE TRUST FUND

A statement of the income and disbursements of the Federal Old-Age and Survivors Insurance Trust Fund in fiscal year 1980, and of the assets of the fund at the beginning and end of the fiscal year, is presented in Table 2. Comparable figures for fiscal year 1979 are also shown in the table.

TABLE 2.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND DURING FISCAL YEARS
1979 AND 1980
[In thousands]

	Fiscal year 1979	Fiscal year 1980
Total assets, beginning of year	\$30,978,264	\$27,742,846
Receipts:		
Contributions:		
Appropriations.....	76,126,738	86,736,410
Deposits arising from State agreements.....	8,680,185	11,228,740
Gross contributions	84,806,923	97,965,150
Less payment into the general fund of the Treasury for contributions subject to refund.....	449,013	357,505
Net contributions.....	84,357,910	97,607,645
Reimbursement from general fund of the Treasury for costs of:		
Noncontributory credits for military service	384,457	392,968
Payments to noninsured persons aged 72 and over:		
Benefit payments.....	199,169	140,550
Administrative expenses.....	2,192	1,557
Interest.....	29,100	21,962
Total reimbursement for payments to noninsured persons aged 72 and over	230,461	164,069
Interest:		
Interest on investments	1,919,705	1,885,287
Interest on amounts transferred from the general fund account for the Supplemental Security Income program due to adjustment in allocation of administrative expenses	1,412	46
Interest on amounts of interfund transfers due to adjustment in allocation of administrative expenses and construction costs ¹	-574	951
Gross interest.....	1,920,544	1,886,284
Less interest on amounts transferred to the DI Trust Fund due to adjustment in allocation of costs of vocational rehabilitation services.....	404	65
Net interest.....	1,920,140	1,886,219
Gifts	100	52
Total receipts.....	86,893,068	100,050,953
Disbursements:		
Benefit payments	87,591,968	100,615,304
Transfer to Railroad Retirement Account.....	1,447,532	1,441,988
Payment for costs of vocational rehabilitation services for disabled benefi- ciaries:		
For current fiscal year.....	12,330	10,960
Transfers to DI Trust Fund due to adjustment in allocation of costs for prior periods	4,650	130
Total payment for costs of vocational rehabilitation services.....	16,980	11,090
Administrative expenses:		
Department of Health and Human Services.....	973,640	1,116,117
Department of the Treasury	104,917	36,589
Construction of facilities for Social Security Administration.....	2,550	21,379
Expenses of Department of Health and Human Services for administration of vocational rehabilitation program for disabled beneficiaries	62	44

TABLE 2.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND DURING FISCAL YEARS
1979 AND 1980 (Cont.)
(In thousands)

	Fiscal year 1979	Fiscal year 1980
Disbursements: (Cont.)		
Administrative expenses: (Cont.)		
Interfund transfers due to adjustment in allocation of costs of construction ¹	-1,013	18
Gross administrative expenses.....	1,080,156	1,174,147
Less interfund transfers due to adjustment in allocation of administrative expenses.....	7,783	14,135
Less reimbursement from general fund of the Treasury for costs of furnishing information on deferred vested pension benefits.....	311	216
Less receipts from sales of supplies, materials, etc.....	55	137
Net administrative expenses.....	1,072,006	1,159,659
Total disbursements.....	90,128,486	103,226,041
Net increase in assets.....	-3,235,418	-3,177,089
Total assets, end of year.....	27,742,846	24,565,757

¹A positive figure represents a transfer of interest to the trust fund from the general fund account for the Supplemental Security Income program. A negative figure represents a transfer of interest from the trust fund to the general fund account for the Supplemental Security Income program.

²A positive figure represents a transfer from the OASI Trust Fund to the other Social Security Trust Funds. A negative figure represents a transfer to the OASI Trust Fund from the other Social Security Trust Funds.

Note: Totals do not necessarily equal the sum of rounded components.

The total assets of the OASI Trust Fund amounted to \$27,743 million on September 30, 1979. During fiscal year 1980, total receipts amounted to \$100,051 million and total disbursements were \$103,228 million. The assets of the trust fund thus decreased \$3,177 million during the year, to a total of \$24,566 million on September 30, 1980.

Included in total receipts during fiscal year 1980 were \$86,736 million representing contributions appropriated to the fund and \$11,229 million representing amounts received by the Secretary of the Treasury in accordance with State agreements for coverage of State and local government employees and deposited in the trust fund. As an offset, \$358 million was transferred from the trust fund into the Treasury as repayment for the estimated amount of contributions subject to refund to employees who worked for more than one employer during the course of a year and paid contributions on wages in excess of the statutory maximum earnings base.

Net contributions amounted to \$97,608 million, an increase of 15.7 percent over the amount for the preceding fiscal year. Growth in contribution income resulted primarily from (1) the higher level of earnings in covered employment; (2) the two increases in the maximum annual amount of earnings taxable—from \$17,700 to \$22,900 and from \$22,900 to \$25,900—that became effective on January 1, 1979, and January 1, 1980, respectively; and (3) the increase in the OASI contribution rate for employees and employers, each, from 4.275 percent to 4.330 percent that became effective on January 1, 1979. Although the first increase in the maximum annual amount of earnings taxable, from \$17,700 to \$22,900, became effective in 1979, earnings between \$17,700 and \$22,900, which were taxable during all of fiscal year 1980, were

taxable during only part of the preceding fiscal year. Similarly, although the increase in the OASI contribution rate, from 4.275 percent to 4.330 percent, became effective in 1979, the first full fiscal year during which the higher rate was operative was 1980.¹

Reference has been made in an earlier section to provisions of the Social Security Act under which the OASI and DI Trust Funds are to be reimbursed annually from the general fund of the Treasury for costs of granting noncontributory credits for military service and for the costs of payments to certain noninsured persons aged 72 and over.

Section 217(g) of the Social Security Act provides for reimbursement of the additional costs for military service performed before 1957 arising from benefit payments that have been made after August 1950 and those that will be made in future years, taking into account the amounts of annual appropriations in fiscal years 1966-76 that have been deposited into the trust funds. In accordance with section 217(g), the Secretary of Health, Education, and Welfare (now Health and Human Services) made a determination in 1975 of the level annual appropriations to the trust funds necessary to amortize this estimated total cost over a 39-year period, beginning in fiscal year 1977. The annual amounts resulting from this determination were \$354 million for the OASI Trust Fund and \$92 million for the DI Trust Fund. In accordance with section 229(b) of the Social Security Act, the Secretary of Health and Human Services has determined that the OASI Trust Fund should receive reimbursement of \$39 million, and the DI Trust Fund should receive reimbursement of \$26 million, for additional costs in fiscal year 1980 attributable to noncontributory credits for military service performed after 1956. Thus, reimbursements amounting to \$393 million for the OASI Trust Fund and \$118 million for the DI Trust Fund were received in December 1979.

A reimbursement amounting to \$164 million for the costs of monthly payments to certain noninsured persons aged 72 and over was transferred from the general fund of the Treasury to the OASI Trust Fund in fiscal year 1980. This reimbursement, made under section 228 of the Social Security Act, reflected the costs of payments made in fiscal year 1978 and adjustments in the costs of payments made in prior fiscal years.

The OASI Trust Fund received \$51,579 in gifts in fiscal year 1980 under the provisions authorizing the deposit of money gifts or bequests in the OASI and DI Trust Funds.

The remaining \$1,886 million of receipts consisted of interest on the investments of the trust fund and net interest on amounts of interfund transfers arising out of adjustments in the allocation of administrative expenses, construction costs, and the costs of vocational rehabilitation services for prior fiscal years.

Of the \$103,228 million in total disbursements, \$100,615 million was for benefit payments, an increase of 14.9 percent over the corresponding amount paid in fiscal year 1979. This increase was due to (1) the automatic cost-of-living benefit increases of 9.9 percent and 14.3 percent,

¹On October 9, 1980, the OASI rate for 1980 was increased to 4.52 percent retroactive to January 1, 1980, by the enactment of Public Law 96-403. Since this change was made after the close of fiscal year 1980, the resulting adjustments in contribution income for the period January through September 1980 were made in fiscal year 1981.

which became effective for June 1979 and June 1980, respectively, under the automatic provisions in section 215(i) of the Social Security Act and (2) the continuing growth in both the total number of beneficiaries and the average benefit amounts (the latter resulting from the rising level of earnings). Although the automatic benefit increase of 9.9 percent became effective in 1979, the resulting higher benefit levels (which were in effect during all of fiscal year 1980) were in effect during only part of the preceding fiscal year. The increase in benefit payments from fiscal year 1979 to fiscal year 1980 also reflects the effects of various provisions in the 1977 amendments.

In accordance with the provisions of the Railroad Retirement Act which coordinate the Railroad Retirement and OASI programs and which govern the financial interchanges arising from the allocation of costs between the two systems, the Railroad Retirement Board and the Secretary of Health and Human Services determined that a transfer of \$1,369,500,000 to the Railroad Retirement Account from the OASI Trust Fund would place this trust fund in the same position as of September 30, 1979, as it would have been if railroad employment had always been covered under the Social Security Act. A total amount of \$1,441,988,000 was transferred to the Railroad Retirement Account in June 1980, including interest to the date of transfer amounting to \$72,488,000.

Expenditures of the OASI program for the costs of vocational rehabilitation services amounted to \$11 million. These services were furnished to disabled adults (children of old-age beneficiaries and survivors of deceased insured workers) who were receiving monthly benefits from the OASI Trust Fund because of their disability.

The remaining \$1,160 million of disbursements from the OASI Trust Fund represents net administrative expenses. The expenses of administering the programs financed through the four trust funds (the OASI, DI, HI, and Supplementary Medical Insurance Trust Funds) are allocated and charged directly to each trust fund on the basis of provisional estimates. Similarly, the expenses of administering the Supplemental Security Income program are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, adjustments to the allocations of administrative expenses and costs of construction for prior periods are effected by interfund transfers, including transfers between the OASI Trust Fund and the general fund account for the Supplemental Security Income program, with appropriate interest allowances.

Section 1131 of the Social Security Act authorizes annual reimbursements from the general fund of the Treasury to the OASI Trust Fund for additional administrative expenses incurred by it as a result of furnishing information on deferred vested benefits to pension plan participants, as required by the Employee Retirement Income Security Act of 1974. This annual reimbursement in fiscal year 1980 amounted to \$216,022.

Net administrative expenses charged to the OASI and DI Trust Funds in fiscal year 1980 totaled \$1,494 million. This amount represented 1.3 percent of contribution income and 1.3 percent of expenditures for

benefit payments. Corresponding percentages for each of the last 5 years for the OASDI system as a whole and for each trust fund separately are shown in Table 3.

TABLE 3.—RELATIONSHIP OF NET ADMINISTRATIVE EXPENSES OF THE OASDI PROGRAM TO CONTRIBUTION INCOME AND BENEFIT PAYMENTS, BY TRUST FUND, FISCAL YEARS 1976-80

Fiscal year	Total— Administrative expenses as a percentage of—		OASI Trust Fund— Administrative expenses as a percentage of—		DI Trust Fund— Administrative expenses as a percentage of—	
	Total contribution income	Total benefit payments ¹	Contribution income	Benefit payments ¹	Contribution income	Benefit payments ¹
1976.....	1.8	1.7	1.6	1.5	3.4	2.9
July-September 1976....	1.7	1.6	1.5	1.4	3.3	2.7
1977.....	1.8	1.7	1.4	1.4	4.2	3.4
1978.....	1.6	1.6	1.5	1.4	2.6	2.7
1979.....	1.5	1.5	1.3	1.2	2.8	3.0
1980.....	1.3	1.3	1.2	1.2	2.0	2.2

¹Payments for the costs of vocational rehabilitation services are included with benefit payments. In fiscal year 1980, such payments, for OASI and DI combined, amounted to 0.1 percent of total benefit payments.

Note: In interpreting the figures in the above table, reference should be made to the accompanying text.

Table 4 compares the experience with respect to actual amounts of contributions and benefit payments in fiscal year 1980 with the estimates for that year which appeared in the 1979 and 1980 Annual Reports. The actual experience for each trust fund was quite close, relatively, to the estimates. Reference was made in an earlier section to the appropriation of contributions to the trust funds on an estimated basis, with subsequent periodic adjustments to account for differences from the amounts of contributions actually payable on the basis of reported earnings. In interpreting these figures, it should be noted that the "actual" amount of contributions in fiscal year 1980 reflects the aforementioned type of adjustments to contributions for prior fiscal years. On the other hand, the "actual" amount of contributions in fiscal year 1980 does not reflect adjustments to contributions for that year that were to be made after September 30, 1980. (Another adjustment to contributions for the period January-September 1980 that was not made until after the end of the fiscal year was due to the retroactive reallocation of contribution rates between OASI and DI provided under Public Law 96-403. Since this act became law after the 1980 Trustees Report had been published, its effects were not reflected in the estimates shown in the 1979 and 1980 reports.)

TABLE 4.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, FISCAL YEAR 1980
[Amounts in millions]

	OASI Trust Fund		DI Trust Fund	
	Net contributions	Benefit payments	Net contributions	Benefit payments
Actual amount.....	\$97,608	\$100,615	\$16,805	\$14,899
Estimated amount published in 1980 report.....	\$98,274	\$101,208	\$16,932	\$14,864
Actual as percentage of estimate.....	99	99	99	100
Estimated amount published in 1979 report.....	\$97,887	\$99,730	\$16,954	\$15,199
Actual as percentage of estimate.....	100	101	99	99

Note: In interpreting the figures in the above table, reference should be made to the accompanying text.

At the end of fiscal year 1980, about 35.4 million persons were receiving monthly benefits under the OASDI program. About 30.7 million of these persons were receiving monthly benefits from the OASI Trust Fund. The distribution of benefit payments in fiscal years 1979 and 1980, by type of beneficiary, is shown in Table 5. Approximately 74 percent of the total benefit payments from the OASI Trust Fund in fiscal year 1980 was accounted for by monthly benefits to retired workers and their spouses and children and about 17 percent by monthly benefits to aged survivors and disabled widows and widowers of deceased workers. Approximately 9 percent of the benefit payments represented monthly benefits on behalf of children of deceased workers and monthly benefits to widowed mothers and fathers who had such children in their care.

TABLE 5.—ESTIMATED DISTRIBUTION OF BENEFIT PAYMENTS FROM THE OASI TRUST FUND, BY TYPE OF BENEFICIARY AND PAYMENT, FISCAL YEARS 1979 AND 1980
(Amounts in millions)

	Fiscal year 1979		Fiscal year 1980	
	Amount	Percent of total	Amount	Percent of total
Total.....	\$87,592	100	\$100,615	100
Monthly benefits.....	87,249	100	100,234	100
Retired workers and their dependents.....	64,716	74	74,513	74
Retired workers.....	58,342	67	67,276	67
Wives and husbands.....	5,386	6	6,139	6
Children.....	989	1	1,099	1
Survivors of deceased workers.....	22,402	26	25,600	25
Aged widows and widowers.....	14,246	16	16,578	16
Disabled widows and widowers.....	279	(¹)	304	(¹)
Parents.....	52	(¹)	54	(¹)
Children.....	6,452	7	7,141	7
Widowed mothers and fathers caring for child beneficiaries.....	1,373	2	1,523	2
Noninsured persons aged 72 and over.....	131	(¹)	121	(¹)
Lump-sum death payments.....	343	(¹)	381	(¹)

¹Less than 0.5 percent.

Note: Totals do not necessarily equal the sum of rounded components.

In fiscal year 1980, special payments to noninsured persons aged 72 and over amounted to \$121 million, or 0.1 percent of total benefit payments. As stated earlier, the costs of such payments to persons who have fewer than 3 quarters of coverage are reimbursable from the general fund of the Treasury. About 97 percent of the total of such payments went to persons with fewer than 3 quarters of coverage.

During fiscal year 1980, lump-sum death payments amounted to \$381 million, or 0.4 percent of total benefit payments.

The assets of the OASI Trust Fund at the end of fiscal year 1980 totaled \$24,566 million, consisting of \$23,566 million in obligations of the U.S. Government or of federally sponsored agency obligations, and an undisbursed balance of \$1,000 million. Table 6 shows the total assets of the fund and their distribution at the end of fiscal years 1979 and 1980.

TABLE 6.—ASSETS OF THE OASI TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1979 AND 1980

	September 30, 1979		September 30, 1980	
	Par value	Book value ¹	Par value	Book value ¹
Investments in public-debt obligations:				
Public issues:				
Treasury bonds:				
2½-percent, investment series B, 1975-80			—	—
3-percent, 1995	\$1,064,902,000	\$1,064,902,000.00	—	—
3-percent, 1995	70,170,000	70,154,300.11	\$70,170,000	\$70,155,324.07
3½-percent, 1978-83	60,200,000	59,982,987.02	60,200,000	60,042,172.22
3½-percent, 1985 ..	25,700,000	25,214,601.59	25,700,000	25,301,538.71
3½-percent, 1980 ..	449,450,000	449,922,552.42	449,450,000	449,486,350.62
3½-percent, 1990 ..	556,250,000	551,865,319.11	556,250,000	552,289,643.31
3½-percent, 1998 ..	552,037,000	546,145,879.93	552,037,000	546,454,585.09
4-percent, 1980	153,100,000	153,098,379.94	—	—
4½-percent, 1989-94	91,300,000	90,859,201.17	91,300,000	90,889,427.37
4½-percent, 1975-85	78,023,000	77,905,844.18	78,023,000	77,926,827.50
4½-percent, 1987-92	33,000,000	33,833,803.68	33,000,000	33,727,360.68
6½-percent, 1984 ..	31,500,000	31,723,267.05	31,500,000	31,677,856.77
7-percent, 1981	50,000,000	49,923,333.01	50,000,000	49,963,332.97
7½-percent, 1988-93	99,934,000	98,828,625.56	99,934,000	98,908,053.68
7½-percent, 2002-07	15,000,000	14,991,911.98	15,000,000	14,992,205.14
7½-percent, 1995-2000	22,180,000	21,559,420.62	22,180,000	21,590,066.46
8-percent, 1996-2001	90,500,000	90,415,430.64	90,500,000	90,419,304.00
8½-percent, 2000-05	22,450,000	22,444,646.82	22,450,000	22,444,845.66
11½-percent, 2010 ..	—	—	153,100,000	151,998,224.32
8½-percent, 1995-2000	50,000,000	50,631,313.25	50,000,000	50,601,010.25
8½-percent, 1994-99	6,352,000	6,493,938.40	6,352,000	6,486,721.12
Total investments in public issues	3,522,048,000	3,510,896,756.48	2,457,146,000	2,445,354,849.94
Obligations sold only to this fund (special issues):				
Certificates of indebtedness:				
8½-percent, 1980 ..	1,732,790,000	1,732,790,000.00	—	—
9-percent, 1980	6,941,877,000	6,941,877,000.00	—	—
10½-percent, 1981 ..	—	—	406,799,000	406,799,000.00
11½-percent, 1981 ..	—	—	8,464,877,000	8,464,877,000.00
Bonds:				
7½-percent, 1988 ..	125,847,000	125,847,000.00	—	—
7½-percent, 1989 ..	125,847,000	125,847,000.00	—	—
7½-percent, 1990 ..	125,847,000	125,847,000.00	125,847,000	125,847,000.00
7½-percent, 1991 ..	125,848,000	125,848,000.00	125,848,000	125,848,000.00
7½-percent, 1992 ..	2,014,741,000	2,014,741,000.00	2,014,741,000	2,014,741,000.00
7½-percent, 1987 ..	474,643,000	474,643,000.00	—	—
7½-percent, 1988 ..	688,956,000	688,956,000.00	—	—
7½-percent, 1989 ..	688,956,000	688,956,000.00	—	—
7½-percent, 1990 ..	1,366,865,000	1,366,865,000.00	1,366,865,000	1,366,865,000.00
7½-percent, 1987 ..	522,029,000	522,029,000.00	—	—
7½-percent, 1988 ..	522,029,000	522,029,000.00	—	—
7½-percent, 1989 ..	522,029,000	522,029,000.00	437,645,000	437,645,000.00
7½-percent, 1990 ..	522,029,000	522,029,000.00	522,029,000	522,029,000.00
7½-percent, 1991 ..	1,888,893,000	1,888,893,000.00	1,888,893,000	1,888,893,000.00
7½-percent, 1987 ..	677,910,000	677,910,000.00	—	—
7½-percent, 1988 ..	677,909,000	677,909,000.00	—	—
7½-percent, 1989 ..	677,909,000	677,909,000.00	677,909,000	677,909,000.00

TABLE 6.—ASSETS OF THE OASI TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1979 AND 1980 (Cont.)

	September 30, 1979		September 30, 1980	
	Par value	Book value ¹	Par value	Book value ¹
Investments in public-debt obligations: (Cont.)				
Obligations sold only to this fund (special issues): (Cont.)				
Bonds: (Cont.)				
8½-percent, 1993 ..	1,555,736,000	1,555,736,000.00	1,555,736,000	1,555,736,000.00
8½-percent, 1994 ..	1,272,609,000	1,272,609,000.00	1,272,609,000	1,272,609,000.00
9½-percent, 1994 ..	—	—	216,450,000	216,450,000.00
9½-percent, 1995 ..	—	—	1,489,059,000	1,489,059,000.00
Total obligations sold only to this fund (special issues)	23,251,299,000	23,251,299,000.00	20,565,307,000	20,565,307,000.00
Total investments in public-debt obligations.....	26,773,347,000	26,762,195,756.48	23,022,453,000	23,010,661,849.94
Investments in federally sponsored agency obligations:				
Participation certificates:				
Federal Assets Liquidation Trust — Government National Mortgage Association:				
5.10-percent, 1987	50,000,000	50,000,000.00	50,000,000	50,000,000.00
5.20-percent, 1982	100,000,000	100,000,000.00	100,000,000	100,000,000.00
Federal Assets Financing Trust — Government National Mortgage Association:				
6.05-percent, 1988	65,000,000	64,898,438.20	65,000,000	64,910,625.76
6.20-percent, 1988	230,000,000	230,000,000.00	230,000,000	230,000,000.00
6.40-percent, 1987	75,000,000	75,000,000.00	75,000,000	75,000,000.00
6.45-percent, 1988	35,000,000	35,000,000.00	35,000,000	35,000,000.00
Total investments in federally sponsored agency obligations.....	555,000,000	554,898,438.20	555,000,000	554,910,625.76
Total investments	27,328,347,000	27,317,094,194.68	23,577,453,000	23,565,572,475.70
Undisbursed balances	—	425,751,973.22	—	1,000,184,989.34
Total assets.....	—	27,742,846,167.90	—	24,565,757,465.04

¹Par value, plus unamortized premium or less discount outstanding.

The net decrease in the par value of the investments owned by the fund during fiscal year 1980 amounted to \$3,751 million. New securities at a total par value of \$117,675 million were acquired during the fiscal year through the investment of receipts and the reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the fiscal year was \$121,425 million. Included in these amounts are \$104,497 million in certificates of indebtedness that

were acquired, and \$104,300 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the OASI Trust Fund during the 12 months ending on June 30, 1980 was 8.3 percent. (This period is used because interest on special issues is paid semiannually on June 30 and December 31.) The interest rate on special issues purchased by the trust fund in June 1980 was 9 $\frac{1}{4}$ percent, payable semiannually. The special issues purchased then included \$1,489 million in Treasury bonds maturing in 1995. Although the interest rate on bonds is generally limited to 4 $\frac{1}{4}$ percent by the provisions of 31 U.S.C. 752, subsequent amendments have authorized the issuance of bonds to the trust funds at rates of interest exceeding 4 $\frac{1}{4}$ percent.

Section 201(d) of the Social Security Act provides that the public-debt obligations issued for purchase by the OASI and DI Trust Funds shall have maturities fixed with due regard for the needs of the funds. The general practice is to spread the maturity dates for the holdings of special issues as nearly as practicable in equal amounts over a 15-year period.

As a result, the OASI Trust Fund held \$11,694 million in special issues (bonds) at the end of September 1980 that were distributed in equal amounts of about \$2,015 million maturing in each of the years 1990-92 and in smaller amounts maturing in 1989, and in 1993-95 (Table 6). The investment operations of the fund in fiscal years 1979 and earlier are described in earlier annual reports.

B. DISABILITY INSURANCE TRUST FUND

A statement of the income and disbursements of the Federal Disability Insurance Trust Fund during fiscal year 1980 and of the assets of the fund at the beginning and end of the fiscal year is presented in Table 7. Comparable figures for fiscal year 1979 are also shown in the table.

TABLE 7.—STATEMENT OF OPERATIONS OF THE DI TRUST FUND DURING FISCAL YEARS
1979 AND 1980
[In thousands]

	Fiscal year 1979	Fiscal year 1980
Total assets, beginning of year	\$4,371,652	\$5,623,711
Receipts:		
Contributions:		
Appropriations.....	13,356,868	15,014,167
Deposits arising from State agreements.....	1,474,907	1,853,633
Gross contributions	14,831,775	16,867,800
Less payment into the general fund of the Treasury for contributions subject to refund.....	82,032	62,545
Net contributions.....	14,749,743	16,805,255
Reimbursement from general fund of the Treasury for costs of noncontributo- ry credits for military service.....	141,663	117,827
Interest:		
Interest on investments	303,226	451,890
Interest on amounts of interfund transfers due to adjustment in allocation of administrative expenses and construction costs.....	1,027	1,315
Interest on amounts transferred from OASI Trust Fund due to adjustment in allocation of costs of vocational rehabilitation services.....	404	65
Total interest	304,657	453,271
Total receipts ¹	15,196,063	17,376,356
Disbursements:		
Benefit payments	13,428,454	14,898,923
Transfer to Railroad Retirement Account ²	29,906	-12,109
Payment for costs of vocational rehabilitation services for disabled benefi- ciaries:		
For the current fiscal year	83,536	99,040
Less transfer from OASI Trust Fund due to adjustment in allocation of costs for prior periods	4,650	130
Total payment for costs of vocational rehabilitation services.....	78,886	98,910
Administrative expenses:		
Department of Health and Human Services.....	385,295	330,628
Department of the Treasury	20,123	9,814
Construction of facilities for Social Security Administration	235	2,546
Expenses of Department of Health and Human Services for administration of vocational rehabilitation program for disabled beneficiaries	538	316
Interfund transfers due to adjustment in allocation of administrative expenses ³	129	-8,990
Interfund transfers due to adjustment in allocation of costs of con- struction ³	458	-96
Gross administrative expenses	406,778	334,217
Less receipts from sales of supplies, materials, etc.....	21	48
Net administrative expenses	406,758	334,169
Total disbursements	13,944,003	15,319,893
Net increase in assets	1,252,059	2,056,462
Total assets, end of year.....	5,623,711	7,680,173

¹Includes gifts amounting to \$281 during fiscal year 1979 and \$2,989 during fiscal year 1980.

²A positive figure represents a transfer from the DI Trust Fund to the Railroad Retirement Account. A negative figure represents a transfer to the DI Trust Fund from the Railroad Retirement Account.

³A positive figure represents a transfer from the DI Trust Fund to the other Social Security Trust Funds. A negative figure represents a transfer to the DI Trust Fund from the other Social Security Trust Funds.

Note: Totals do not necessarily equal the sum of rounded components.

The total assets of the DI Trust Fund amounted to \$5,624 million on September 30, 1979. During fiscal year 1980, total receipts amounted to \$17,376 million, and total disbursements were \$15,320 million. The assets of the trust fund thus increased by \$2,056 million during the year, to a total of \$7,680 million on September 30, 1980.

Included in total receipts were \$15,014 million representing contributions appropriated to the fund and \$1,854 million representing amounts received by the Secretary of the Treasury in accordance with State coverage agreements and deposited in the fund. As an offset, \$63 million was transferred from the trust fund into the Treasury as repayment for the estimated amount of contributions subject to refund to employees who worked for more than one employer during the course of a year and paid contributions on wages in excess of the statutory maximum earnings base.

Net contributions amounted to \$16,805 million, an increase of 13.9 percent over the amount for the preceding fiscal year. The increase is accounted for, in part, by the same factors, insofar as they apply to contributions of the DI Trust Fund, that accounted for the increase in contributions to the OASI Trust Fund (described in the preceding section).

In addition, the trust fund received \$118 million in December 1979 from the general fund of the Treasury as reimbursement for the costs of noncontributory credits for military service. Of this amount, \$92 million was reimbursed in accordance with section 217(g) and \$26 million was reimbursed in accordance with section 229(b), as described in the preceding section.

The remaining \$453 million of receipts consisted of interest on the investments of the fund, plus interest on amounts of interfund transfers.

Of the \$15,320 million in total disbursements, \$14,899 million was for benefit payments, an increase of 11.0 percent over the corresponding amount paid in fiscal year 1979. This increase is accounted for by the same factors that resulted in the increase in benefit payments from the OASI Trust Fund as described in the preceding section. This increase also reflects the offsetting effects of (1) a continuing decline in the number of persons receiving benefits from the DI Trust Fund and (2) reductions in outlays resulting from the Social Security Disability Amendments of 1980.

Provisions governing the financial interchanges between the Railroad Retirement Account and the DI Trust Fund are similar to those referred to in the preceding section relating to the OASI Trust Fund. The determination made as of September 30, 1979 required that a transfer of \$11,500,000 be made to the DI Trust Fund from the Railroad Retirement Account. A total amount of \$12,109,000 was transferred from the Railroad Retirement Account in June 1980, including interest to the date of transfer amounting to \$609,000. The transfer made in the previous fiscal year, 1979, was in the opposite direction—from the DI Trust Fund to the Railroad Retirement Account—because, in the determination underlying the 1979 transfer, the estimate of additional contributions that would have been received by the DI Trust Fund if railroad employment had always been covered under Social Security was smaller than the

estimate of additional benefits and administrative expenses that would have been paid from the fund, whereas in the determination underlying the 1980 transfer, the estimated contributions were larger than the estimated expenditures.

The remaining disbursements amounted to \$334 million for net administrative expenses and \$99 million for the costs of vocational rehabilitation services furnished to disabled-worker beneficiaries and to those children of disabled workers who are receiving benefits on the basis of disabilities that have continued since childhood.

As stated earlier, the total amount of funds that may be made available in a fiscal year for payment for the costs of vocational rehabilitation services may not exceed a specified percentage of the benefits certified for payment in the preceding fiscal year from the OASI and DI Trust Funds to disabled persons receiving benefits because of their disability. This statutory limitation on the amounts to be made available was 1½ percent in fiscal years 1974 and later. Beginning with payments for fiscal year 1977, such funds were further curtailed by limitations in the Budget of the United States for each year. The data presented below show the relationship between the total amount of such payments for fiscal years 1975-79 and the amount of benefits paid to disabled beneficiaries:

Fiscal year to which costs of rehabilitation services are charged	Amount of payments for costs of rehabilitation services ¹ (in thousands)	Estimated amount of benefit payments in preceding fiscal year to disabled beneficiaries (in thousands)	Payments for costs of rehabilitation services as a percent of preceding year's benefit payments
1975	\$75,434	\$5,533,493	1.36
July 1975-September 1976 ²	120,514	8,824,547	1.37
1977 ³	87,079	8,547,410	1.02
1978	93,229	9,986,069	.93
1979	45,627	10,967,760	.42

¹The amounts shown represent the expenditures incurred for a fiscal year and differ from amounts actually expended in a fiscal year as shown in accounting statements of the trust funds on a cash basis. The amounts shown are subject to revision.

²The amount of payments for costs of rehabilitation services represents the total amount for the 15-month period, July 1975 through September 1976. The estimated amount of benefit payments to disabled beneficiaries represents total payments during the corresponding earlier 15-month period, July 1974 through September 1975.

³The estimated amount of benefit payments to disabled beneficiaries represents total payments during the preceding 12-month period, October 1975 through September 1976.

At the end of fiscal year 1980, some 4.7 million persons were receiving monthly benefits from the DI Trust Fund. The distribution of benefit payments in fiscal years 1979 and 1980, by type of beneficiary, is shown in Table 8.

TABLE 8.—ESTIMATED DISTRIBUTION OF BENEFIT PAYMENTS FROM THE DI TRUST FUND, BY TYPE OF BENEFICIARY, FISCAL YEARS 1979 AND 1980
[Amounts in millions]

	Fiscal year 1979		Fiscal year 1980	
	Amount	Percent of total	Amount	Percent of total
Total.....	\$13,428	100	\$14,899	100
Disabled workers.....	11,090	83	12,355	83
Wives and husbands.....	572	4	620	4
Children.....	1,766	13	1,924	13

Note: Totals do not necessarily equal the sum of rounded components.

The assets of the DI Trust Fund at the end of fiscal year 1980 totaled \$7,680 million, consisting of \$7,673 million in the form of obligations of the U.S. Government and an undisbursed balance of \$7 million. Table 9 shows the total assets of the fund and their distribution at the end of fiscal years 1979 and 1980.

TABLE 9.—ASSETS OF THE DI TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1979 AND 1980

	September 30, 1979		September 30, 1980	
	Par value	Book value ¹	Par value	Book value ¹
Investments in public-debt obligations:				
Public issues:				
Treasury bonds:				
3½-percent, 1990..	\$10,500,000	\$10,214,103.11	\$10,500,000	\$10,241,770.67
3½-percent, 1998..	5,000,000	4,801,399.55	5,000,000	4,811,806.55
4-percent, 1980....	30,250,000	30,249,657.12	—	—
4½-percent, 1989-94.....	68,400,000	67,914,273.75	68,400,000	67,947,580.59
4½-percent, 1975-85.....	20,795,000	20,786,772.02	20,795,000	20,788,245.50
4½-percent, 1987-92.....	80,800,000	80,870,716.32	80,800,000	80,861,688.84
6½-percent, 1984..	15,000,000	15,026,674.00	15,000,000	15,021,248.68
7½-percent, 1988-93.....	26,500,000	25,966,014.68	26,500,000	26,004,384.80
7½-percent, 2002-07.....	10,000,000	9,994,607.78	10,000,000	9,994,804.34
8-percent, 1996-2001.....	26,000,000	25,975,703.74	26,000,000	25,976,816.50
8½-percent, 2000-05.....	3,750,000	3,732,402.89	3,750,000	3,733,088.45
11½-percent, 2010.....	—	—	30,250,000	30,032,307.52
Total investments in public issues	296,995,000	295,532,324.96	296,995,000	295,413,742.44
Obligations sold only to this fund (special issues):				
Certificates of indebtedness:				
9-percent, 1980....	1,531,773,000	1,531,773,000.00	—	—
11½-percent, 1981.....	—	—	1,875,730,000	1,875,730,000.00
Bonds:				
7½-percent, 1986..	5,830,000	5,830,000.00	5,830,000	5,830,000.00
7½-percent, 1987..	5,831,000	5,831,000.00	5,831,000	5,831,000.00
7½-percent, 1988..	5,831,000	5,831,000.00	5,831,000	5,831,000.00
7½-percent, 1989..	5,831,000	5,831,000.00	5,831,000	5,831,000.00
7½-percent, 1990..	5,831,000	5,831,000.00	5,831,000	5,831,000.00
7½-percent, 1991..	5,831,000	5,831,000.00	5,831,000	5,831,000.00
7½-percent, 1992..	274,851,000	274,851,000.00	274,851,000	274,851,000.00
7½-percent, 1986..	84,338,000	84,338,000.00	84,338,000	84,338,000.00
7½-percent, 1987..	84,338,000	84,338,000.00	84,338,000	84,338,000.00
7½-percent, 1988..	84,337,000	84,337,000.00	84,337,000	84,337,000.00
7½-percent, 1989..	84,337,000	84,337,000.00	84,337,000	84,337,000.00
7½-percent, 1990..	206,000,000	206,000,000.00	206,000,000	206,000,000.00
7½-percent, 1986..	63,020,000	63,020,000.00	63,020,000	63,020,000.00

TABLE 9.—ASSETS OF THE DI TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1979 AND 1980 (Cont.)

	September 30, 1979		September 30, 1980	
	Par value	Book value ¹	Par value	Book value ¹
Investments in public-debt obligations: (Cont.)				
Obligations sold only to this fund (special issues): (Cont.)				
Bonds: (Cont.)				
7½-percent, 1987 ..	63,019,000	63,019,000.00	63,019,000	63,019,000.00
7½-percent, 1988 ..	63,020,000	63,020,000.00	63,020,000	63,020,000.00
7½-percent, 1989 ..	63,020,000	63,020,000.00	63,020,000	63,020,000.00
7½-percent, 1990 ..	63,020,000	63,020,000.00	63,020,000	63,020,000.00
7½-percent, 1991 ..	269,020,000	269,020,000.00	269,020,000	269,020,000.00
7½-percent, 1985 ..	32,529,000	32,529,000.00	32,529,000	32,529,000.00
7½-percent, 1986 ..	121,663,000	121,663,000.00	121,663,000	121,663,000.00
7½-percent, 1987 ..	121,663,000	121,663,000.00	121,663,000	121,663,000.00
7½-percent, 1988 ..	121,663,000	121,663,000.00	121,663,000	121,663,000.00
7½-percent, 1989 ..	121,663,000	121,663,000.00	121,663,000	121,663,000.00
8½-percent, 1984 ..	146,558,000	146,558,000.00	—	—
8½-percent, 1985 ..	208,860,000	208,860,000.00	208,860,000	208,860,000.00
8½-percent, 1993 ..	241,389,000	241,389,000.00	241,389,000	241,389,000.00
8½-percent, 1983 ..	21,816,000	21,816,000.00	—	—
8½-percent, 1984 ..	192,718,000	192,718,000.00	61,511,000	61,511,000.00
8½-percent, 1985 ..	97,887,000	97,887,000.00	97,887,000	97,887,000.00
8½-percent, 1986 ..	64,425,000	64,425,000.00	64,425,000	64,425,000.00
8½-percent, 1987 ..	64,425,000	64,425,000.00	64,425,000	64,425,000.00
8½-percent, 1988 ..	64,425,000	64,425,000.00	64,425,000	64,425,000.00
8½-percent, 1989 ..	64,425,000	64,425,000.00	64,425,000	64,425,000.00
8½-percent, 1990 ..	64,425,000	64,425,000.00	64,425,000	64,425,000.00
8½-percent, 1991 ..	64,425,000	64,425,000.00	64,425,000	64,425,000.00
8½-percent, 1992 ..	64,425,000	64,425,000.00	64,425,000	64,425,000.00
8½-percent, 1993 ..	97,887,000	97,887,000.00	97,887,000	97,887,000.00
8½-percent, 1994 ..	339,277,000	339,277,000.00	339,277,000	339,277,000.00
9½-percent, 1984 ..	—	—	142,338,000	142,338,000.00
9½-percent, 1985 ..	—	—	142,338,000	142,338,000.00
9½-percent, 1986 ..	—	—	142,338,000	142,338,000.00
9½-percent, 1987 ..	—	—	142,338,000	142,338,000.00
9½-percent, 1988 ..	—	—	142,338,000	142,338,000.00
9½-percent, 1989 ..	—	—	142,338,000	142,338,000.00
9½-percent, 1990 ..	—	—	142,337,000	142,337,000.00
9½-percent, 1991 ..	—	—	142,337,000	142,337,000.00
9½-percent, 1992 ..	—	—	142,337,000	142,337,000.00
9½-percent, 1993 ..	—	—	142,337,000	142,337,000.00
9½-percent, 1994 ..	—	—	142,336,000	142,336,000.00
9½-percent, 1995 ..	—	—	481,613,000	481,613,000.00
Total obligations sold only to this fund (special issues)	5,285,626,000	5,285,626,000.00	7,377,327,000	7,377,327,000.00
Total investments in public-debt obligations....	5,582,621,000	5,581,158,324.96	7,674,322,000	7,672,740,742.44
Undisbursed balances	—	42,552,853.65	—	7,432,523.85
Total assets	—	5,623,711,178.61	—	7,680,173,266.29

¹Par value, plus unamortized premium or less discount outstanding.

The net increase in the par value of the investments owned by the trust fund during the fiscal year amounted to \$2,092 million. New securities at a total par value of \$20,784 million were acquired during the fiscal year through the investment of receipts and the reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was \$18,692 million. Included in

these amounts are \$17,313 million in certificates of indebtedness that were acquired, and \$16,970 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the DI Trust Fund during the 12 months ending on June 30, 1980 was 8.8 percent. The interest rate on public-debt obligations issued for purchase by the trust fund in June 1980 was $9\frac{3}{4}$ percent, payable semiannually.

The investment policy and practices described in the preceding section concerning the OASI Trust Fund apply equally to investments of the assets of the DI Trust Fund.

VI. ACTUARIAL COST PROJECTIONS

Section 201(c) of the Social Security Act requires that the Board of Trustees report annually to the Congress on the operations and status of the OASI and DI Trust Funds during the preceding fiscal year and on the expected operations and status of those trust funds during the ensuing 5 fiscal years. Such information for the fiscal year that ended September 30, 1980 is presented in the preceding section of this report. Such information for fiscal years 1981-85 is presented in this section. It is also required that the report include "a statement of the actuarial status of the trust funds." Such statements have customarily been made for the medium-range period (25 years) and the long-range period (75 years), each period commencing with the year of the issuance of the report. Statements of the current actuarial status are presented in this section. The methods used to estimate the actuarial status are described in Appendix A.

Basic to the discussion of the medium-range or long-range actuarial status of either trust fund is the concept of a "cost rate"—i.e., the cost (also referred to as outgo or disbursements) of the program as a percentage of taxable payroll. The outgo includes benefit payments, administrative expenses, net transfers under the financial interchange between the OASDI Trust Funds and the Railroad Retirement Account, and payments for vocational rehabilitation services for disabled beneficiaries. The taxable payroll consists of the total earnings which are subject to Social Security taxation, adjusted to reflect the lower effective tax rates (in comparison with the combined employee-employer rate) which apply to self-employment income, tips, and multiple-employer "excess wages." With this adjustment, the cost rate can be compared directly with the combined OASDI employee-employer tax rate scheduled in the law.

Over the medium-range and long-range periods, the actuarial status of the trust funds is often summarized by the actuarial balance, which is the difference between the average tax rate and the estimated average cost rate. If the actuarial balance is positive, the system is said to have an actuarial surplus, and if negative, an actuarial deficit. Such a deficit, if it exists, is a warning that, unless the projected trends turn out to be too pessimistic, changes in the system will be needed to make it viable in the future.

The concept of actuarial balance must, however, be used with caution. The use of a single summary measure to describe the system over a fixed time span may mask an adverse pattern (or patterns) within that time frame or problems which emerge soon after the end of the time frame. The addition or deletion of years to the time span could change a surplus into a deficit or vice versa. This is, in fact, the case under either set of intermediate assumptions with the OASDI system, which runs a severe 5- or 10-year deficit, a 25-year surplus, and a 75-year deficit which continues thereafter.

Thus, it is important to note the year-by-year relationship between income and outgo, each expressed as a percentage of taxable payroll. For example, projections presented later in the report show a deficit beginning around 2010 and generally widening through 2055. Such a

pattern indicates that the benefits promised by the system become more and more out of line with expected revenues over time, indicating a very different situation from a hypothetical pattern of early but temporary deficits which might average out to the same actuarial balance.

In recent years, the system has been said to be in "close actuarial balance" over the long-range period if the average tax rate over the 75-year period is within 5 percent of the estimated average cost rate over that period (relatively, i.e., not 5 percentage points). This is equivalent to requiring that the average tax rate be between 95 and 105 percent of the estimated average cost rate over the long-range period.

There is general agreement that the OASDI system should be financed on the basis of a "current-cost" method, under which total income each year is intended to be approximately equal to total outgo during the year, plus an additional amount needed to maintain the trust funds at appropriate contingency-reserve levels. Under this financing method, the assets of the trust funds should not become too large (through continued annual surpluses), nor too small (through continued annual deficits). Although there is no general agreement regarding the appropriate size of either trust fund, the level of each fund should be large enough to allow time for legislative action to prevent its exhaustion during periods of continued annual deficits. When either trust fund is not large enough to serve this purpose, the immediate future financing of that fund—to be considered adequate—must provide for rebuilding the fund to such a level within a reasonable period of time without significant further decline in the interim.

The adequacy of either trust fund is often measured by the size of the trust fund ratio—i.e., the assets at the beginning of the year as a percentage of the outgo during the year. If the ratio for either trust fund falls below a level of about 12-14 percent, the probable inability of the fund to pay benefits when due becomes imminent. To be considered adequate, short-range financing must result in projected trust fund ratios that do not fall below such a level, even under pessimistic assumptions.

Projections of income, outgo, cost rates, actuarial balances, and trust fund ratios are presented later in this section.

A. ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

The future income and outgo of the OASDI system will depend upon many economic and demographic factors, including fertility, mortality, net immigration, marriage, divorce, labor force participation, unemployment, productivity, inflation, retirement patterns, and disability incidence and duration. The income will depend upon how these factors affect the size and composition of the working population and the general level of earnings. Similarly, the outgo will depend upon how these factors affect the size and composition of the beneficiary population and the general level of benefits. Because the precise forecasting of the behavior of these various factors is impossible, projections are shown in this report on the basis of four sets of long-range assumptions, designated as alternatives I, II-A, II-B, and III.

Alternative I is the most optimistic alternative in terms of its economic and demographic assumptions and its net effect on the status of the trust funds; alternative III is the most pessimistic. Alternatives II-A and II-B are generally referred to as intermediate assumptions. Alternatives II-A and II-B share the same demographic assumptions. However, alternative II-A assumes future economic performance resembling that of the more robust recent economic expansions; such performance would result from policies aimed at stimulating growth and lowering inflation. Alternative II-B assumes the adoption of policies which would result in an economic performance resembling less robust economic expansions. This presentation illustrates the beneficial effect on the financial status of the trust funds of higher real growth in wages, higher employment, and lower inflation for any given set of demographic assumptions.

These sets of economic and demographic assumptions have been developed using the best available information. The resulting cost projections, however, should be interpreted as indicating a range of values around future system income and outgo rather than specific point estimates. Nonetheless, such information can provide valuable input into the decision-making process.

Economic assumptions

The economic assumptions incorporated in the four alternatives relating to the long range are summarized in Table 10.

TABLE 10.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2055

Calendar year	Average annual percentage increase in—					Average annual interest rate ³ (percent)	Average annual unemployment rate (percent)
	Real GNP ¹	Average wages in covered employment	Consumer price index	Real-wage differential ² (percent)			
Past experience:							
1960-64	4.0	3.4	1.3	2.1	3.7	5.7	
1965-69	4.4	5.4	3.4	2.0	5.2	3.8	
1970-74	2.8	6.3	6.1	.2	6.7	5.4	
1975-79	3.5	*7.8	8.1	*.3	7.8	7.0	
1980	-.1	*8.5	13.5	*-5.0	11.0	7.1	
Alternative I:							
1981	1.7	10.6	10.7	-.1	11.7	7.7	
1982	4.8	9.6	8.3	1.3	9.4	7.1	
1983	5.3	9.1	6.5	2.6	8.1	6.5	
1984	4.7	7.6	5.0	2.6	7.1	6.0	
1985	4.4	6.8	4.1	2.7	6.4	5.7	
1990	3.9	4.6	2.0	2.6	5.0	5.2	
1995	3.2	4.5	2.0	2.5	5.1	4.5	
2000 & later	*3.5	4.5	2.0	2.5	5.1	4.0	
Alternative II-A ⁴ :							
1981	1.1	10.2	11.1	-.9	11.6	7.8	
1982	4.2	9.8	8.3	1.5	9.6	7.2	
1983	5.0	8.6	6.2	2.4	8.9	6.6	
1984	4.5	7.9	5.5	2.4	8.1	6.4	
1985	4.2	7.1	4.7	2.4	7.3	5.9	
1990	3.4	5.1	3.0	2.1	5.6	5.5	
1995	2.8	5.0	3.0	2.0	5.6	5.0	
2000 & later	*3.1	5.0	3.0	2.0	5.6	5.0	
Alternative II-B:							
1981	1.1	10.2	11.1	-.9	11.8	7.8	
1982	3.7	9.6	9.4	.2	9.9	7.5	
1983	3.5	9.7	9.0	.7	9.1	7.2	
1984	2.9	8.8	8.2	.6	8.4	7.0	
1985	2.9	8.1	7.4	.7	7.9	6.8	
1990	3.0	5.4	4.0	1.4	6.1	5.9	
1995	2.4	5.5	4.0	1.5	6.1	5.4	
2000 & later	*2.7	5.5	4.0	1.5	6.1	5.0	
Alternative III:							
1981 .....	.7	11.5	12.6	-1.1	12.2	7.9
1982	1.1	10.9	12.5	-1.6	10.9	8.0	
1983	2.2	11.1	11.1	.0	10.2	8.8	
1984	3.9	11.4	10.7	.7	9.7	7.9	
1985	3.0	10.1	9.7	.4	9.2	7.4	
1990	2.4	8.2	7.4	.8	7.7	6.3	
1995	2.3	6.4	5.4	1.0	6.8	6.0	
2000 & later	*2.2	6.0	5.0	1.0	6.6	6.0	
"Worst-case" ⁵ :							
1981	-.1	10.6	12.8	-2.2	12.1	8.3	
1982 .....	.7	11.0	13.6	-2.6	11.1	8.7
1983 .....	.7	10.3	11.6	-1.3	10.4	9.7
1984	4.4	12.0	10.9	1.1	9.8	9.1	
1985	4.4	10.4	9.7	.7	9.2	8.0	
1986	3.4	9.2	8.6	.6	8.6	7.4	

¹The real GNP (Gross National Product) is the total output of goods and services expressed in constant dollars.

²The difference between the percentage increase in average annual wages in covered employment and the percentage increase in the average annual CPI.

³The average of the interest rates determined in each of the 12 months of the year for special public-debt obligations issuable to the trust funds.

⁴Preliminary.

⁵This value is for the year 2000. The annual percentage increase in real GNP is assumed to continue to change after 2000 under each alternative so as to reflect the dependence of labor force growth on the size and age-sex distribution of the population. The percentage increases for 2055 are 3.4, 2.5, 2.1, and 0.9 for alternatives I, II-A, II-B, and III, respectively.

⁶The economic assumptions in alternative II-A for 1981-86 are identical to or derived from the assumptions underlying the President's 1982 Budget.

All four long-range alternatives assume a sluggish economy during 1981, with an upturn beginning toward the end of the year. Real GNP in 1981 is assumed to increase 1.7 percent above the 1980 level in alternative I, 1.1 percent in alternatives II-A and II-B, and 0.7 percent in alternative III. In 1982 and later, the GNP paths of the four alternatives branch out from recent experience, with growth of roughly 0.5 percentage points per year separating each of them at the end of the 1980's. Over the long-range period, the rate of growth in the projected real GNP depends strongly upon the rate of growth in the size of the labor force, the rate of change in the average number of hours worked per person in the labor force, and the rate of change in the average productivity of the labor force. A general downward trend in the growth rate of real GNP until 1995 is projected as a result of a significant slowdown in the growth rate of the labor force. Such slowdown results from the combination of the baby boom in the 1950's and 1960's, the subsequent decline in birth rates, and the rapid increase in the labor force participation of women which is projected to begin decelerating during the mid-1980's.

In both alternatives I and II-A, a strong economy is assumed in 1982, followed by continued and steady growth. In alternative II-B, the upturn is assumed to be long and slow by historical standards, although no recession is assumed. In alternative III, the upturn is assumed to begin at the end of 1981, decelerate at the beginning of 1982, and be followed by a recession, which will occur during the last two quarters of 1982. Because economic performance recently has been particularly volatile and difficult to project, the range of future economic performance incorporated in the various alternatives is wider than in previous reports.

In alternative II-A, the annual rate of growth in real GNP is assumed to rise to 5.0 percent in 1983, before slowing to 3.4 percent by 1990. At the same time, the average annual unemployment rate declines, reaching an assumed ultimate rate of 5.0 percent by 1995. The annual rate of increase in average wages in covered employment is assumed to fall to an ultimate rate of 5.0 percent by 1991, with an accompanying decline in the annual rate of increase in the average CPI to an ultimate rate of 3.0 percent by 1989. The real-wage differential (i.e., the difference between annual rates of increase in the average wage and the average CPI) is assumed to reach an ultimate rate of 2.0 percent per year by 1991. The annual interest rate is assumed to reach its ultimate value of 5.6 percent by 1990.

In alternative II-B, the annual rate of growth in real GNP is assumed to rise to 3.7 percent in 1982, before slowing to 2.9 percent by 1984. At the same time, the average annual unemployment rate declines, reaching an assumed ultimate of 5.0 percent by 1999. The annual rate of increase in average wages in covered employment is assumed to fall to an ultimate of 5.5 percent by 1991, with an accompanying decline in the annual rate of increase in the average CPI to an ultimate of 4.0 percent by 1990. The real-wage differential is assumed to reach an ultimate of 1.5 percent per year by 1991. The annual interest rate is assumed to reach its ultimate value of 6.1 percent by 1990.

It is convenient to discuss alternative I in comparison with alternative II-A, the more optimistic of the two intermediate alternatives. In each year, the assumed annual percentage increase in the real GNP in alternative I is higher. Consistent with this higher real GNP is an assumed average annual unemployment rate which in each year is lower, with the ultimate rate of 4.0 percent being 1 percentage point lower. In each year after 1983, the assumed annual percentage increase in the CPI is lower, with the ultimate of 2.0 percent being 1 percentage point lower. In each year after 1982, the assumed real-wage differential is higher, with the ultimate of 2.5 percent being 0.5 percentage points higher. The resulting ultimate annual rate of increase in average wages in covered employment is 4.5 percent, which is 0.5 percentage points lower. The ultimate interest rate of 5.1 percent is lower by 0.5 percentage points.

Similarly, it is convenient to discuss alternative III in comparison with alternative II-B, the more pessimistic of the two intermediate alternatives. In each year after 1985, the assumed annual percentage increase in the real GNP in alternative III is lower. These assumptions reflect an assumed economic recession in 1982 and a subsequent period of recovery. Consistent with this lower real GNP is an average annual unemployment rate which in every year is higher, with the ultimate level of 6.0 percent being 1 percentage point higher. The assumed annual percentage increase in the CPI is higher in each year, with the ultimate of 5.0 percent being 1 percentage point higher. In every year after 1984, the assumed real-wage differential is lower, with the ultimate of 1.0 percent being 0.5 percentage points lower. The resulting ultimate annual rate of increase in average wages in covered employment is 6.0 percent, which is 0.5 percentage points higher. The ultimate interest rate of 6.6 percent is higher by 0.5 percentage points.

In addition to the four long-range alternatives, a fifth set of assumptions is shown in Table 10. That set is the one that was characterized as the "worst-case" assumptions in the announcement of the Administration's Social Security proposals made on May 12, 1981. This "worst-case" set of assumptions was used to estimate the cost effect of those proposals. For the 6-year period for which this set is defined, it is more pessimistic than all four long-range alternatives. Cost projections based on this set of assumptions are shown later in this section.

Demographic assumptions

The demographic assumptions incorporated in the four long-range alternatives are shown in Table 11.

TABLE 11.—SELECTED DEMOGRAPHIC ASSUMPTIONS UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1960-2055

Calendar year	Total fertility rate ¹	Age-adjusted mortality rate ²		Age-adjusted gross disability incidence rate ³	
		Male	Female	Male	Female
Past experience:					
1960.....	3,608	12.56	8.17	4.68	3.34
1965.....	2,885	12.49	7.73	4.94	3.52
1970.....	2,432	12.18	7.22	5.05	3.60
1975.....	1,770	11.09	6.38	7.51	6.05
1978.....	1,745	10.94	8.32	6.94	5.43
1977.....	1,795	10.69	6.13	7.11	5.42
1978.....	1,764	10.61	6.10	5.77	4.26
1979 ⁴	1,812	10.27	5.88	4.97	3.67
1980 ⁴	1,845	10.27	5.88	4.66	3.44
Alternative I:					
1981.....	1,867	10.19	5.82	4.52	3.34
1982.....	1,889	10.12	5.76	4.53	3.35
1983.....	1,912	10.04	5.71	4.57	3.37
1984.....	1,934	9.97	5.65	4.60	3.40
1985.....	1,956	9.89	5.59	4.63	3.42
1990.....	2,067	9.57	5.36	4.78	3.53
1995.....	2,178	9.35	5.21	4.80	3.54
2000.....	2,289	9.24	5.14	4.81	3.55
2005 & later.....	2,400	*9.15	*5.09	4.81	3.55
Alternatives II-A and II-B:					
1981.....	1,855	10.12	5.77	4.61	3.41
1982.....	1,865	9.97	5.66	4.66	3.44
1983.....	1,876	9.82	5.54	4.75	3.51
1984.....	1,886	9.67	5.43	4.85	3.58
1985.....	1,896	9.52	5.32	4.94	3.65
1990.....	1,947	8.91	4.89	5.34	3.94
1995.....	1,998	8.51	4.63	5.46	4.03
2000.....	2,049	8.31	4.50	5.49	4.05
2005 & later.....	2,100	*8.16	*4.41	5.49	4.05
Alternative III:					
1981.....	1,839	9.98	5.67	4.71	3.47
1982.....	1,833	9.69	5.46	4.78	3.53
1983.....	1,828	9.39	5.24	4.94	3.65
1984.....	1,822	9.10	5.03	5.09	3.76
1985.....	1,816	8.81	4.82	5.25	3.87
1990.....	1,787	7.73	4.07	5.91	4.36
1995.....	1,758	7.06	3.64	6.17	4.56
2000.....	1,729	6.72	3.45	6.24	4.60
2005 & later.....	1,700	*6.49	*3.31	6.24	4.60

¹The total fertility rate for any year is the number of children who would be born to 1,000 women in their lifetime if they were to experience the birth rates by age assumed for the selected year and if they were to survive the entire child-bearing period.

²The age-adjusted mortality rate for any year is the annual number of deaths per 1,000 persons that would have occurred in the enumerated total population as of April 1, 1970, if that population had experienced the death rates by age assumed for the selected year.

³The age-adjusted gross disability incidence rate for any year is the annual number of awards per 1,000 persons that would have occurred in the total population exposed to disability during 1978, if that population had experienced the disability incidence rates by age assumed for the selected year.

⁴Preliminary.

*This value is for the year 2005. Mortality rates are assumed to continue declining during the remainder of the projection period. For men, the rates in 2055 are 8.46, 6.98, 6.98, and 4.76, under alternatives I, II-A, II-B, and III, respectively. For women, the corresponding rates are 4.63, 3.66, 3.66, and 2.30.

The demographic assumptions in alternatives II-A and II-B are identical. In those alternatives, the assumed ultimate total fertility rate is 2,100 children per 1,000 women (or 2.1 children per woman), which is the rate that, in the absence of net migration and changes in mortality, would eventually result in a nearly constant number of people in the population. This ultimate level of fertility is fully attained in 2005, after a

projected gradual increase from the estimated 1980 level. Mortality rates are assumed to decrease gradually during the entire 75-year projection period, with an average reduction from 1978 levels of 36 percent by the year 2055. Disability incidence rates, which declined during 1978-80, are assumed to increase steadily from 1981 through 2000, when they reach an ultimate level which, after an adjustment to reflect the effects of the Disability Amendments of 1980 (P.L. 96-265), is about 15 percent higher than the average incidence rate for 1978-80.

In alternative I, the total fertility rate is assumed to be higher than in the other alternatives, reaching an ultimate level of 2.4 children per woman, which is fully attained in 2005. The average annual reduction in mortality rates during the 75-year projection period is assumed to be half of the annual reduction assumed in alternatives II-A and II-B. Disability incidence rates are assumed to increase steadily from 1981 through 2000, when they reach an ultimate level which, after the previously mentioned adjustment, is approximately equal to the average for 1978-80.

In alternative III, less favorable demographic conditions are assumed. The total fertility rate is assumed to be lower than in the other alternatives, decreasing from the estimated 1980 level to an ultimate level of 1.7, which is fully attained in 2005. The average annual reduction in mortality rates during the 75-year projection period is assumed to be twice the annual reduction assumed in alternatives II-A and II-B. Disability incidence rates are assumed to increase steadily from 1981 through 2000, when they reach an ultimate level which, after the previously mentioned adjustment, is about 30 percent above the average for 1978-80.

The values assumed after the early years for both the economic and the demographic factors are intended to represent the average experience for those years and are not intended to be predictions of year-by-year values. Actual future values will likely exhibit fluctuations or cyclical patterns, as in the past. In order to provide some insight into the variations from a trend, illustrative cost projections based on economic assumptions which fluctuate around those in alternative II-B are presented in Appendix C.

In addition to the assumptions discussed above, many other assumed or derived factors (such as labor force participation rates, marriage rates, and others) are necessary to prepare the cost estimates presented in this report. Appendix A includes a discussion of some of those factors.

B. AUTOMATIC ADJUSTMENTS

Under the automatic-increase provisions of the law, benefits are adjusted to reflect increases in the CPI. For persons becoming eligible for benefits in 1979 and later, the automatic cost-of-living benefit increases begin with the year a worker reaches age 62, or becomes disabled or dies, if earlier. An automatic increase of 14.3 percent, effective for June 1980, was established in April 1980, as described in Appendix D. Another automatic increase, effective for June 1981, has been determined to be 11.2 percent.

With the exception of predetermined amounts provided under the 1977 amendments, the contribution and benefit base, as well as the amount of earnings exempted from the withholding of benefits under the retirement earnings test, automatically increase in the year following each year in which an automatic cost-of-living benefit increase becomes effective. Such automatic increases are proportionate to the increase in average wages.

The 1977 amendments provided specific amounts for the contribution and benefit base for each year in 1978-81 and for the exempt amount under the earnings test in 1978-82 for beneficiaries aged 65 and over. As a result of these provisions, the contribution and benefit base increased from \$25,900 in 1980 to \$29,700 in 1981. Similarly, the annual exempt amount under the earnings test for beneficiaries aged 65 and over increased from \$5,000 in 1980 to \$5,500 in 1981.

Following the cost-of-living benefit increase that became effective for June 1980, an automatic increase in the annual exempt amount under the earnings test, from \$3,720 in 1980 to \$4,080 in 1981, was established in November 1980 for beneficiaries under age 65, as described in Appendix E. That appendix also describes the determinations of the following amounts for 1981:

1. The amount of earnings a worker must have to be credited with quarters of coverage in 1981;
2. The dollar amounts (or "bend points") in the formulas used to compute benefits payable on the earnings of workers who first become eligible for Old-Age or Disability Insurance benefits, or die before becoming eligible for such benefits, in 1981; and
3. The average of total wages reported for calendar year 1979, to be used for indexing earnings of workers who first become eligible for benefits, or die before first eligibility, in 1981 or later.

A historical summary of the Social Security program amounts determined under the automatic provisions, and the average-wage series used for indexing earnings, are shown in Appendix F. A projection of the corresponding amounts resulting from the two intermediate sets of assumptions, through 1986, is also shown there.

The law as amended in 1977 further provides for the determination of the contribution and benefit base that would have been in effect in each year after 1978 under the automatic provisions of the law as in effect before the enactment of the 1977 amendments. This "old-law" base is used in determining special minimum benefits for certain workers who have many years of low earnings in covered employment. It is also used

for certain purposes under the Railroad Retirement program and the Employee Retirement Income Security Act of 1974. For 1980, the old-law base was \$20,400. The corresponding old-law base for 1981 was determined to be \$22,200.

The five alternative sets of economic assumptions described previously result in the following general benefit increases and contribution and benefit bases for each year 1982 through 1986 (amounts for 1980 and 1981 are also shown as a basis for comparison):

Calendar year	General benefit increase ¹ (percent) under alternative—					Contribution and benefit base ² under alternative—				
	I	II-A	II-B	III	"Worst-case"	I	II-A	II-B	III	"Worst-case"
1980.....	14.3	14.3	14.3	14.3	14.3	\$25,900	\$25,900	\$25,900	\$25,900	\$25,900
1981.....	11.2	11.2	11.2	11.2	11.2	29,700	29,700	29,700	29,700	29,700
1982.....	8.9	9.3	9.7	13.4	14.4	32,100	32,100	32,100	32,100	32,100
1983.....	7.2	6.6	9.2	11.4	11.9	35,400	35,400	35,400	35,700	35,400
1984.....	5.5	5.8	8.5	11.0	11.4	38,700	39,000	38,700	39,600	39,300
1985.....	4.5	4.9	7.7	10.1	10.2	42,300	42,300	42,600	44,100	43,500
1986.....	3.6	4.4	6.9	9.2	9.0	45,600	45,600	46,200	49,200	48,600

¹Effective with benefits for June of the stated year. General benefit increases are assumed to continue to decline gradually after 1986, reaching ultimate values by the year 1997 of 2 percent, 3 percent, 4 percent, and 5 percent, respectively, under alternatives I, II-A, II-B, and III.

²The amounts, effective on January 1 of the stated year, are specified in the law for the years 1979-81. After 1981, the amount increases under the automatic provisions.

Under the automatic provisions of the law, the five different sets of economic assumptions result in the following annual exempt amounts under the earnings test, both for beneficiaries under age 65 and for beneficiaries aged 65 and over (the amounts for 1980 and 1981, and the amounts scheduled for 1982 under present law for beneficiaries aged 65 and over, are also shown as a basis for comparison):

Calendar year	ANNUAL EXEMPT AMOUNTS UNDER THE RETIREMENT TEST ¹						
	Annual exempt amount for beneficiaries under age 65 under alternative—			Annual exempt amount for beneficiaries aged 65 and over ² under alternative—			
	I, II-A, & II-B	III & "Worst-case"	I & II-A	II-B	III	"Worst-case"	
1980.....	\$3,720	\$3,720	\$5,000	\$5,000	\$5,000	5,000	
1981.....	4,080	4,080	5,500	5,500	5,500	5,500	
1982.....	4,440	4,440	6,000	6,000	6,000	6,000	
1983.....	4,920	4,920	6,600	6,600	6,600	6,600	
1984.....	5,400	5,400	7,200	7,200	7,320	7,320	
1985.....	5,880	6,000	7,800	7,920	8,160	8,040	
1986.....	6,360	6,720	8,400	8,640	9,120	9,000	

¹Effective on January 1 of the stated year.

²The amounts are specified in the law for the years 1980-82. After 1982, the amount increases automatically. Through the year 1981, the earnings test does not apply to beneficiaries aged 72 and over; after 1981, it will not apply to beneficiaries aged 70 and over.

C. ESTIMATED OPERATIONS AND STATUS OF THE TRUST FUNDS DURING THE PERIOD OCTOBER 1, 1980 TO DECEMBER 31, 1985

The following statement of the estimated operations and status of the trust funds during the period October 1, 1980 to December 31, 1985 is based on the assumptions described in the preceding sections. As previously stated, it is assumed that present statutory provisions and regulations affecting the program will remain unchanged in the period. The estimates reflect the effects of: (1) the reallocation of OASDI tax rates for 1980 and 1981 enacted in October 1980; (2) Public Law 96-473, which amended the earnings test, provided for separate entitlement to cash benefits and Hospital Insurance benefits, and suspended benefits for certain inmates of penal institutions; and (3) the Omnibus Reconciliation Act of 1980.

OASI Trust Fund operations

Estimates of the operations and status of the OASI Trust Fund during calendar years 1981-85 are shown in Table 12 for each of the five alternative sets of assumptions that were described in the preceding sections. Actual data for calendar year 1980 are also shown in the table. Under each alternative, it is assumed that employment and earnings will increase in every year through 1985. The number of persons with taxable earnings under the OASDI program is expected to increase from 115 million during calendar year 1980 to about 128 million, 126 million, and 125 million by 1985, under alternatives I, II-A, and II-B, respectively, and to 123 million under both alternative III and the "worst-case." The total annual amount of taxable earnings is expected to increase from \$1,175 billion in 1980 to \$2,005 billion, \$1,973 billion, \$2,002 billion, \$2,113 billion, and \$2,094 billion in 1985, under alternatives I, II-A, II-B, and III, and the "worst-case," respectively. (In 1980 dollars—taking account of assumed increases in the CPI from 1980 to 1985 under each alternative—the estimated amounts of taxable earnings in 1985 are \$1,435 billion, \$1,399 billion, \$1,301 billion, \$1,235 billion, and \$1,204 billion under alternatives I, II-A, II-B, and III, and the "worst-case," respectively.) These increases are due in part to the remaining ad hoc increase in the contribution and benefit base for 1981 under present law, and the increases in the base assumed to occur in 1982-85 under the automatic provisions. The increases in taxable earnings are also due to projected increases in (1) employment levels and (2) average earnings in covered employment.

TABLE 12.—ESTIMATED OPERATIONS OF THE OASI TRUST FUND DURING CALENDAR YEARS 1980-85 UNDER FIVE ALTERNATIVE SETS OF ASSUMPTIONS
[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Fund at beginning of year as a percentage of disbursements during year
Alternative I:					
1980 ¹	\$105.8	\$107.7	-\$1.8	\$22.8	23
1981.....	123.7	127.0	-3.3	19.6	18
1982 ²	134.2	144.3	-10.1	9.5	14
1983 ³	148.5	160.6	-12.1	-2.6	6
1984 ³	162.9	176.1	-13.1	-15.7	-1
1985 ³	184.1	190.4	-6.3	-22.0	-8
Alternative II-A:					
1980 ¹	105.8	107.7	-1.8	22.8	23
1981.....	123.3	127.0	-3.7	19.1	18

TABLE 12.—ESTIMATED OPERATIONS OF THE OASI TRUST FUND DURING CALENDAR YEARS 1980-85 UNDER FIVE ALTERNATIVE SETS OF ASSUMPTIONS (Cont.)
[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Fund at beginning of year as a percentage of disbursements during year
Alternative II-A: (Cont.)					
1982 ¹	132.7	144.6	-11.8	7.3	13
1983 ²	145.7	160.8	-15.1	-7.8	5
1984 ²	159.4	176.3	-16.9	-24.7	-4
1985 ²	179.9	191.4	-11.5	-36.2	-13
Alternative II-B:					
1980 ¹	105.8	107.7	-1.8	22.8	23
1981.....	123.3	127.0	-3.7	19.1	18
1982 ²	132.7	144.8	-12.1	7.0	13
1983 ²	146.3	163.3	-17.0	-10.0	4
1984 ²	160.1	183.3	-23.2	-33.2	-5
1985 ²	181.1	203.8	-22.7	-55.9	-16
Alternative III:					
1980 ¹	105.8	107.7	-1.8	22.8	23
1981.....	124.1	127.0	-3.0	19.9	18
1982 ²	134.3	147.4	-13.1	6.8	13
1983 ²	146.5	170.6	-24.1	-17.3	4
1984 ²	163.9	195.7	-31.8	-49.1	-9
1985 ²	188.2	222.8	-34.5	-83.6	-22
"Worst-case":					
1980 ¹	105.8	107.7	-1.8	22.8	23
1981.....	122.8	127.0	-4.3	18.6	18
1982 ²	132.7	148.0	-15.3	3.3	13
1983 ²	142.9	172.2	-29.3	-26.0	2
1984 ²	159.4	197.9	-38.6	-64.6	-13
1985 ²	184.3	225.2	-40.9	-105.4	-29

¹Figures for 1980 represent actual experience.

²Under each set of assumptions, the fund is depleted late in 1982, when assets become insufficient to pay benefits when due. Figures for these and later years are therefore theoretical. See text for details.

Note: Totals do not necessarily equal the sum of rounded components. The major assumptions underlying the estimates are described in the preceding sections and are shown in Tables 10 and 11.

The rise in estimated income shown in Table 12 under each set of assumptions reflects the increases in estimated taxable earnings under the different alternatives, as described above. In addition, the estimated income to the fund is affected by the scheduled changes in contribution rates.

Rising disbursements during calendar years 1981-85 reflect the effects of the assumed future automatic benefit increases previously shown, as well as the long-range upward trend in the numbers of beneficiaries and in the amounts of average monthly earnings underlying benefits payable under the program. The growth in the number of beneficiaries in the past and the expected growth in the future result partly from the increase in the aged population and partly from two other factors—(1) in each succeeding year a larger proportion of the persons attaining age 62 are eligible for benefits and (2) the amendments during the period 1950-77 liberalized the eligibility provisions and extended coverage to additional categories of employment.

In addition, there has been a growth in the proportion of eligible persons who receive benefits. This growth is due to several factors, among which are (1) the amendments enacted during the period 1950-77 which affect the conditions governing the receipt of benefits and (2) the increasing percentage of eligible persons who are aged 72 and over and

who therefore receive benefits regardless of earnings. As indicated in the previous section, the age at which eligible persons may begin to receive full benefits regardless of earnings will be reduced from 72 to 70 beginning in 1982.

Under all five sets of assumptions, the estimates shown in Table 12 indicate that disbursements are estimated to exceed income in every year 1981-85. The assets of the OASI Trust Fund at the beginning of 1980 were equal to about 23 percent of the fund's disbursements in 1980. During 1980, the fund declined to 18 percent of estimated outgo in 1981. By the beginning of 1982, this percentage is estimated to decline to 13 percent under alternatives II-A, II-B, III, and the "worst-case" assumptions, and to 14 percent under alternative I.

By late 1982, under all five alternatives, the assets of the OASI Trust Fund would become insufficient to pay benefits when due in the absence of corrective legislation. This condition occurs when, at the end of any month, the assets fall to less than about 9 percent of the following 12 months of disbursements. Below this level, assets are not large enough to pay benefits when due because of the difference in the cash flow of income and outgo during a month. Almost all of the benefits for a given month are usually payable on the third day of the following month. Contribution income, on the other hand, is received more or less uniformly throughout the month, on a daily basis. For example, the benefits for October 1982, estimated to be about \$12 billion under alternative II-B, are payable on November 3, 1982, before enough income can be added to the fund's estimated assets of about \$11 billion at the end of October to pay the benefits due on November 3.

Although the OASI Trust Fund would be depleted in 1982 under present law, projections representing the theoretical operations of the trust fund in 1982 and later years are shown in Table 12 for informational purposes. In order to calculate the figures representing these theoretical trust fund operations, it was assumed that the OASI Trust Fund could borrow money, to be repaid with interest, on the same terms that it normally would invest positive trust fund balances.

DI Trust Fund operations

The estimated operations and status of the DI Trust Fund during calendar years 1981-85 under the five sets of assumptions are shown in Table 13, together with figures on actual experience in 1980. Income will increase during calendar years 1981-85, under each alternative, reflecting the same factors, insofar as they apply to income to the DI Trust Fund, that are reflected in the increase in income to the OASI Trust Fund during the same period. Income will also rise as a result of the scheduled increases in the combined employee-employer contribution rate allocated for DI, and accompanying increases in contribution rates for self-employed persons.

Disbursements will increase because of automatic benefit increases and because of projected increases in the amounts of average monthly earnings on which benefits are based. These effects are offset, somewhat, by projected decreases in the numbers of beneficiaries. Since about 1978, the number of persons receiving benefits under the DI program has been declining, primarily because of declining disability incidence rates. A

continuing decline in the number of beneficiaries is projected for the next several years under all five sets of assumptions, reflecting the combined effects of (1) somewhat lower incidence rates than those of the last decade and (2) projected termination rates that are somewhat higher than recent experience. The higher termination rates are expected to result from the increased review of the continuing eligibility of disabled beneficiaries.

Because OASDI tax rates were reallocated in 1980 retroactively to January 1, 1980, some tax income was shifted from the DI fund to the OASI fund. The effect of this reallocation on the assets of the DI fund, as a percentage of annual expenditures, was to cause a sharp decrease—from 35 percent at the beginning of 1980 to an estimated 13 percent at the beginning of 1982. Since the reallocation was limited to only 2 years, the increase in DI tax rates to the levels provided for 1982-84 is expected to result in a rapid increase in the assets of the DI fund. As a percentage of annual expenditures, the assets of the DI Trust Fund are projected to reach 104 percent, 96 percent, 87 percent, 75 percent, and 68 percent at the beginning of 1985 under alternatives I, II-A, II-B, and III, and the "worst-case," respectively.

TABLE 13.—ESTIMATED OPERATIONS OF THE DI TRUST FUND DURING CALENDAR YEARS 1980-85 UNDER FIVE ALTERNATIVE SETS OF ASSUMPTIONS
[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Fund at beginning of year as a percentage of disbursements during year
Alternative I:					
1980 ¹	\$13.9	\$15.9	-\$2.0	\$3.6	35
1981.....	17.0	18.1	-1.0	2.6	20
1982.....	24.1	19.5	4.8	7.2	13
1983.....	27.8	20.6	7.2	14.4	35
1984.....	31.2	21.8	9.4	23.8	66
1985.....	39.4	22.8	16.6	40.4	104
Alternative II-A:					
1980 ¹	13.9	15.9	-2.0	3.6	35
1981.....	17.0	18.1	-1.1	2.5	20
1982.....	23.9	19.6	4.3	6.8	13
1983.....	27.4	20.7	6.7	13.5	33
1984.....	30.7	21.9	8.8	22.3	62
1985.....	38.8	23.2	15.7	38.0	96
Alternative II-B:					
1980 ¹	13.9	15.9	-2.0	3.6	35
1981.....	17.0	18.1	-1.1	2.5	20
1982.....	23.9	19.6	4.3	6.8	13
1983.....	27.5	21.0	6.5	13.3	32
1984.....	31.0	22.8	8.2	21.5	58
1985.....	39.4	24.6	14.9	36.3	87
Alternative III:					
1980 ¹	13.9	15.9	-2.0	3.6	35
1981.....	17.1	18.1	-1.0	2.7	20
1982.....	24.2	19.9	4.2	6.9	13
1983.....	27.7	22.0	5.7	12.6	31
1984.....	32.0	24.3	7.7	20.3	52
1985.....	41.7	26.9	14.8	35.1	75
"Worst-case":					
1980 ¹	13.9	15.9	-2.0	3.6	35
1981.....	17.0	18.1	-1.1	2.6	20
1982.....	23.9	20.0	3.9	6.4	13
1983.....	27.1	22.1	5.0	11.4	29
1984.....	31.3	24.4	6.9	18.3	47
1985.....	41.1	26.8	14.3	32.6	68

¹Figures for 1980 represent actual experience.

Note: Totals do not necessarily equal the sum of rounded components. The assumptions underlying the estimates are described in the preceding sections and are shown in Tables 10 and 11.

Combined OASI and DI Trust Fund operations

The estimated operations and status of the OASI and DI Trust Funds, combined, during calendar years 1981-85 under the five alternatives, are shown in Table 14 together with figures on actual experience in 1980. As explained above, the OASI Trust Fund is projected to be depleted in the near future under all five alternative sets of assumptions. Since under present law, none of the income to one trust fund can be allocated to the other trust fund, the projections of the combined OASI and DI Trust Fund operations for 1982-85 under each alternative are theoretical. These figures represent the arithmetical addition of the figures shown in Tables 12 and 13.

TABLE 14.—ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING CALENDAR YEARS 1980-85 UNDER FIVE ALTERNATIVE SETS OF ASSUMPTIONS
(Amounts in billions)

Calendar year	Income	Disbursements	Net increase in funds	Funds at end of year	Funds at beginning of year as a percentage of disbursements during year
Alternative I:					
1980 ¹	\$119.7	\$123.5	-\$3.8	\$26.5	25
1981.....	140.8	145.1	-4.3	22.2	18
1982 ²	158.3	163.8	-5.5	16.7	14
1983 ²	176.3	181.2	-4.9	11.8	9
1984 ²	194.1	197.9	-3.7	8.1	6
1985 ²	223.5	213.2	10.2	18.3	4
Alternative II-A:					
1980 ¹	119.7	123.5	-3.8	26.5	25
1981.....	140.2	145.1	-4.8	21.6	18
1982 ²	156.6	164.1	-7.5	14.1	13
1983 ²	173.1	181.5	-8.4	5.7	8
1984 ²	190.1	198.2	-8.1	-2.4	3
1985 ²	218.7	214.6	4.2	1.7	-1
Alternative II-B:					
1980 ¹	119.7	123.5	-3.8	26.5	25
1981.....	140.2	145.1	-4.8	21.6	18
1982 ²	156.6	164.4	-7.8	13.8	13
1983 ²	173.8	184.4	-10.6	3.2	7
1984 ²	191.1	206.0	-15.0	-11.7	2
1985 ²	220.6	228.4	-7.9	-19.6	-5
Alternative III:					
1980 ¹	119.7	123.5	-3.8	26.5	25
1981.....	141.1	145.1	-3.9	22.5	18
1982 ²	158.5	167.3	-8.8	13.7	13
1983 ²	174.2	192.6	-18.4	-4.8	7
1984 ²	196.0	220.1	-24.1	-28.9	-2
1985 ²	229.9	249.7	-19.7	-48.6	-12
"Worst-case":					
1980 ¹	119.7	123.5	-3.8	26.5	25
1981.....	139.8	145.1	-5.3	21.1	18
1982 ²	156.6	168.0	-11.4	9.7	13
1983 ²	170.0	194.3	-24.3	-14.6	5
1984 ²	190.7	222.4	-31.6	-46.2	-7
1985 ²	225.4	252.0	-26.6	-72.8	-18

¹Figures for 1980 represent actual experience.

²Figures are theoretical. See accompanying text and footnote 2 in Table 12 for details.

Note: Totals do not necessarily equal the sum of rounded components. The assumptions underlying the estimates are described in the preceding sections and are shown in Tables 10 and 11.

At the beginning of 1980, the assets of the combined OASI and DI Trust Funds were equal to 25 percent of the disbursements in 1980, as shown in Table 14. By the beginning of 1981 the assets had declined to an amount representing 18 percent of the expenditures in 1981 as estimated under each of the five alternatives. Under alternative I, the

combined funds are projected to continue to decline and are depleted late in 1983. Under the other alternatives, the combined funds decline more rapidly and are depleted in late 1982 or early 1983.

Assets as a percentage of annual expenditures for selected years prior to 1981 are shown in Table 15 for both funds combined and for each fund separately.

TABLE 15.—ASSETS AT THE BEGINNING OF THE YEAR AS A PERCENTAGE OF EXPENDITURES DURING THE YEAR, FOR THE OASDI PROGRAM, BY TRUST FUND, FOR SELECTED CALENDAR YEARS 1950-80

Calendar year	OASI and DI Trust Funds, combined	OASI Trust Fund	DI Trust Fund
1950.....	1,156	1,156	—
1955.....	405	405	—
1960.....	186	180	304
1965.....	110	109	121
1970.....	103	101	126
1971.....	99	94	140
1972.....	93	88	140
1973.....	80	75	125
1974.....	73	68	110
1975.....	66	63	92
1976.....	57	54	71
1977.....	47	47	48
1978.....	37	39	26
1979.....	30	30	30
1980.....	25	23	35

Expenditures in calendar year 1980 from both trust funds, combined, were 10.77 percent of taxable payroll for the year—0.61 percentage points more than the combined employee-employer contribution rate of 10.16 percent. The cost rates for both trust funds, combined, are estimated to increase in 1981 and 1982 under each alternative. Under alternatives I and II-A, cost rates are estimated to begin a slow decline in 1983, reaching 10.85 percent and 11.10 percent, respectively, in 1985. Under alternatives II-B and III, cost rates are estimated to continue to climb to 11.63 percent and 12.04 percent, respectively, in 1985. Under the “worst-case” assumptions, the estimated OASDI cost rate rises to 12.27 percent in 1985. These percentages are shown in Table 16 for both trust funds, combined, and for each trust fund separately. Table 16 also shows a comparison of each of the percentages with the corresponding combined employee-employer contribution rate.

TABLE 16.—ESTIMATED COST RATES FOR THE OASI AND DI TRUST FUNDS COMPARED WITH COMBINED EMPLOYEE-EMPLOYER CONTRIBUTION RATES, FOR CALENDAR YEARS 1980-85 UNDER FIVE ALTERNATIVE SETS OF ASSUMPTIONS

Calendar year	OASI Trust Fund			DI Trust Fund			OASI and DI Trust Funds, combined		
	Estimated cost rate ^a	Combined employee-employer contribution rate	Difference ^a	Estimated cost rate ^a	Combined employee-employer contribution rate	Difference ^a	Estimated cost rate ^a	Combined employee-employer contribution rate	Difference ^a
1980 ^a	9.39	9.04	-0.35	1.38	1.12	-0.26	10.77	10.16	-0.61
Alternative I:									
1981.....	9.84	9.40	-.44	1.40	1.30	-.10	11.24	10.70	-.54
1982.....	9.94	9.15	-.79	1.34	1.65	.31	11.28	10.80	-.48
1983.....	9.86	9.15	-.71	1.27	1.65	.38	11.13	10.80	-.33
1984.....	9.80	9.15	-.65	1.21	1.65	.44	11.01	10.80	-.21
1985.....	9.69	9.50	-.19	1.16	1.90	.74	10.85	11.40	.55
Alternative II-A:									
1981.....	9.89	9.40	-.49	1.41	1.30	-.11	11.30	10.70	-.60
1982.....	10.07	9.15	-.92	1.36	1.65	.29	11.43	10.80	-.63
1983.....	10.04	9.15	-.89	1.29	1.65	.36	11.33	10.80	-.53
1984.....	9.97	9.15	-.82	1.24	1.65	.41	11.21	10.80	-.41
1985.....	9.90	9.50	-.40	1.20	1.90	.70	11.10	11.40	.30
Alternative II-B:									
1981.....	9.89	9.40	-.49	1.41	1.30	-.11	11.30	10.70	-.60
1982.....	10.08	9.15	-.93	1.36	1.65	.29	11.45	10.80	-.65
1983.....	10.15	9.15	-1.00	1.31	1.65	.34	11.45	10.80	-.65
1984.....	10.29	9.15	-1.14	1.28	1.65	.37	11.57	10.80	-.77
1985.....	10.36	9.50	-.88	1.25	1.90	.65	11.63	11.40	-.23
Alternative III:									
1981.....	9.81	9.40	-.41	1.40	1.30	-.10	11.21	10.70	-.51
1982.....	10.16	9.15	-1.01	1.38	1.65	.27	11.54	10.80	-.74
1983.....	10.54	9.15	-1.39	1.36	1.65	.29	11.90	10.80	-1.10
1984.....	10.61	9.15	-1.46	1.32	1.65	.33	11.93	10.80	-1.13
1985.....	10.75	9.50	-1.25	1.30	1.90	.60	12.04	11.40	-.64
"Worst-case":									
1981.....	9.88	9.40	-.48	1.40	1.30	-.10	11.29	10.70	-.59
1982.....	10.31	9.15	-1.16	1.39	1.65	.26	11.71	10.80	-.91
1983.....	10.84	9.15	-1.69	1.39	1.65	.26	12.24	10.80	-1.44
1984.....	10.94	9.15	-1.79	1.35	1.65	.30	12.29	10.80	-1.49
1985.....	10.96	9.50	-1.46	1.31	1.90	.59	12.27	11.40	-.87

See following page for footnotes.

¹Represents trust fund expenditures as a percentage of taxable payroll. Percentage takes into account (1) the lower contribution rate payable by the self-employed compared with combined employee-employer rate, (2) employee contributions subject to refund and (3) that the employer contribution is payable on only a portion of tips taxable as wages. For 1980, expenditures are adjusted to exclude payments to certain noninsured persons aged 72 and over with less than three quarters of coverage, costs of which are financed from the general fund of the Treasury. Similar adjustments are not made in the projection period, 1981 and later, because such payments are relatively small.

²Represents difference between tax contribution income and total outgo, as a percentage of taxable payroll, and therefore excludes the effects of other sources of income (principally interest income). Total income and outgo during 1980-85 are shown in Tables 12-14.

³Percentages for 1980, though based on actual experience, are preliminary and subject to revision.

Expenditures as a percentage of taxable payroll for years prior to 1981 are shown in Table 17.

TABLE 17.—COST RATES FOR THE OASI AND DI TRUST FUNDS FOR SELECTED CALENDAR YEARS 1950-80¹

Calendar year	OASI and DI Trust Funds, combined	OASI Trust Fund	DI Trust Fund
1950.....	1.17	1.17	—
1955.....	3.34	3.34	—
1960.....	5.89	5.59	0.30
1965.....	7.93	7.23	.70
1970.....	8.12	7.32	.81
1971.....	9.23	8.27	.97
1972.....	9.13	8.12	1.01
1973.....	9.68	8.58	1.09
1974.....	9.73	8.57	1.16
1975.....	10.65	9.29	1.36
1976.....	10.86	9.42	1.44
1977.....	10.97	9.47	1.50
1978.....	10.75	9.30	1.45
1979.....	10.31	8.95	1.36
1980.....	10.77	9.39	1.38

¹See footnote 1, Table 16. For 1976-80, percentages are preliminary and subject to revision. Expenditures in each year 1970-80 are adjusted to exclude payments to certain noninsured persons aged 72 and over with less than three quarters of coverage, the costs of which are financed from the general fund of the Treasury.

As stated previously, estimates of the operations of the trust funds during calendar years 1981-85 have been presented in the preceding tables of this section under five different sets of economic assumptions because of the uncertainty of future economic developments. Under the provisions of the Social Security Act, it is required that estimates of the expected operations and status of the trust funds during the next 5 fiscal years be shown in this report. Accordingly, detailed estimates of the expected operations and status of the trust funds during each fiscal year 1981-85 are shown in the remaining tables of this section for the two intermediate sets of assumptions (alternatives II-A and II-B) only. Similar detailed estimates are also shown on a calendar-year basis for 1981-85.

Data on the actual operations of the OASI Trust Fund for selected years during 1940-80, and estimates of the expected operations of the trust fund during 1981-85 under the intermediate set of assumptions, are shown in Tables 18 and 19 on fiscal and calendar year bases, respectively. Corresponding figures on the operations of the DI Trust Fund are shown in Tables 20 and 21. Operations of both trust funds combined are shown in Tables 22 and 23.¹

¹Data relating to the operations of the two trust funds for years not shown in Tables 18-23 are contained in earlier annual reports.

TABLE 18.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED FISCAL YEARS 1940-80 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1981-85 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS
[In millions]

Fiscal year ¹	Income					Disbursements						
	Total	Reimbursements from the general fund of Treasury for costs of—				Total	Benefit payments	Payments for vocational rehabilitation services	Administra- tive expenses	Transfers to Railroad Retirement Account	Net increase in fund	Fund at end of period
		Contributions, less refunds	Noncon- tributory credits for military service	Payments to non- insured persons aged 72 and over	Interest on invest- ments ²							
Past experience:												
1940.....	\$592	\$550	—	—	\$42	\$28	\$16	—	\$12	—	\$564	\$1,745
1945.....	1,434	1,310	—	—	124	267	240	—	27	—	1,167	6,613
1950.....	2,367	2,106	\$4	—	257	784	727	—	57	—	1,583	12,893
1955.....	5,525	5,087	—	—	438	4,427	4,333	—	103	-\$10	1,098	21,141
1960.....	10,360	9,843	—	—	517	11,073	10,270	—	202	600	-713	20,829
1965.....	16,443	15,857	—	—	586	15,962	15,226	—	300	436	482	20,180
1970.....	31,746	29,955	78	\$364	1,350	27,321	26,267	\$1	474	579	4,425	32,616
1975.....	58,757	56,017	140	307	2,292	56,676	54,939	8	848	982	2,081	39,948
1976.....	62,327	59,555	157	268	2,347	64,295	62,140	7	935	1,212	-1,968	37,980
July-Sept. 1976.....	16,186	16,106	—	—	80	17,111	16,876	2	234	—	-925	37,055
1977.....	71,796	68,895	378	236	2,287	73,479	71,271	8	993	1,208	-1,683	35,372
1978.....	76,811	74,047	385	228	2,151	81,205	78,524	6	1,086	1,589	-4,394	30,978
1979.....	86,893	84,358	384	230	1,920	90,128	87,592	17	1,072	1,448	-3,235	27,743
1980.....	100,051	97,608	393	164	1,886	103,228	100,615	11	1,160	1,442	-3,177	24,566
Estimated future experience:³												
Alternative II-A:												
1981.....	121,433	119,111	390	150	1,782	122,302	119,375	12	1,330	1,585	-869	23,696
1982 ⁴	130,693	128,642	534	140	1,377	140,403	136,980	12	1,533	1,878	-9,710	13,986
1983 ⁵	143,438	142,720	527	137	54	150,998	153,265	13	1,629	2,091	-13,560	427
1984 ⁶	156,731	157,533	531	120	-1,453	172,483	168,466	13	1,748	2,255	-15,752	-15,325
1985 ⁷	175,172	177,282	534	106	-2,750	187,744	183,523	14	1,866	2,341	-12,572	-27,897
Alternative II-B:												
1981.....	121,436	119,111	390	150	1,785	122,303	119,376	12	1,330	1,585	-867	23,699
1982 ⁴	130,640	128,571	534	140	1,395	140,537	137,114	12	1,533	1,878	-9,897	13,802
1983 ⁵	144,034	143,342	527	137	28	158,517	154,780	13	1,627	2,097	-14,483	-680
1984 ⁶	157,601	158,715	531	121	-1,766	178,234	174,175	14	1,759	2,286	-20,633	-21,313
1985 ⁷	176,835	179,749	536	107	-3,757	198,703	194,339	15	1,893	2,456	-22,068	-43,381

See following page for footnotes.

¹Under the Congressional Budget Act of 1974 (Public Law 93-344), fiscal years 1977 and later consist of the 12 months ending on September 30 of each year. The act further provides that the calendar quarter July-September 1976 is a period of transition from fiscal year 1976, which ended on June 30, 1976, to fiscal year 1977, which began on October 1, 1976.

²Interest on investments includes net profits on marketable investments. Beginning in 1967, administrative expenses incurred under the OASI program are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in interest on investments. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report.

³Includes \$2,700,000 as a single reimbursement for the estimated total costs of granting noncontributory wage credits to individuals who were interned during World War II at a place within the United States operated by the Federal Government for the interment of persons of Japanese ancestry.

⁴In interpreting the estimates, reference should be made to the underlying assumptions described in the preceding section and shown in Tables 10 and 11.

⁵Figures are theoretical. See text and footnote 2 in Table 12 for details.

TABLE 19.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED CALENDAR YEARS 1940-80 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1981-85 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS
[In millions]

Calendar year	Income					Disbursements					Fund at end of period	
	Total	Reimbursements from the general fund of Treasury for costs of—				Total	Benefit payments	Payments for vocational rehabilitation services	Administrative expenses	Transfers to Railroad Retirement Account		Net increase in fund
		Contributions, less refunds	Noncontributory credits for military service	Payments to non-insured persons aged 72 and over	Interest on investments							
Past experience:												
1940.....	\$368	\$325	—	—	\$43	\$62	\$35	—	\$26	—	\$306	\$2,031
1945.....	1,420	1,285	—	—	134	304	274	—	30	—	1,116	7,121
1950.....	2,928	2,667	\$4	—	257	1,022	961	—	61	—	1,905	13,721
1955.....	6,167	5,713	—	—	454	5,079	4,968	—	119	-\$7	1,087	21,663
1960.....	11,382	10,866	—	—	516	11,198	10,677	—	203	318	184	20,324
1965.....	16,610	16,017	—	—	593	17,501	16,737	—	328	436	-890	18,235
1970.....	32,220	30,256	78	\$371	1,515	29,848	28,796	\$2	471	579	2,371	32,454
1975.....	59,605	56,816	157	268	2,364	60,395	58,509	9	896	982	-790	36,987
1976.....	66,276	63,362	378	236	2,301	67,876	65,699	6	959	1,212	-1,600	35,388
1977.....	72,412	69,572	385	228	2,227	75,309	73,113	8	981	1,208	-2,897	32,491
1978.....	78,094	75,471	384	230	2,008	83,064	80,352	9	1,115	1,589	-4,971	27,520
1979.....	90,274	87,919	393	164	1,797	93,133	90,556	18	1,113	1,448	-2,860	24,660
1980.....	105,841	103,456	390	150	1,845	107,678	105,074	8	1,154	1,442	-1,837	22,824
Estimated future experience:												
Alternative II-A:												
1981.....	123,265	120,913	534	140	1,678	127,014	124,038	15	1,376	1,585	-3,749	19,075
1982.....	132,748	131,171	527	137	913	144,572	141,105	12	1,577	1,878	-11,824	7,250
1983.....	145,723	145,815	531	120	-743	160,820	157,058	13	1,658	2,091	-15,097	-7,846
1984.....	159,427	160,921	534	106	-2,134	176,299	172,251	13	1,780	2,255	-16,872	-24,719
1985.....	179,906	182,386	538	91	-3,109	191,431	187,180	14	1,896	2,341	-11,525	-36,243
Alternative II-B:												
1981.....	123,271	120,913	534	140	1,684	127,015	124,039	15	1,376	1,585	-3,744	19,080
1982.....	132,744	131,164	527	137	916	144,840	141,373	12	1,577	1,878	-12,096	6,984
1983.....	146,297	146,519	531	121	-874	163,328	159,563	13	1,655	2,097	-17,031	-10,047
1984.....	160,105	162,226	536	107	-2,764	183,271	179,175	14	1,796	2,286	-23,166	-33,213
1985.....	181,116	185,141	541	95	-4,661	203,847	199,449	15	1,927	2,456	-22,731	-55,944

Note: In interpreting the above, reference should be made to the footnotes in Table 18.

TABLE 20.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED FISCAL YEARS 1960-80 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1981-85 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS
[In millions]

Fiscal year ¹	Income				Disbursements						
	Total	Contributions, less refunds	Reimbursements from the general fund of Treasury for costs of noncontributory credits for military service	Interest on investments ²	Total	Benefit payments	Payments for vocational rehabilitation services	Administrative expenses	Transfers to Railroad Retirement Account	Net increase in fund	Fund at end of period
Past experience: ³											
1960	\$1,034	\$987	—	\$47	\$533	\$528	—	\$32	-\$27	\$501	\$2,167
1965	1,237	1,175	—	62	1,495	1,392	—	79	24	-257	2,007
1970	4,380	4,141	\$16	223	2,954	2,778	\$16	149	10	1,426	5,104
1975	7,920	7,356	52	512	7,982	7,630	71	253	29	-62	8,191
1976	8,355	7,797	90	468	9,606	9,222	92	266	26	-1,251	6,939
July-Sept. 1976	2,172	2,159	—	13	2,653	2,555	27	71	—	-481	6,459
1977	9,374	8,900	103	372	11,590	11,135	77	378	(*)	-2,215	4,243
1978	12,784	12,404	128	251	12,655	12,214	84	327	30	129	4,372
1979	15,196	14,750	142	305	13,944	13,428	79	407	30	1,252	5,624
1980	17,376	16,805	118	453	15,320	14,899	99	334	-12	2,056	7,680
Estimated future experience: ⁴											
Alternative I-A:											
1981	13,061	12,561	130	370	17,547	16,901	75	542	29	-4,486	3,194
1982	22,104	21,686	168	250	19,217	18,433	75	671	39	2,887	6,080
1983	26,524	25,745	168	611	20,412	19,623	79	707	3	6,112	12,192
1984	29,767	28,417	173	1,177	21,604	20,775	84	756	-10	8,163	20,355
1985	36,609	34,541	178	1,890	22,855	21,971	87	808	-12	13,754	34,109
Alternative II-B:											
1981	13,062	12,561	130	371	17,547	16,901	75	542	29	-4,485	3,195
1982	22,096	21,674	168	254	19,235	18,450	75	671	39	2,861	6,056
1983	26,654	25,859	168	627	20,616	19,825	81	707	3	6,038	12,094
1984	29,995	28,629	174	1,192	22,317	21,477	88	762	-10	7,678	19,772
1985	37,112	35,025	180	1,907	24,116	23,209	94	819	-7	12,996	32,769

¹See footnote 1 in Table 18.

²Interest on investments includes net profits on marketable investments. Beginning in 1967, administrative expenses incurred under the DI program are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in interest on investments. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report.

³The financial operations of the DI Trust Fund began in the latter half of fiscal year 1957.

⁴Less than \$500,000 was transferred from the Railroad Retirement Account to the DI Trust Fund.

⁵In interpreting the estimates, reference should be made to the underlying assumptions described in the preceding section and shown in Tables 10 and 11.

TABLE 21.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED CALENDAR YEARS 1960-80 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1981-85 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS
[In millions]

Calendar year	Income				Disbursements						Fund at end of period
	Total	Contributions, less refunds	Reimbursements from the general fund of Treasury for costs of noncontributory credits for military service	Interest on investments	Total	Benefit payments	Payments for vocational rehabilitation services	Administrative expenses	Transfers to Railroad Retirement Account	Net increase in fund	
Past experience:											
1960	\$1,063	\$1,010	—	\$53	\$600	\$568	—	\$38	-\$5	\$464	\$2,289
1965	1,247	1,188	—	59	1,687	1,573	—	90	24	-440	1,606
1970	4,774	4,481	\$16	277	3,259	3,067	\$18	164	10	1,514	5,614
1975	8,035	7,444	90	502	8,790	8,414	91	256	29	-754	7,354
1976	8,757	8,233	103	422	10,366	9,966	89	285	26	-1,609	5,745
1977	9,570	9,138	128	304	11,945	11,463	84	399	(¹)	-2,375	3,370
1978	13,810	13,413	142	256	12,954	12,513	86	325	30	856	4,226
1979	15,590	15,114	118	358	14,186	13,708	78	371	30	1,404	5,630
1980	13,871	13,255	130	485	15,872	15,437	78	368	-12	-2,001	3,629
Estimated future experience:											
Alternative II-A:											
1981	16,973	16,556	168	249	18,055	17,333	93	600	29	-1,082	2,547
1982	23,853	23,298	168	387	19,554	18,740	75	700	39	4,299	6,846
1983	27,354	26,304	173	877	20,701	19,899	80	718	3	8,853	13,499
1984	30,709	29,029	178	1,502	21,918	21,071	85	770	-10	8,793	22,292
1985	38,840	36,280	183	2,377	23,164	22,265	88	822	-12	15,676	37,969
Alternative II-B:											
1981	16,974	16,556	168	250	18,055	17,333	93	600	29	-1,081	2,548
1982	23,863	23,298	168	397	19,590	18,776	76	700	39	4,273	8,820
1983	27,503	26,434	174	895	21,028	20,224	83	718	3	6,475	13,295
1984	30,952	29,259	180	1,513	22,766	21,908	90	778	-10	8,186	21,482
1985	39,434	36,829	187	2,418	24,566	23,643	96	834	-7	14,868	36,349

¹Less than \$500,000 was transferred from the Railroad Retirement Account to the DI Trust Fund.

Note: In interpreting the above, reference should be made to the footnotes in Table 20.

TABLE 22.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED FISCAL YEARS 1960-80 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1981-85 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS
[In millions]

Fiscal year	Income					Disbursements						Funds at end of period
	Total	Contributions, less refunds	Reimbursements from the general fund of Treasury for costs of—	Payments to non-insured persons aged 72 and over	Interest on investments	Total	Benefit payments	Payments for vocational rehabilitation services	Administrative expenses	Transfers to Railroad Retirement Account	Net increase in funds	
Past experience:												
1960.....	\$11,394	\$10,830	—	—	\$564	\$11,606	\$10,798	—	\$234	\$574	-\$212	\$22,996
1965.....	17,681	17,032	—	—	648	17,456	16,818	—	379	459	224	22,187
1970.....	36,127	34,096	\$94	\$364	1,572	30,275	29,045	\$18	623	589	5,852	37,720
1975.....	66,677	63,374	192	307	2,804	64,658	62,469	79	1,101	1,010	2,018	48,138
1976.....	70,882	67,352	247	268	2,815	73,901	71,363	100	1,200	1,239	-3,219	44,919
July-Sept. 1976.....	18,359	18,265	—	—	94	19,764	19,431	29	304	—	-1,405	43,514
1977.....	81,170	77,794	481	236	2,659	85,068	82,406	85	1,370	1,208	-3,898	39,615
1978.....	89,595	86,451	513	228	2,403	93,860	90,738	91	1,413	1,618	-4,265	35,350
1979.....	102,089	99,108	526	230	2,225	104,072	101,020	96	1,479	1,477	-1,983	33,367
1980.....	117,427	114,413	511	164	2,339	118,548	115,514	110	1,494	1,430	-1,121	32,246
Estimated future experience:												
Alternative II-A:												
1981.....	134,494	131,672	521	150	2,152	139,850	136,276	86	1,873	1,614	-5,356	26,890
1982.....	152,797	150,328	702	140	1,627	159,620	155,413	86	2,204	1,917	-6,823	20,067
1983.....	189,962	188,465	695	137	665	177,410	172,888	92	2,336	2,094	-7,448	12,619
1984.....	186,498	185,950	704	120	-276	194,087	189,241	97	2,504	2,245	-7,589	5,030
1985.....	211,781	211,823	712	106	-860	210,599	205,494	101	2,674	2,329	1,182	6,212
Alternative II-B:												
1981.....	134,498	131,672	521	150	2,156	139,850	136,277	86	1,873	1,614	-5,352	26,894
1982.....	152,736	150,245	702	140	1,649	159,771	155,564	86	2,204	1,917	-7,035	19,859
1983.....	170,688	169,201	695	137	655	179,133	174,605	94	2,334	2,100	-8,445	11,414
1984.....	187,596	187,344	705	121	-574	200,551	195,652	102	2,521	2,276	-12,955	-1,541
1985.....	213,747	214,774	716	107	-1,850	222,618	217,548	109	2,712	2,449	-9,071	-10,612

Note: In interpreting the above, reference should be made to the footnotes in Table 18.

TABLE 23.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED CALENDAR YEARS 1960-80 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1981-85 UNDER THE INTERMEDIATE SETS OF ASSUMPTIONS
[In millions]

Calendar year	Income					Disbursements						Net increase in funds	Funds at end of period
	Total	Contributions, less refunds	Reimbursements from the general fund of Treasury for costs of—			Total	Benefit payments	Payments for vocational rehabilitation services	Administrative expenses	Transfers to Railroad Retirement Account			
			Noncontributory credits for military service	Payments to non-insured persons aged 72 and over	Interest on investments								
Past experience:													
1960.....	\$12,445	\$11,876	—	—	\$569	\$11,798	\$11,245	—	\$240	\$314	\$647	\$22,613	
1965.....	17,857	17,205	—	—	651	19,187	18,311	—	418	459	-1,331	19,841	
1970.....	36,993	34,737	\$94	\$371	1,791	33,108	31,863	\$20	635	589	3,886	38,068	
1971.....	40,908	38,343	187	351	2,027	38,542	37,171	26	719	626	2,366	40,434	
1972.....	45,622	42,886	189	337	2,208	43,281	41,595	30	907	749	2,341	42,775	
1973.....	54,787	51,907	191	303	2,386	53,148	51,459	49	837	802	1,639	44,414	
1974.....	62,066	58,907	192	307	2,660	60,593	58,521	59	1,082	931	1,472	45,886	
1975.....	67,640	64,259	247	268	2,866	69,184	66,923	99	1,152	1,010	-1,544	44,342	
1976.....	75,034	71,595	481	236	2,722	78,242	75,665	95	1,244	1,239	-3,209	41,139	
1977.....	81,982	78,710	513	228	2,531	87,254	84,576	92	1,379	1,208	-5,272	35,861	
1978.....	91,904	88,883	526	230	2,264	96,018	92,865	95	1,439	1,618	-4,115	31,746	
1979.....	105,864	103,034	511	164	2,155	107,320	104,263	96	1,483	1,477	-1,456	30,291	
1980.....	119,712	116,711	521	150	2,330	123,550	120,512	86	1,522	1,430	-3,838	26,453	
Estimated future experience:													
Alternative II-A:													
1981.....	140,238	137,469	702	140	1,927	145,069	141,371	108	1,976	1,614	-4,831	21,622	
1982.....	156,601	154,469	695	137	1,300	164,126	159,845	87	2,277	1,917	-7,525	14,096	
1983.....	173,077	172,119	704	120	134	181,521	176,957	93	2,376	2,094	-8,444	5,653	
1984.....	190,136	189,950	712	106	-632	198,215	193,322	98	2,550	2,245	-8,079	-2,426	
1985.....	218,746	218,666	721	91	-732	214,594	209,445	102	2,718	2,329	4,152	1,725	
Alternative II-B:													
1981.....	140,245	137,469	702	140	1,934	145,070	141,372	108	1,976	1,614	-4,825	21,628	
1982.....	156,607	154,462	695	137	1,313	164,430	160,148	88	2,277	1,917	-7,823	13,804	
1983.....	173,800	172,953	705	121	21	184,356	179,787	96	2,373	2,100	-10,556	3,248	
1984.....	191,057	191,485	716	107	-1,251	206,036	201,083	104	2,574	2,276	-14,979	-11,731	
1985.....	220,550	221,970	728	95	-2,243	228,413	223,092	111	2,761	2,449	-7,863	-19,595	

Note: In interpreting the above, reference should be made to the footnotes in Table 18.

The estimates in the tables in this section include the effects of various provisions to which reference has been made in earlier sections—namely, the provisions for (1) reimbursements to the trust funds from the general fund of the Treasury for the costs of granting noncontributory credits for military service and for the costs of monthly payments to certain noninsured persons aged 72 and over and (2) financial interchanges between the Railroad Retirement Account and the trust funds.

Coverage agreements with State and local governments

State and local government systems may terminate the agreements under which Social Security coverage is provided for their public employees. Such coverage is available only on a group voluntary basis through agreements between the Secretary of Health and Human Services and the individual States. After coverage of the employees of a State, or of a political subdivision of the State, has been in effect for at least 5 years, the State may give notice of its intention to terminate the coverage of such employees. The termination of coverage becomes effective at the end of any specified calendar year, as long as at least 2 years have passed after such notice is given. The State may withdraw the notice of termination before it becomes effective. However, once the termination becomes effective, it is irrevocable and the same group cannot be covered under Social Security again.

In the past few years, there has been some increase in the number of terminations of coverage among State and local government employees. The total number of employees becoming covered under new agreements in each year through 1976 was larger than the number of employees for whom coverage was terminated during the year. However, in each of the last 4 years, the number of State and local government employees for whom coverage was terminated was somewhat larger than the number of employees becoming covered under new agreements. Notices have also been given of the intention to terminate coverage on the part of a larger number of State and local government employees in each of the next 2 years than the number of employees becoming covered under new agreements each year. The filing of such a notice does not necessarily mean that coverage will be terminated because, as noted above, the notice may be withdrawn during the period before the termination becomes effective.

The termination of coverage for any large number of State or local government employees would have an adverse effect on the status of the trust funds, especially in the short range. In fiscal year 1980, tax contributions received by the combined OASI and DI Trust Funds from workers employed by State and local governments and from such employers under all of the coverage agreements in effect amounted to \$13.1 billion, or about 11 percent of total contributions in the year. The estimates presented in this report do not reflect the effects of (1) future terminations of coverage which may become effective as a result of such notices that have been filed and that are still pending, or that may be filed in the future, or (2) future agreements that would bring additional groups of public employees under covered employment.

Study of extension of coverage

The Social Security Amendments of 1977 directed the Secretary of Health and Human Services to undertake a study of the feasibility and desirability of covering Federal employees, State and local government employees, and employees of nonprofit organizations under the OASDI and HI programs on a mandatory basis. The study was conducted in consultation with the Secretary of the Treasury, the Director of the Office of Management and Budget, and the Director of the Office of Personnel Management. The results of the study were contained in a report released in March 1980. The report describes and evaluates various policy opinions concerning universal coverage, but does not advocate a particular alternative.

D. ACTUARIAL ANALYSIS OF BENEFIT DISBURSEMENTS FROM THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES

(Required by sec. 201(c) of the Social Security Act)

Effective January 1957, monthly benefits have been payable from the OASI Trust Fund to disabled children aged 18 and over of retired and deceased workers in those cases in which the disability of the child has continued since childhood. Effective February 1968, reduced monthly benefits have been payable from this trust fund to disabled widows and widowers beginning at age 50.

On December 31, 1980, about 519,000 persons were receiving monthly benefits with respect to disability from the OASI Trust Fund. In addition to disabled beneficiaries, this total includes 43,000 mothers and fathers. These mothers and fathers (wives or husbands under age 65 of retired-worker beneficiaries and widows or widowers of deceased insured workers) met all other qualifying requirements and were receiving full-rate (i.e., not reduced-for-age) benefits solely because they had at least one disabled-child beneficiary in their care. Benefits paid from this trust fund to persons receiving benefits with respect to disability totaled \$1,223 million in calendar year 1980. Similar figures are presented in Table 24 to show the experience in selected calendar years during 1960-80. Figures relating to past experience for years not shown are contained in the 1976 Annual Report.

TABLE 24.—BENEFITS PAYABLE FROM THE OASI TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES, SELECTED CALENDAR YEARS 1960-85
[Beneficiaries in thousands; benefit payments in millions]

Calendar year	Disabled beneficiaries, end of year			Amount of benefit payments ¹		
	Total	Children ²	Widows and widowers	Total	Children ²	Widows and widowers ³
Past experience:						
1960.....	117	117	—	\$59	\$59	—
1965.....	214	214	—	134	134	—
1970.....	316	281	36	301	260	\$41
1971.....	338	298	40	363	307	56
1972.....	360	314	46	409	343	66
1973.....	381	331	51	492	417	75
1974.....	409	355	53	567	479	88
1975.....	435	376	59	664	560	104
1976.....	457	395	62	748	637	111
1977.....	480	414	65	868	748	120
1978.....	494	430	64	950	823	127
1979.....	507	445	62	1,071	946	125
1980.....	519	460	59	1,223	1,097	126
Estimated future experience:⁴						
Alternative II-A:						
1981.....	528	470	58	1,436	1,306	130
1982.....	535	479	56	1,525	1,489	136
1983.....	541	486	55	1,798	1,660	139
1984.....	546	493	54	1,953	1,814	139
1985.....	551	498	52	2,099	1,960	139

TABLE 24.—BENEFITS PAYABLE FROM THE OASI TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES, SELECTED CALENDAR YEARS 1960-85 (Cont.)
 [Beneficiaries in thousands; benefit payments in millions]

Calendar year	Disabled beneficiaries, end of year			Amount of benefit payments ¹		
	Total	Children ²	Widows and widowers	Total	Children ²	Widows and widowers ³
Estimated future experience: ⁴ (Cont.)						
Alternative II-B:						
1981	528	470	58	1,436	1,306	130
1982	535	479	56	1,628	1,492	136
1983	541	486	55	1,828	1,687	141
1984	546	493	54	2,034	1,889	145
1985	551	498	52	2,241	2,092	149

¹Beginning in 1966, includes payments for vocational rehabilitation services.

²Reflects the effect of including certain mothers and fathers. (See text.)

³Reflects the offsetting effect of lower benefits payable to disabled widows and widowers who continue to receive benefits past age 60 (62, for disabled widowers, prior to 1973) as compared to the higher nondisabled widow's (and widower's) benefits that would otherwise be payable.

⁴The estimates are based on the alternative II-A and II-B economic assumptions and reflect the resulting assumed changes under the automatic increase provisions, as described in an earlier section.

Table 24 also shows the estimated future experience in calendar years 1981-85, under the alternative II-A and II-B assumptions described in an earlier section. Total benefit payments from the OASI Trust Fund with respect to disabled beneficiaries are estimated to increase from \$1,436 million in calendar year 1981 to \$2,099 million in calendar year 1985, under the alternative II-A assumptions, and to \$2,241 million in calendar year 1985 under the alternative II-B assumptions.

In calendar year 1980, benefit payments (including expenditures for vocational rehabilitation services) with respect to disabled persons from the OASI Trust Fund and from the DI Trust Fund (including payments from the latter fund to all children and spouses of disabled-worker beneficiaries) totaled \$16,738 million, of which \$1,223 million, or 7.3 percent, represented payments from the OASI Trust Fund. Similar figures for selected calendar years during 1960-80 and estimates for calendar years 1981-85, under alternative II-A and II-B economic assumptions, are presented in Table 25. Figures relating to past experience for years not shown in Table 25 are contained in the 1976 Annual Report.

TABLE 25.—BENEFIT PAYMENTS UNDER THE OASDI PROGRAM WITH RESPECT TO DISABLED BENEFICIARIES, BY TRUST FUND, SELECTED CALENDAR YEARS 1960-85
[Amounts in millions]

Calendar year	Benefit payments ¹ from —			
	Total ¹	DI Trust Fund ²	Amount ³	OASI Trust Fund As a percentage of total benefit pay- ments with respect to disabled beneficiaries
Past experience:				
1960	\$627	\$568	\$59	9.4
1965	1,707	1,573	134	7.9
1970	3,386	3,085	301	8.9
1971	4,146	3,783	363	8.8
1972	4,911	4,502	409	8.3
1973	6,256	5,764	492	7.9
1974	7,524	6,957	567	7.5
1975	9,169	8,505	664	7.2
1976	10,803	10,055	748	6.9
1977	12,415	11,547	868	7.0
1978	13,549	12,599	950	7.0
1979	14,857	13,786	1,071	7.2
1980	16,738	15,515	1,223	7.3
Estimated future experience:⁴				
Alternative II-A:				
1981	18,862	17,426	1,436	7.6
1982	20,440	18,815	1,625	8.0
1983	21,777	19,979	1,798	8.3
1984	23,109	21,156	1,953	8.5
1985	24,452	22,353	2,099	8.6
Alternative II-B:				
1981	18,862	17,426	1,436	7.6
1982	20,480	18,852	1,628	7.9
1983	22,135	20,307	1,828	8.3
1984	24,032	21,998	2,034	8.5
1985	25,980	23,739	2,241	8.6

¹Beginning in 1966, includes payments for vocational rehabilitation services.

²Benefit payments to disabled workers and their children and spouses.

³Benefit payments to disabled children aged 18 and over, to certain mothers and fathers (see text), and to disabled widows and widowers (see footnote 3, Table 24).

⁴The estimates are based on the alternative II-A and II-B assumptions and reflect the resulting assumed changes under the automatic increase provisions, as described in an earlier section.

E. ACTUARIAL STATUS OF THE TRUST FUNDS

Historically, the actuarial status of the OASDI program has been measured by the actuarial balance, as described earlier in this section. In recent reports, medium-range and long-range actuarial balances have been shown. They have been computed, respectively, over the 25-year and 75-year periods beginning with the calendar year of issuance of the report. In accordance with this practice, the statements of the medium-range and long-range actuarial statuses contained in this report pertain to the periods 1981-2005 and 1981-2055, respectively. Also presented are actuarial balances for the second and third 25-year periods within the 75-year period. As described earlier in this section, year-by-year time series or 25-year averages may reveal patterns or problems which would be masked by a single 75-year average.

In addition to the medium-range and long-range actuarial balances, two other indicators of the financial condition of the trust funds are shown in this report. One is the time series of projected cost rates (annual cost, or outgo, expressed as a percentage of taxable payroll), and the other is the time series of projected trust fund ratios (assets at the beginning of the year expressed as a percentage of outgo during the year). These indicators were discussed in concept earlier in this section, and estimates of their numerical values are discussed later.

The cost rates are useful in establishing tax rate schedules according to the current-cost method of financing described earlier. However, the cost rates do not reflect the cost of increasing the trust fund ratio from its current level, or even maintaining it at that level. Therefore, any consideration of alternative financing provisions must also take into account the desired level of the trust fund ratio and the time by which that level is to be attained. The tax schedule can then be designed so that the projected annual tax income not only covers the projected annual outgo, but also produces the desired trust fund ratios. For example, if it were considered appropriate to increase the combined OASI and DI Trust Funds ratio to 50 percent of the projected annual outgo by the end of the 75-year period, under either alternative II-A or II-B, it would be necessary to raise the tax rate (the combined employee-employer rate, as discussed earlier) by an additional 0.07 percent of taxable payroll per year above the amount needed to cover the outgo.

As discussed earlier, the cost estimates are sensitive to changes in many economic and demographic assumptions upon which they are based. However, the degree of sensitivity to change varies considerably among the various assumptions. For example, variations in projected fertility rates have little effect on the medium-range cost estimates, because almost all covered workers and beneficiaries projected for this period were born prior to the start of the projection period. However, variations in economic factors such as wage and price increases have significant effects on the estimates, even in the medium-range period. In general, the degree of confidence that can be placed in the assumptions and estimates is greater for the medium-range period than for the long-range period. Nonetheless, even over the medium-range period, the cost projections are only an indication of the trend and general range of the actual cost of the program. Appendix B contains a more detailed

discussion of the effects on the cost estimates of varying selected economic and demographic assumptions.

Table 26 presents a comparison of the estimated cost rates under alternatives II-A and II-B with the OASDI tax rates. The table shows that, under alternative II-A, after 1984, the OASDI system is projected to have a surplus of tax income over outgo in each year of the medium-range period and then beyond to about 2015, after which the system is projected to have annual deficits. These deficits are projected to grow rapidly to a peak of 3.64 percent of taxable payroll in 2035, after which they level off at approximately 3.3 percent during the last 15 years of the long-range projection period. This pattern of annual surpluses and deficits produces a medium-range actuarial surplus of 1.27 percent of taxable payroll and a long-range actuarial deficit of 0.93 percent. Notwithstanding the medium-range surplus, the deficits in the early years are sufficient to exhaust the OASI Trust Fund near the end of 1982 and the combined OASI and DI funds around the beginning of 1983, as shown elsewhere in this section.

TABLE 26.—ESTIMATED COST RATES OF THE OASDI SYSTEM UNDER ALTERNATIVES II-A AND II-B AND COMPARISON WITH TAX RATES, CALENDAR YEARS 1981-2055
[As percent of taxable payroll]

Calendar year	Estimated cost rate			Tax rate	Difference ¹
	OASI	DI	Total		
Alternative II-A:					
1981	9.89	1.41	11.30	10.70	-0.60
1982	10.07	1.36	11.43	10.80	-.63
1983	10.04	1.29	11.33	10.80	-.53
1984	9.97	1.24	11.21	10.80	-.41
1985	9.90	1.20	11.10	11.40	.30
1986	9.78	1.16	10.94	11.40	.46
1987	9.69	1.14	10.83	11.40	.57
1988	9.66	1.14	10.80	11.40	.60
1989	9.59	1.14	10.73	11.40	.67
1990	9.55	1.14	10.69	12.40	1.71
1991	9.52	1.14	10.66	12.40	1.74
1992	9.50	1.15	10.64	12.40	1.76
1993	9.47	1.15	10.62	12.40	1.78
1994	9.44	1.15	10.59	12.40	1.81
1995	9.43	1.16	10.58	12.40	1.82
1996	9.33	1.19	10.52	12.40	1.88
1997	9.25	1.21	10.46	12.40	1.94
1998	9.17	1.24	10.40	12.40	2.00
1999	9.08	1.26	10.34	12.40	2.06
2000	8.99	1.28	10.27	12.40	2.13
2001	8.94	1.31	10.25	12.40	2.15
2002	8.91	1.34	10.25	12.40	2.15
2003	8.89	1.37	10.26	12.40	2.14
2004	8.87	1.40	10.27	12.40	2.13
2005	8.87	1.42	10.29	12.40	2.11
2010	9.32	1.56	10.87	12.40	1.53
2015	10.47	1.65	12.12	12.40	.28
2020	11.96	1.68	13.64	12.40	-1.24
2025	13.41	1.63	15.05	12.40	-2.65
2030	14.29	1.56	15.85	12.40	-3.45
2035	14.51	1.53	16.04	12.40	-3.64
2040	14.25	1.55	15.80	12.40	-3.40
2045	14.06	1.58	15.64	12.40	-3.24
2050	14.11	1.58	15.68	12.40	-3.28
2055	14.22	1.56	15.77	12.40	-3.37
25-year averages:					
1981-2005	9.43	1.24	10.67	11.94	1.27
2006-2030	11.46	1.61	13.07	12.40	-.67
2031-2055	14.23	1.56	15.79	12.40	-3.39
75-year average:					
1981-2055	11.71	1.47	13.17	12.25	-.93

TABLE 26.—ESTIMATED COST RATES OF THE OASDI SYSTEM UNDER ALTERNATIVES II-A AND II-B AND COMPARISON WITH TAX RATES, CALENDAR YEARS 1981-2055 (Cont.)
[As percent of taxable payroll]

Calendar year	Estimated cost rate			Tax rate	Difference ¹
	OASI	DI	Total		
Alternative II-B:					
1981	9.89	1.41	11.30	10.70	-.60
1982	10.08	1.36	11.45	10.80	-.65
1983	10.15	1.31	11.45	10.80	-.65
1984	10.29	1.28	11.57	10.80	-.77
1985	10.38	1.25	11.63	11.40	-.23
1986	10.49	1.23	11.73	11.40	-.33
1987	10.57	1.22	11.79	11.40	-.39
1988	10.63	1.23	11.86	11.40	-.46
1989	10.65	1.23	11.88	11.40	-.48
1990	10.64	1.23	11.86	12.40	.54
1991	10.61	1.22	11.83	12.40	.57
1992	10.57	1.22	11.80	12.40	.60
1993	10.53	1.22	11.75	12.40	.65
1994	10.48	1.23	11.71	12.40	.69
1995	10.47	1.23	11.70	12.40	.70
1996	10.35	1.26	11.61	12.40	.79
1997	10.22	1.28	11.50	12.40	.90
1998	10.09	1.30	11.39	12.40	1.01
1999	9.95	1.32	11.27	12.40	1.13
2000	9.85	1.34	11.19	12.40	1.21
2001	9.80	1.37	11.16	12.40	1.24
2002	9.74	1.39	11.13	12.40	1.27
2003	9.68	1.42	11.10	12.40	1.30
2004	9.64	1.45	11.09	12.40	1.31
2005	9.61	1.48	11.09	12.40	1.31
2010	10.00	1.61	11.62	12.40	.78
2015	11.16	1.71	12.87	12.40	-.47
2020	12.69	1.74	14.43	12.40	-2.03
2025	14.23	1.69	15.92	12.40	-3.52
2030	15.18	1.61	16.79	12.40	-4.39
2035	15.45	1.58	17.03	12.40	-4.63
2040	15.22	1.60	16.82	12.40	-4.42
2045	15.05	1.64	16.68	12.40	-4.28
2050	15.11	1.63	16.74	12.40	-4.34
2055	15.21	1.61	16.82	12.40	-4.42
25-year averages:					
1981-2005	10.21	1.30	11.51	11.94	.43
2006-2030	12.21	1.66	13.87	12.40	-1.47
2031-2055	15.20	1.61	16.81	12.40	-4.41
75-year average:					
1981-2055	12.54	1.52	14.07	12.25	-1.82

¹The tax rate minus the OASDI cost rate. Positive differences are referred to as surpluses, and negative differences, as deficits.

Note: The definitions of alternatives II-A and II-B, cost rate, tax rate, and taxable payroll are presented in the text.

This table also shows that, under alternative II-B, annual OASDI surpluses are not projected until 1990. Annual surpluses are projected thereafter until about 2015, after which deficits are projected for each year. These projected deficits grow more rapidly than under alternative II-A—to a peak of 4.63 percent of taxable payroll in 2035, after which they level off at around 4.4 percent during the last 15 years of the long-range projection period. This pattern of annual surpluses and deficits produces a medium-range actuarial surplus of 0.43 percent of taxable payroll and a long-range actuarial deficit of 1.82 percent. The deficits projected under alternative II-B in the early years are sufficient to exhaust the OASI Trust Fund and the combined OASI and DI Trust Funds near the end of 1982 (again, as shown elsewhere in this section).

The long-range actuarial deficits under alternatives II-A and II-B are about 7 and 13 percent of the estimated average long-range cost rates (of 13.17 and 14.07 percent of taxable payroll), respectively. Because the deficit in each case exceeds 5 percent of the estimated average cost rate

(that is, exceeds 0.66 and 0.70 percent of taxable payroll, respectively), the system is not regarded as being in close actuarial balance over the long-range period under either alternative.

The reason for the rapid increase in the estimated cost rates after the medium-range period (under either alternative) is that, at that time, the projected number of beneficiaries is increasing faster than the projected number of covered workers. This occurs because the relatively large number of persons born during the period from the end of World War II through the early 1960's (when fertility rates were high) will reach retirement age, and begin to receive benefits, while the relatively small number of persons born during the recent past, current, and projected periods of low fertility rates will comprise the labor force. During the last years of the projection period, the projected OASI cost rates generally stabilize at a fairly high level, thereby reflecting, in part, a stabilization in the relationship between the number of beneficiaries and the number of covered workers. Such stabilization results from the relatively smooth pattern of the assumed fertility rates. A comparison of the numbers of beneficiaries and covered workers, both historically and as projected under all four long-range alternatives, is shown in Table 27.

TABLE 27.—COMPARISON OF OASDI BENEFICIARIES AND COVERED WORKERS UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1945-2055

Calendar year	Covered workers ¹ (in thousands)	Beneficiaries ² (in thousands)			Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
		OASI	DI	Total		
1945.....	46,390	1,106	—	1,106	41.9	2
1950.....	48,280	2,930	—	2,930	16.5	6
1955.....	65,200	7,563	—	7,563	8.6	12
1960.....	72,530	13,740	522	14,262	5.1	20
1965.....	80,680	18,509	1,648	20,157	4.0	25
1970.....	93,090	23,185	2,568	25,753	3.6	28
1975.....	100,200	27,244	4,125	31,369	3.2	31
1980.....	115,110	30,384	4,734	35,118	3.3	31
Alternative I:						
1981.....	115,962	31,072	4,697	35,769	3.2	31
1985.....	127,820	33,697	4,475	38,172	3.3	30
1990.....	137,654	36,886	4,538	41,424	3.3	30
1995.....	140,702	38,281	4,603	42,884	3.3	30
2000.....	146,317	39,280	5,122	44,402	3.3	30
2005.....	151,773	40,814	5,394	46,208	3.3	30
2010.....	156,133	44,061	5,974	50,035	3.1	32
2015.....	158,994	49,322	6,356	55,678	2.9	35
2020.....	161,418	55,549	6,527	62,076	2.6	38
2025.....	164,581	61,716	6,431	68,147	2.4	41
2030.....	169,142	65,608	6,217	71,825	2.4	42
2035.....	174,339	67,055	6,216	73,271	2.4	42
2040.....	180,178	66,564	6,470	73,034	2.5	41
2045.....	186,370	66,457	6,852	73,309	2.5	39
2050.....	192,869	67,627	7,105	74,732	2.6	39
2055.....	199,652	69,365	7,257	76,622	2.6	38
Alternative II-A:						
1981.....	115,748	31,072	4,697	35,769	3.2	31
1985.....	125,838	33,786	4,519	38,305	3.3	30
1990.....	134,556	37,260	4,750	42,010	3.2	31
1995.....	138,153	39,076	5,014	44,090	3.1	32
2000.....	143,732	40,504	5,690	46,194	3.1	32
2005.....	148,714	42,449	6,353	48,802	3.0	33
2010.....	152,055	46,109	7,057	53,166	2.9	35
2015.....	153,475	51,834	7,509	59,343	2.6	39
2020.....	153,940	58,624	7,703	66,327	2.3	43
2025.....	154,550	65,470	7,561	73,031	2.1	47
2030.....	155,730	70,062	7,250	77,312	2.0	50
2035.....	157,554	72,222	7,173	79,395	2.0	50
2040.....	159,683	72,368	7,352	79,720	2.0	50
2045.....	161,755	72,796	7,628	80,424	2.0	50
2050.....	163,708	74,016	7,721	81,737	2.0	50
2055.....	165,682	75,305	7,697	83,002	2.0	50

TABLE 27.—COMPARISON OF OASDI BENEFICIARIES AND COVERED WORKERS UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1945-2055 (Cont.)

Calendar year	Covered workers ¹ (in thousands)	Beneficiaries ² (in thousands)			Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
		OASI	DI	Total		
Alternative II-B:						
1981	115,738	31,072	4,697	35,769	3.2	31
1985	124,998	33,724	4,519	38,243	3.3	31
1990	133,873	37,067	4,750	41,817	3.2	31
1995	137,438	39,073	5,014	44,087	3.1	32
2000	143,481	40,502	5,686	46,188	3.1	32
2005	148,446	42,440	6,349	48,789	3.0	33
2010	151,784	46,102	7,056	53,158	2.9	35
2015	153,207	51,824	7,506	59,330	2.6	39
2020	153,679	58,604	7,697	66,301	2.3	43
2025	154,287	65,468	7,558	73,026	2.1	47
2030	155,465	70,046	7,247	77,293	2.0	50
2035	157,284	72,214	7,170	79,384	2.0	50
2040	159,410	72,368	7,350	79,718	2.0	50
2045	161,483	72,780	7,626	80,406	2.0	50
2050	163,429	74,011	7,720	81,731	2.0	50
2055	165,399	75,307	7,696	83,003	2.0	50
Alternative III:						
1981	115,599	31,072	4,696	35,768	3.2	31
1985	123,181	33,827	4,560	38,387	3.2	31
1990	131,608	37,699	4,958	42,657	3.1	32
1995	135,537	40,694	5,355	46,049	2.9	34
2000	141,172	43,071	6,175	49,246	2.9	35
2005	145,630	45,978	7,433	53,411	2.7	37
2010	147,754	50,678	8,268	58,946	2.5	40
2015	147,402	57,516	8,797	66,313	2.2	45
2020	145,415	65,573	9,005	74,578	1.9	51
2025	142,871	73,945	8,794	82,739	1.7	58
2030	140,452	80,118	8,344	88,462	1.6	63
2035	138,390	83,941	8,135	92,076	1.5	67
2040	136,364	85,739	8,168	93,907	1.5	69
2045	133,991	87,671	8,240	95,911	1.4	72
2050	131,247	89,858	8,056	97,914	1.3	75
2055	128,446	91,238	7,739	98,977	1.3	77

¹Workers with taxable earnings at some time during the year.

²Beneficiaries with monthly benefits in current-payment status as of June 30.

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text.

Table 27 shows that, even under alternative I, which includes high fertility rates and low mortality improvement, the number of covered workers per beneficiary declines from the 1980 level of 3.3 to an ultimate level of 2.6. Under alternative III, which includes low fertility rates and high mortality improvement, the decline is far more dramatic, down to about 1.3 workers per beneficiary. Under alternatives II-A and II-B, the decline is to about 2.0 workers per beneficiary. The implication of this is that in the future there will be relatively fewer workers paying taxes and more retired persons receiving benefits. The impact that this will have on OASDI financing can be readily assessed by looking at the projected number of beneficiaries per hundred workers. Under alternatives I, II-A, II-B, and III, this rises to levels at the end of the long-range period of 38, 50, 50, and 77, respectively. These levels are, respectively, about 23, 61, 61, and 148 percent higher than the 1980 level of 31 beneficiaries per 100 covered workers. The implication of this result is that, in the absence of other program or financing changes, for the system to remain viable, the current OASDI tax rate would need to be increased to significantly higher levels simply because of the demographic shift.

Table 28 shows the OASDI cost rates estimated under each of the four long-range alternatives. For ease of comparison, it also shows the scheduled tax rates. Under alternatives I and II-A, after 1982, the cost rates generally decline slowly throughout the medium-range period. Under alternative II-B, the cost rates follow a similar pattern, except that the early peak occurs in 1989 instead of 1982. Under alternative III, the cost rates peak at 12.98 percent in 1996 and decline to 12.82 percent in 1999 before beginning to rise again. After the medium-range period, under each alternative, the cost rates increase rapidly (because of the demographic shift discussed earlier). Under alternatives I, II-A, and II-B, the cost rates peak around 2035, while under alternative III, they are still increasing at the end of the long-range projection period.

The OASDI cost rates under alternatives I and III differ by about 16 percentage points toward the end of the long-range period, although by only about 4 percentage points near the end of the medium-range period. The highest cost rate occurring in the long-range period varies from 12.84 percent under alternative I to 27.78 percent under alternative III, whereas the highest during the medium-range period varies within a much narrower band—from 11.28 to 13.09 percent. The average long-range cost rate for the OASDI program varies from 10.99 percent of taxable payroll under alternative I to 18.50 percent under alternative III, while the average medium-range cost rate varies much less—from 9.99 to 12.55 percent.

TABLE 28.—TAX RATES AND ESTIMATED COST RATES OF THE OASDI SYSTEM UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1981-2055
[As percent of taxable payroll]

Calendar year	Tax rate	Cost rate by alternative			
		I	II-A	II-B	III
1981	10.70	11.24	11.30	11.30	11.21
1982	10.80	11.28	11.43	11.45	11.54
1983	10.80	11.13	11.33	11.45	11.90
1984	10.80	11.01	11.21	11.57	11.93
1985	11.40	10.85	11.10	11.63	12.04
1986	11.40	10.69	10.94	11.73	12.17
1987	11.40	10.40	10.83	11.79	12.28
1988	11.40	10.37	10.80	11.86	12.39
1989	11.40	10.15	10.73	11.88	12.47
1990	12.40	10.12	10.69	11.86	12.57
1991	12.40	10.11	10.66	11.83	12.67
1992	12.40	10.02	10.64	11.80	12.74
1993	12.40	9.92	10.62	11.75	12.79
1994	12.40	9.84	10.59	11.71	12.84
1995	12.40	9.76	10.58	11.70	12.95
1996	12.40	9.64	10.52	11.61	12.98
1997	12.40	9.55	10.46	11.50	12.94
1998	12.40	9.45	10.40	11.39	12.89
1999	12.40	9.36	10.34	11.27	12.82
2000	12.40	9.26	10.27	11.19	12.82
2001	12.40	9.19	10.25	11.16	12.89
2002	12.40	9.15	10.25	11.13	12.92
2003	12.40	9.11	10.26	11.10	12.96
2004	12.40	9.09	10.27	11.09	13.01
2005	12.40	9.08	10.29	11.09	13.09
2010	12.40	9.45	10.87	11.62	14.01
2015	12.40	10.42	12.12	12.87	15.82
2020	12.40	11.56	13.64	14.43	18.17
2025	12.40	12.52	15.05	15.92	20.70
2030	12.40	12.84	15.85	16.79	22.65
2035	12.40	12.63	16.04	17.03	23.98
2040	12.40	12.07	15.80	16.82	24.84
2045	12.40	11.62	15.64	16.68	25.78
2050	12.40	11.42	15.68	16.74	26.86
2055	12.40	11.34	15.77	16.82	27.78
25-year averages:					
1981-2005	11.94	9.99	10.67	11.51	12.55
2006-2030	12.40	11.07	13.07	13.87	17.50
2031-2055	12.40	11.92	15.79	16.81	25.43
75-year average:					
1981-2055	12.25	10.99	13.17	14.07	18.50

Note: The definitions of alternatives I, II-A, II-B, and III, cost rate, tax rate, and taxable payroll are presented in the text.

It is important to recognize that actual future OASDI costs may not necessarily fall within the range resulting under alternatives I and III. Nonetheless, since alternatives I and III constitute a reasonably wide range of economic and demographic conditions, the resulting cost estimates delineate a reasonable range of possibilities for future program costs.

Table 29 shows a comparison of the cost as a percentage of Gross National Product (GNP) estimated under alternatives I, II-A, II-B, and III. There are various similarities between the patterns of these cost percentages and the cost rates shown in the previous table. Under alternatives I, II-A, and II-B, the percentages, after reaching peaks at different points in the early years, generally decline slowly throughout the medium-range period to levels of 3.73 to 4.38 percent. Under alternative III, the percentages peak at 5.27 percent in 1995 and decline to about 5.10 in 2000-04 before beginning to rise again. After the medium-range period, under each alternative, the percentages increase rapidly (because of the demographic shift discussed earlier) and peak around 2030 under alternatives I, II-A, and II-B, while continuing to increase to the end of the projection period under alternative III.

Another similarity is that the costs as percentages of GNP projected under the various alternatives differ by a relatively large amount at the end of the long-range period (4.63 percentage points), although differing by a much smaller amount at the end of the medium-range period (1.38 percentage points). Also, the highest percentage occurring in the medium-range period varies within a much narrower band (4.94 percent under alternative I versus 5.27 under alternative III) than does the highest occurring during the long-range period (4.91 versus 8.96 percent). In addition, the average long-range cost as a percentage of GNP projected under the various alternatives varies by a relatively large amount (from 4.33 percent under alternative I to 6.73 percent under alternative III), while the average medium-range cost varies by a much smaller amount (from 4.23 to 5.15 percent).

TABLE 29.—ESTIMATED COST OF THE OASDI SYSTEM AS PERCENT OF GNP UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1981-2055

Calendar year	I	II-A	II-B	III
1981	4.94	4.97	4.97	4.93
1982	4.90	4.98	4.98	5.03
1983	4.80	4.91	4.95	5.12
1984	4.74	4.84	4.97	5.08
1985	4.67	4.77	4.98	5.10
1986	4.60	4.69	4.99	5.13
1987	4.47	4.63	5.00	5.15
1988	4.41	4.61	5.01	5.16
1989	4.35	4.59	5.01	5.17
1990	4.30	4.56	4.98	5.19
1991	4.30	4.54	4.95	5.22
1992	4.26	4.52	4.92	5.24
1993	4.21	4.49	4.88	5.25
1994	4.16	4.47	4.84	5.24
1995	4.12	4.45	4.81	5.27
1996	4.06	4.41	4.76	5.25
1997	4.01	4.37	4.69	5.21
1998	3.96	4.34	4.63	5.17
1999	3.91	4.30	4.56	5.12
2000	3.85	4.25	4.51	5.10
2001	3.81	4.23	4.48	5.11
2002	3.79	4.22	4.45	5.10
2003	3.76	4.21	4.42	5.10
2004	3.74	4.21	4.40	5.10
2005	3.73	4.20	4.38	5.11
2010	3.82	4.38	4.50	5.36
2015	4.16	4.81	4.90	5.94
2020	4.55	5.33	5.39	6.70
2025	4.85	5.80	5.83	7.48
2030	4.91	6.02	6.03	8.03
2035	4.76	6.01	6.00	8.35
2040	4.48	5.84	5.82	8.48
2045	4.25	5.70	5.66	8.64
2050	4.12	5.63	5.57	8.83
2055	4.04	5.58	5.50	8.96
25-year averages:				
1981-2005	4.23	4.51	4.78	5.15
2006-2030	4.37	5.13	5.20	6.47
2031-2055	4.40	5.78	5.75	8.58
75-year average:				
1981-2055	4.33	5.14	5.24	6.73

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text.

Table 30 presents a comparison, by trust fund, of the average cost rates estimated under the four alternatives, with the average tax rates. The OASI and DI programs are estimated to have medium-range actuarial surpluses under all alternatives, except that, under alternatives II-B and III, a medium-range deficit is projected for the OASI program. Although the OASI program has a medium-range actuarial surplus under alternatives I and II-A, the pattern of the projected cost rates is

such that the OASI Trust Fund is exhausted in 1982 under all four alternatives (as shown elsewhere in this section).

In the long range, a deficit is projected for the OASI program under alternatives II-A, II-B, and III, as against a surplus under alternative I; for the DI program, a surplus is projected under all alternatives. The combined OASDI long-range actuarial balance ranges from a surplus of 1.25 percent of taxable payroll under alternative I to a deficit of 6.25 percent under alternative III.

TABLE 30.—ESTIMATED AVERAGE COST RATE OF THE OASDI SYSTEM UNDER ALTERNATIVES I, II-A, II-B, AND III AND COMPARISON WITH AVERAGE TAX RATE
[As percent of taxable payroll]

Calendar years	Average tax rate	Estimated average cost rate by alternative				Difference by alternative			
		I	II-A	II-B	III	I	II-A	II-B	III
OASI:									
1981-2005.....	9.90	8.88	9.43	10.21	11.12	1.03	0.47	-0.31	-1.22
2006-30.....	10.20	9.78	11.46	12.21	15.43	.42	-1.26	-2.01	-5.23
2031-55.....	10.20	10.73	14.23	15.20	23.30	-.53	-4.03	-5.00	-13.10
1981-2055.....	10.10	9.80	11.71	12.54	16.62	.30	-1.61	-2.44	-6.51
DI:									
1981-2005.....	2.04	1.12	1.24	1.30	1.43	.92	.80	.74	.61
2006-30.....	2.20	1.28	1.61	1.66	2.08	.92	.59	.54	.12
2031-55.....	2.20	1.19	1.56	1.61	2.14	1.01	.64	.59	.06
1981-2055.....	2.15	1.20	1.47	1.52	1.88	.95	.68	.62	.26
Total:									
1981-2005.....	11.94	9.99	10.67	11.51	12.55	1.95	1.27	.43	-.61
2006-30.....	12.40	11.07	13.07	13.87	17.50	1.33	-.67	-1.47	-5.10
2031-55.....	12.40	11.93	15.79	16.81	25.43	.48	-3.39	-4.41	-13.03
1981-2055.....	12.25	10.99	13.17	14.07	18.50	1.25	-.93	-1.82	-6.25

Note: The definitions of alternatives I, II-A, II-B, and III, cost rate, tax rate, and taxable payroll are presented in the text.

Table 31 shows the trust fund ratios for the OASI and DI programs under all four alternatives. In each case, the OASI Trust Fund is projected to become exhausted near the end of 1982. By contrast, after 1982, the DI Trust Fund is projected to grow steadily throughout the long-range, as well as the medium-range, period. Even if authority for interfund borrowing between the OASI and DI Trust Funds were provided, additional financing would be required. This can be inferred from the fact that the combined OASI and DI Trust Funds are projected to be exhausted early in 1983 under alternatives I and II-A and near the end of 1982 under alternatives II-B and III.

The fund ratios shown after a trust fund is projected to be exhausted are theoretical in that they are calculated on the assumption that the payment of benefits will continue by allowing the fund to borrow money (although no such borrowing authority exists in present law). The theoretical ratios are derived by assuming that money is borrowed and repaid as necessary in a manner analogous to that in which positive trust fund balances are invested. Under alternative I, the OASI ratio is projected to become positive by 1991 and to increase to fairly high levels, reaching 470 percent in 2015, and then steadily decreasing. Under alternative II-A, the OASI ratio is projected to become positive by 1995 and to increase to 183 percent in 2015, before decreasing rapidly so that, by 2030, the fund is again projected to be exhausted. Under alternatives II-B and III, the OASI Trust Fund does not recover at all within the projection period after becoming exhausted near the end of 1982.

TABLE 31.—ESTIMATED TRUST FUND RATIOS OF THE OASDI SYSTEM UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1981-2055

Calendar year	Alternative I			Alternative II-A			Alternative II-B			Alternative III		
	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total
1981.....	18	20	18	18	20	18	18	20	18	18	20	18
1982.....	14	13	14	13	13	13	13	13	13	13	13	13
1983.....	6	35	9	5	33	8	4	32	7	4	31	7
1984.....	-1	66	6	-4	62	3	(¹)	58	2	(¹)	52	(¹)
1985.....	-8	104	4	-13	96	-1	(¹)	87	-5	(¹)	75	(¹)
1986.....	-11	169	8	-18	155	1	(¹)	138	-8	(¹)	118	(¹)
1987.....	-12	246	14	-21	219	4	(¹)	191	-11	(¹)	163	(¹)
1988.....	-11	325	24	-24	285	9	(¹)	244	-15	(¹)	206	(¹)
1989.....	-9	405	33	-26	352	14	(¹)	299	-19	(¹)	248	(¹)
1990.....	-6	487	45	-28	418	20	(¹)	354	-24	(¹)	288	(¹)
1991.....	6	597	67	-22	510	35	(¹)	434	-20	(¹)	349	(¹)
1992.....	18	713	90	-16	602	51	(¹)	515	-16	(¹)	409	(¹)
1993.....	31	833	114	-9	693	67	(¹)	594	-11	(¹)	468	(¹)
1994.....	46	953	140	-1	781	84	(¹)	672	-6	(¹)	525	(¹)
1995.....	61	1,070	166	6	863	100	(¹)	744	-1	(¹)	578	(¹)
1996.....	78	1,161	194	14	926	117	(¹)	802	5	(¹)	620	(¹)
1997.....	97	1,249	223	23	985	135	(¹)	857	11	(¹)	658	(¹)
1998.....	118	1,334	254	33	1,042	153	(¹)	910	19	(¹)	692	(¹)
1999.....	140	1,418	287	44	1,097	172	(¹)	961	27	(¹)	723	(¹)
2000.....	164	1,498	321	57	1,147	192	(¹)	1,008	37	(¹)	750	(¹)
2001.....	190	1,568	356	70	1,187	212	(¹)	1,046	47	(¹)	766	(¹)
2002.....	216	1,635	391	83	1,224	232	(¹)	1,081	58	(¹)	780	(¹)
2003.....	244	1,699	426	97	1,258	252	(¹)	1,113	69	(¹)	790	(¹)
2004.....	271	1,757	461	111	1,287	271	(¹)	1,140	80	(¹)	796	(¹)
2005.....	300	1,816	496	125	1,315	290	(¹)	1,166	91	(¹)	801	(¹)
2010.....	420	2,058	640	180	1,436	360	(¹)	1,276	133	(¹)	822	(¹)
2015.....	470	2,306	705	183	1,558	370	(¹)	1,381	132	(¹)	829	(¹)
2020.....	452	2,636	705	127	1,722	324	(¹)	1,526	82	(¹)	846	(¹)
2025.....	394	3,107	672	28	1,976	240	(¹)	1,747	(¹)	(¹)	896	(¹)
2030.....	327	3,687	643	(¹)	2,304	138	(¹)	2,035	(¹)	(¹)	961	(¹)
2035.....	272	4,190	636	(¹)	2,590	29	(¹)	2,290	(¹)	(¹)	1,052	(¹)
2040.....	237	4,547	660	(¹)	2,799	(¹)	(¹)	2,475	(¹)	(¹)	1,093	(¹)
2045.....	223	4,823	702	(¹)	2,974	(¹)	(¹)	2,630	(¹)	(¹)	1,126	(¹)
2050.....	219	5,188	745	(¹)	3,219	(¹)	(¹)	2,846	(¹)	(¹)	1,191	(¹)
2055.....	218	5,619	786	(¹)	3,514	(¹)	(¹)	3,106	(¹)	(¹)	1,284	(¹)

Trust fund is projected to be first exhausted in.....

1982 (¹) 1983 1982 (¹) 1983 1982 (¹) 1982 1982 (¹) 1982

¹The fund is projected to be exhausted and not to recover before the end of the projection period.

²The fund is not projected to be exhausted within the projection period.

Note: The definitions of alternatives I, II-A, II-B, and III, and trust fund ratio are presented in the text. The ratios shown after the year a given fund is projected to be exhausted are theoretical, because they are calculated on the assumption that the exhaustion of the fund will be avoided by allowing the fund to borrow money (see text).

The cost estimates and actuarial balances shown in this report are different from those published in last year's report. Table 32 itemizes the reasons for the differences—together with their estimated cost effects—between the estimates under alternative II in last year's report and those under alternatives II-A and II-B in this report.

TABLE 32.—CHANGE IN ESTIMATED AVERAGE ANNUAL COST RATE OF THE OASDI SYSTEM UNDER ALTERNATIVES II-A AND II-B BY REASON FOR CHANGE
[As percent of taxable payroll]

Item	Medium range			Long range		
	OASI	DI	Total	OASI	DI	Total
Shown in 1980 report: ¹						
Actuarial balance.....	+0.41	+0.78	+1.19	-2.16	+0.64	-1.52
Average tax rate.....	9.83	2.02	11.85	10.08	2.14	12.22
Estimated average cost rate.....	9.42	1.24	10.66	12.24	1.50	13.74
Alternative II-A:						
Changes in estimated average cost rate due to changes in: ²						
Social Security Act.....	-0.01	-0.00	-0.01	-0.01	-0.00	-0.01
Valuation date.....	-0.02	+0.00	-0.02	+0.08	+0.00	+0.08
Demographic assumptions.....	+0.06	+0.00	+0.06	-0.01	+0.00	-0.01
Economic assumptions.....	-0.34	-0.04	-0.38	-0.47	-0.04	-0.51
Disability assumptions.....	-0.00	-0.07	-0.07	-0.00	-0.12	-0.12
All other factors.....	+0.32	+0.11	+0.43	-0.12	+0.13	+0.01
Total change in estimated average cost rate.....	+0.01	-0.00	+0.01	-0.53	-0.03	-0.56
Shown in this report: ³						
Estimated average cost rate.....	9.43	1.24	10.67	11.71	1.47	13.17
Average tax rate.....	9.90	2.04	11.94	10.10	2.15	12.25
Actuarial balance.....	+0.47	+0.80	+1.27	-1.61	+0.68	-0.93
Alternative II-B:						
Changes in estimated average cost rate due to changes in: ²						
Social Security Act.....	-0.01	-0.00	-0.01	-0.01	-0.00	-0.01
Valuation date.....	-0.02	+0.00	-0.02	+0.08	+0.00	+0.08
Demographic assumptions.....	+0.06	+0.00	+0.06	-0.01	+0.00	-0.01
Economic assumptions.....	+0.36	+0.03	+0.39	+0.27	+0.02	+0.29
Disability assumptions.....	-0.00	-0.07	-0.07	-0.00	-0.12	-0.12
All other factors.....	+0.40	+0.10	+0.50	-0.03	+0.13	+0.10
Total change in estimated average cost rate.....	+0.79	+0.06	+0.85	+0.30	+0.03	+0.33
Shown in this report: ³						
Estimated average cost rate.....	10.21	1.30	11.51	12.54	1.52	14.07
Average tax rate.....	9.90	2.04	11.94	10.10	2.15	12.25
Actuarial balance.....	-0.31	+0.74	+0.43	-2.44	+0.62	-1.82

¹Cost rates (expenditures as percent of taxable payroll) and taxable payroll are calculated under the intermediate set of assumptions (alternative II) described in last year's report, which incorporates ultimate annual increases of 5½ percent in average wages in covered employment and 4 percent in the CPI, an ultimate annual unemployment rate of 5 percent, and an ultimate total fertility rate of 2.1 children per woman. The averages are computed over projection periods commencing with 1980.

²See the text for a discussion of the items shown.

³The definitions of alternatives II-A and II-B are presented in the text. The averages are computed over projection periods commencing with 1981.

Note: The definitions of cost rate, tax rate, and taxable payroll are presented in the text.

The cost estimates and actuarial balances shown in this report differ from those published in last year's report. Table 32 shows the differences between the estimates under the intermediate assumptions (alternative II) in last year's report and those under both alternatives II-A and II-B in this report.

Three amendments to the Social Security Act were enacted since the last report, as described in a preceding section. The net effect on the OASDI program is a minor decrease in the estimated medium-range and long-range cost rates.

In changing from the valuation periods of last year's report, which were 1980-2004 and 1980-2054 for the medium-range and long-range periods, respectively, to the valuation periods of this report, 1981-2005 and 1981-2055, the year 1980 is replaced by 2005 in the medium range and 2055 in the long range. The estimated cost rate in the replacement year is higher than that in the year being replaced (except in the OASI medium-range period), thereby increasing the estimated average cost rate, even in the absence of other changes.

The demographic assumptions include only minor changes from those in last year's report. The ultimate total fertility rate has not been changed, although the fertility rates by age have been modified to conform more closely with recent experience. Also, the ultimate rate of improvement in the age-adjusted death rates by sex is about the same. However, this year's report assumes more improvement for the young and the aged, and less for those of middle age. The net effect of the changes in demographic assumptions is a slight increase in the estimated average medium-range cost rate and a small decrease in the long-range rate.

The economic assumptions in both alternatives II-A and II-B differ substantially from those in alternative II in last year's report. Under alternative II-A, there generally are larger real-wage increases, both for the early years and ultimately (when the assumed real-wage differential is 2.00 percent as compared with 1.75 percent). This results in significant reductions in both the estimated average medium-range and long-range cost rates. By contrast, under alternative II-B, there generally are smaller real-wage increases, both for the early years and ultimately (when the assumed real-wage differential is 1.50 percent, which is 0.25 percentage points lower). This results in significant increases in both the estimated average medium-range and long-range cost rates.

Changes in the assumed disability incidence and termination rates were made to reflect more recent experience. These changes result in decreases in both the estimated average medium-range and long-range cost rates. Slightly more than half of the decrease results from changes in the incidence assumptions, and slightly less than half from the termination assumptions.

Numerous changes were made in other factors and in methods used to project the costs of the OASDI program. Two major changes were made this year in the method for projecting the level of average benefits. First, average benefit levels are now projected separately for male and female workers, thereby better reflecting the differences in their work patterns. Second, average benefit levels are now adjusted to reflect projected changes in the age at which workers choose to take retirement benefits. Another major change was in the method of projecting the percentages of persons (by age and sex) who are fully insured. This year, these percentages reflect more precisely both the proportion of all workers who are in covered employment and the number of calendar quarters in covered employment required to be fully insured. For the OASDI program, the net effect of these changes is to increase the estimated average medium-range cost rate and to decrease the long-range rate. For the DI program, the net effect is to increase both the estimated average medium-range and long-range cost rates.

VII. CONCLUSION

The actuarial cost estimates presented in this report are based upon economic assumptions which are subject to considerable uncertainty. Nevertheless, it is virtually certain that, unless legislation to strengthen the financial status of the OASI Trust Fund is enacted soon, that fund will be exhausted in the latter half of 1982. The DI Trust Fund, on the other hand, is projected to increase rapidly. The enactment of legislation to reallocate tax rates from the DI Trust Fund to the OASI Trust Fund or to permit interfund borrowing between the two funds would not, however, postpone the latter's exhaustion by more than a few months. Furthermore, as indicated by the projections shown in Appendix G, there is a strong likelihood that, if additional financing were provided to the OASI Trust Fund by legislation reallocating tax rates from both the DI and Hospital Insurance Trust Funds, or by legislation permitting interfund borrowing among the three funds, the OASI Trust Fund would still become exhausted at some time during the 1980's—perhaps as early as 1984 under alternative III or even 1983 under "worst-case" assumptions.

Long-range estimates are presented on the basis of four sets of economic and demographic assumptions, which are characterized as optimistic (alternative I), intermediate (alternatives II-A and II-B), and pessimistic (alternative III). Of the two intermediate sets, alternative II-A assumes future economic performance resembling that of more robust recent economic expansions which result from policies to stimulate growth and lower inflation. Alternative II-B assumes the adoption of policies which would result in an economic performance resembling less robust recent economic expansions. A fifth projection, which is applicable only to the short range, is based on the so-called "worst-case" economic assumptions.

The economic and demographic assumptions which underlie the projections traditionally have been treated as outside factors acting upon the OASDI system while being largely unaffected by it. We have continued to follow that procedure. However, because of the size and nature of the OASDI system, it is becoming increasingly apparent that interaction of OASDI and the economy as a whole deserves attention. As has been shown earlier in the report, higher real growth, real wages, and labor-force participation increase tax revenues, thereby reducing the relative burden on workers to support OASDI benefits. OASDI may well impact labor force participation, savings and investment, and growth, which, in turn, affect the economy's performance. The Board therefore recommends that attention be given to the long-run interaction of the OASDI system and the economy in future research and policy deliberations on the role and structure of the system.

Long-run projections are traditionally made for a 75-year period. Information is supplied for the period as a whole, for the three 25-year periods contained within the 75-year span, for each year in the first 25-year period, and for every fifth year thereafter.

The long-run projections show that the immediate short-run financing crisis is followed by a period of rising trust fund balances during the remainder of the first 25-year period. For this period as a whole, the

average annual income from OASDI taxes is estimated to exceed the average annual outgo by 1.27 percent of taxable payroll under alternative II-A and by 0.43 percent under alternative II-B.

Although the average financial status of the OASDI program is favorable for the next 25 years, the estimated average annual tax income for the entire 75-year projection period falls below the estimated average annual outgo for the period under both sets of intermediate assumptions—by 0.93 percent of taxable payroll under alternative II-A and 1.82 percent under alternative II-B. This is due to tax receipts falling below outgo at an increasing rate in the second and third 25-year periods, in which shortfalls average 0.67 percent of payroll and 3.39 percent of payroll, respectively, under alternative II-A, and 1.47 percent of payroll and 4.41 percent of payroll, respectively, under alternative II-B. Data for individual years confirm the pattern of early annual net inflows followed by continual annual net outflows.

When the expected net outflows of the HI Trust Fund beginning in the late 1980's are considered in conjunction with the OASDI Trust Funds, the situation of the combined-OASDI-HI Trust Fund looks even worse. The initial 25-year net inflow of the OASDI Trust Funds is then turned into a net outflow under both sets of intermediate assumptions. This emphasizes the need to do more than rely on interfund borrowing to restore the financial strength of the combined system.

The Board strongly urges prompt action by the Congress to prevent the exhaustion of the OASI Trust Fund in the short range and thus permit the timely payment of the current financial obligations of the OASDI program, to build the balances of the OASI and DI Trust Funds to satisfactory levels, and to restore the OASDI system to financial health over the long range. Decisions on actions to strengthen the short-range financing of the system should be made on a basis which minimizes the risk that a possible downturn in economic conditions will require additional action in the short term, thereby further weakening public confidence in the Social Security system.

The Administration has recommended a package of financing proposals that would restore soundness to the OASDI program in the short range and well into the next century. The Board recommends the enactment of these proposals or of similar ones which will accomplish the same objectives within the basic principles set forth by the Administration.

APPENDIX A.—ASSUMPTIONS AND METHODS UNDERLYING THE MEDIUM-RANGE AND LONG-RANGE COST ESTIMATES

This appendix describes the assumptions and methods which underlie the medium-range and long-range cost estimates in this report. All descriptions pertain to the estimates under each of alternatives I, II-A, II-B, and III unless specifically stated otherwise. The basic assumptions comprising each alternative have been summarized in an earlier section entitled "Economic and Demographic Assumptions" and thus will be discussed here only in the context of the methods used. Further details about the assumptions, methods, and cost estimates are published periodically in Actuarial Studies prepared by the Office of the Actuary, Social Security Administration.

TOTAL POPULATION

Projections were made of the U.S. population (including persons overseas covered by the OASDI program) by age, sex, and marital status for future years to 2055. The starting point was the population on July 1, 1979 as estimated by the Bureau of the Census from the 1970 Census and from births, deaths, and net immigration during 1970-79. This population estimate was adjusted for net census undercount and was increased by the estimated populations in the geographic areas covered by the OASDI program but not included in the estimate made by the Bureau of the Census. The population in future years was then projected from assumed rates of birth and death and assumed net immigration.

Historically, fertility rates in the United States have fluctuated widely. The total fertility rate (which for a given year is the number of children that a woman would have during her lifetime if she were to survive the childbearing period and were to experience the age-specific birth rates observed in that year) decreased from 3.3 after World War I to 2.1 during the Great Depression, rose to about 3.7 in 1957 and then fell to 1.7 in 1976. Since that time, the total fertility rate has fluctuated around 1.8 children per woman.

The historical variations in fertility rates have resulted from changes in social attitudes, economic conditions, and medical knowledge. After considering the recent behavior and trends of these factors, ultimate total fertility rates of 2.4, 2.1, 2.1, and 1.7 children per woman were selected for alternatives I, II-A, II-B, and III, respectively. For each alternative, the total fertility rate was projected from its estimated level in 1980 to its ultimate level in 2005 by linear interpolation. These ultimate values can be compared with those used by the Bureau of the Census in its latest series of population projections.¹ The Bureau of the Census used a range of 1.7 to 2.7, with an intermediate assumption of 2.1, as is used in alternatives II-A and II-B. This rate of 2.1 is the rate which would result in a constant population if there were no net migration and if mortality were constant at levels close to current U.S. levels.

Historically, mortality rates in the United States have improved steadily. For a given year, the age-adjusted death rate for men is that rate which, when applied to the enumerated total male population as of April 1, 1970, gives the same number of deaths that results from applying

¹U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 704, "Projections of the Population of the United States: 1977-2050," U.S. Government Printing Office, Washington, D.C., 1977.

the age-specific death rates for men for the given year to the same population by age. The age-adjusted death rate for women is determined analogously. Such rate for both men and women has been improving an average of 1.2 percent per year since 1900. This improvement has resulted from many factors, including increased medical knowledge, increased availability of health-care services, and improvements in personal health-care practices such as diet and exercise.

The mortality assumptions in alternatives II-A and II-B (which are identical) were developed after taking the above factors into consideration. First, ultimate percentage improvements in death rates by sex and cause of death were selected. Then the annual percentage improvements by age, sex, and cause of death were projected by a logarithmic formula from their average values during 1968-78 to their ultimate values in 2005. As shown in Table A1, the resulting average annual improvement in the age-adjusted death rate during 1978-2055 is 0.59 percent, or about 49 percent of the observed average annual improvement during 1900-78. The average annual improvement for women is projected to be generally more than that for men, although the relative difference is less than observed during 1900-78.

TABLE A1.—PROJECTED AVERAGE ANNUAL MORTALITY IMPROVEMENT DURING 1978 TO 2055 UNDER ALTERNATIVES II-A AND II-B AND COMPARISON TO OBSERVED AVERAGE ANNUAL IMPROVEMENT DURING 1900 TO 1978

Sex and age	Adjusted death rate ^a (per 100,000)			Average annual improvement (percent)		1978-2055 improve- ment as ratio to 1900-78 improve- ment
	1900	1978	2055	1900-78	1978-2055	
Men:						
Under 15	1,836.8	144.0	87.8	3.21	0.64	0.20
15-24	590.0	172.0	150.1	1.57	.18	.11
25-64	1,502.7	736.8	467.3	.91	.59	.65
65 and over.....	9,542.3	6,741.4	4,469.0	.44	.53	1.20
Total.....	2,229.7	1,061.0	698.2	.95	.54	.57
Women:						
Under 15	1,606.5	109.5	62.0	3.38	.74	.22
15-24	580.0	60.5	45.3	2.86	.37	.13
25-64	1,380.8	379.4	243.8	1.64	.57	.35
65 and over.....	8,799.3	4,064.5	2,362.2	.99	.70	.71
Total.....	2,035.4	609.9	366.1	1.53	.66	.43
Total:						
Under 15	1,723.8	127.1	75.1	3.29	.68	.21
15-24	585.0	115.8	97.2	2.06	.23	.11
25-64	1,439.8	552.3	531.9	1.22	.58	.48
65 and over.....	9,110.2	5,184.7	3,243.8	.72	.61	.84
Total.....	2,130.0	829.5	527.7	1.20	.59	.49

^aAdjusted by the "direct" method, using the enumerated total population of the United States on April 1, 1970 as the standard.

Note: The definitions of alternatives II-A and II-B are presented in the text.

The mortality assumptions in alternative I reflect average annual improvements in the death rates by age and sex of half as much as those in alternatives II-A and II-B, while in alternative III they are twice as much.

Net immigration was assumed to be 400,000 persons per year in all four alternatives. The assumed net immigration does not include aliens entering the United States illegally, largely because no reliable estimate of their number exists. However, illegal aliens as enumerated in the 1970 Census were included in the starting population.

Table A2 shows the projected population by broad age groups under all four alternatives. Because many categories of OASDI benefits depend upon marital status, the population was also projected by marital status in addition to age and sex. Marriage rates and divorce rates were based on recent data from the National Center for Health Statistics.

TABLE A2.—SOCIAL SECURITY AREA POPULATION AS OF JULY 1 AND DEPENDENCY RATIOS BY BROAD AGE GROUP UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1960-2055

Calendar year	Population (in thousands)			Total	Dependency ratio	
	Under 20	20-64	65 and over		Aged ^a	Total ^b
1960	73,116	98,687	17,146	188,949	0.174	0.915
1965	79,931	104,112	18,963	203,006	.182	.950
1970	80,637	112,500	20,655	213,792	.184	.900
1975	77,947	122,036	23,092	223,075	.189	.828
1976	77,039	124,145	23,635	224,818	.190	.811
1977	76,420	126,200	24,166	226,787	.191	.797
1978	75,545	128,416	24,724	228,685	.193	.781
1979	74,734	130,579	25,328	230,640	.194	.766
1980	74,045	132,731	25,892	232,668	.195	.753
Alternative I:						
1985	72,544	142,471	28,638	243,653	.201	.710
1990	74,692	148,834	31,599	255,125	.212	.714
1995	78,055	154,233	33,712	266,001	.219	.725
2000	81,414	160,063	34,651	276,127	.216	.725
2005	83,580	167,312	35,578	286,470	.213	.712
2010	86,178	173,139	38,171	297,488	.220	.718
2015	89,789	175,977	42,975	308,741	.244	.754
2020	94,000	176,948	48,767	319,715	.276	.807
2025	97,720	177,582	54,917	330,220	.309	.860
2030	100,879	180,157	59,479	340,514	.330	.890
2035	104,208	185,911	60,772	350,891	.327	.887
2040	108,086	193,160	60,211	361,457	.312	.871
2045	112,347	200,747	59,218	372,312	.295	.855
2050	116,557	207,264	59,915	383,735	.289	.851
2055	120,567	214,037	61,497	396,101	.287	.851
Alternatives II-A and II-B:						
1985	72,252	142,531	28,773	243,556	.202	.709
1990	73,529	149,044	32,106	254,678	.215	.709
1995	75,506	154,640	34,745	264,891	.225	.713
2000	77,001	160,695	36,251	273,947	.226	.705
2005	76,957	167,890	37,719	282,566	.225	.683
2010	77,273	173,062	40,846	291,182	.236	.683
2015	78,570	174,678	46,225	299,473	.265	.714
2020	80,376	173,902	52,653	306,931	.303	.765
2025	81,720	172,107	59,539	313,366	.346	.821
2030	82,453	171,598	64,925	318,977	.378	.859
2035	83,151	173,803	67,044	323,997	.386	.864
2040	84,235	177,012	67,257	328,504	.380	.856
2045	85,604	180,037	66,922	332,562	.372	.847
2050	86,889	181,582	67,942	336,412	.374	.853
2055	87,921	183,192	69,293	340,406	.378	.858

TABLE A2.—SOCIAL SECURITY AREA POPULATION AS OF JULY 1 AND DEPENDENCY RATIOS BY BROAD AGE GROUP UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1960-2055 (Cont.)

Calendar year	Population (in thousands)			Total	Dependency ratio	
	Under 20	20-64	65 and over		Aged ¹	Total ²
Alternative III:						
1985.....	71,868	142,644	29,033	243,545	.204	.707
1990.....	71,993	149,425	33,080	254,498	.221	.703
1995.....	72,129	155,355	36,747	264,231	.237	.701
2000.....	71,141	161,776	39,409	272,327	.244	.683
2005.....	68,162	168,966	42,034	279,181	.249	.652
2010.....	65,598	173,316	46,337	285,252	.267	.646
2015.....	64,138	173,331	52,970	290,439	.306	.676
2020.....	63,283	170,229	60,755	294,268	.357	.729
2025.....	62,211	165,202	89,170	296,584	.419	.795
2030.....	60,641	160,684	76,250	297,575	.475	.852
2035.....	58,922	158,429	80,126	297,477	.506	.878
2040.....	57,538	156,715	82,119	296,372	.524	.891
2045.....	56,488	154,324	83,473	294,285	.541	.907
2050.....	55,486	150,147	85,728	291,361	.571	.941
2055.....	54,347	146,106	87,430	287,883	.598	.970

¹Population aged 65 and over as ratio to population aged 20-64.

²Population aged 65 and over plus population under age 20 as ratio to population aged 20-64.

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text.

A more thorough discussion of the population projections is shown in an Actuarial Study published by the Social Security Administration.¹

COVERED POPULATION

The covered population for any year is the number of people who work in covered employment at any time during the year. Projections of the covered population were made by applying projected coverage rates by age and sex to the corresponding number of people in the total population. The coverage rates—i.e., the percentages of the total population who work in covered employment during the year—were projected by age and sex from the unemployment rates and labor force participation rates, based on the relationships existing among those rates in 1970-76.

Unemployment rates by age and sex were projected on the basis of their relationships with the total unemployment rate since 1968. The total unemployment rate has averaged about 5.5 percent for the last 25 years and 6.4 percent for the last 10 years. The ultimate total unemployment rate was assumed to be 4.0, 5.0, 5.0, and 6.0 percent in alternatives I, II-A, II-B, and III, respectively. For each alternative, the total unemployment rates assumed for the early years of the projection period are consistent with the other assumptions in the alternative.

Labor force participation rates by age and sex were projected on the basis of historical data since 1960. In alternative II-A, the resulting ultimate age-adjusted rates for men reflect a decrease of 0.2 percentage points from the 1980 level of 78.1 percent, while the rates for women reflect an increase of 8.6 percentage points from the 1980 level of 51.2 percent. The assumed ultimate rates by age for women are about 77 percent of those for men, on the average for all ages combined. For both sexes, the ultimate rates are assumed to be attained by 2000. In alternative II-B, the resulting ultimate age-adjusted rates for men reflect

¹Joseph F. Faber and John C. Wilkin, F.S.A., *Social Security Area Population Projections, 1981*, Actuarial Study No. 85 (U.S. Department of Health and Human Services, SSA Publication No. 11-11532, July 1981).

a decrease of 0.4 percent from the 1980 level, while the rates for women reflect an increase of 8.4 percent from the 1980 level. The assumed ultimate rates by age for women average about 74 percent of those for men. For both sexes, the ultimate rates are assumed to be attained by 2000.

The labor force participation rates in alternatives I and III are based on those in alternative II-B. In alternative I, each rate by age was raised initially by two percentage points for women, and by one point for men. A further adjustment was made for women, so as to reflect the higher assumed fertility; this was based on the assumption that, for each additional baby born during the year, one less woman would be in the labor force in that year. In alternative III, each rate by age was decreased initially by two percentage points for women and by one point for men. For women, the rates by age were increased to reflect the lower assumed fertility.

Under alternative I, coverage rates for men are projected to increase for all ages except 40-44, 50-54, and 70 and over, for which very small decreases are projected. Under alternatives II-A and II-B, they are projected to increase slightly for all ages except 50-64 and 70 and over, for which small decreases are projected. Under alternative III, they are projected to increase slightly for all ages except 40-44, 50-64, and 70 and over, for which no change or small decreases are projected. Under each alternative, the projected coverage rates for women increase substantially for all ages over 15, thereby reflecting the projected increase in labor force participation of women.

TAXABLE PAYROLL

The taxable payroll is defined as that amount which, when multiplied by the combined employee-employer tax rate, yields the total amount of taxes paid by employees, employers, and the self-employed. When the cost of the OASDI program is expressed as a percentage of taxable payroll, it can be compared directly with the combined OASDI employee-employer tax rate to determine whether the system is operating at a surplus or deficit.

In practice, the taxable payroll is calculated as a weighted average of the earnings on which employees, employers, and self-employed persons are taxed. The weighting takes into account the lower tax rates on self-employment income, on tips, and on multiple-employer "excess wages," as compared with the combined employee-employer rate. For 1981-90, the amounts of earnings for employees, employers, and the self-employed were projected separately. After 1990, the amounts of earnings taxable for employees, employers, and the self-employed were each assumed to increase at the compounded rate of the estimated increases in covered workers and in average wages in covered employment.

Another way to measure the cost of the program is as a percentage of the Gross National Product (GNP). Such percentages (which are shown in Table 29) are based on the estimated cost rates and on the assumed ratios of taxable payroll to GNP which are presented in Table A3. The GNP series was determined by applying a series of factors to the assumed ratio of total employee compensation in the economy to GNP. The ratio of total employee compensation in the economy to GNP was

used as the initial point because it is a measure of the share of output going to workers. This ratio is also a convenient starting point because it has changed slowly over time and can be expected to remain fairly constant. Total employee compensation in the economy was related to taxable payroll by means of factors which adjust for various differences in the two measures. The factors adjust total employee compensation by removing supplements to wages and salaries; removing wages and salaries earned in noncovered employment; removing wages, salaries, and self-employment income earned above the taxable base; and adjusting for the lower tax rates on self-employment income, on tips, and on multiple-employer "excess wages."

The ratio of taxable payroll to GNP has risen since 1960, in part because of the increases made in the contribution and benefit base. The long-range trend, however, is more likely to be downward because of increases in fringe benefits, both public and private, which are not included in taxable payroll.

TABLE A3.—RATIO OF TAXABLE PAYROLL TO GNP UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1960-2055

Calendar year	Past experience			
1960	0.396			
1965 .....	.351			
1970 .....	.412			
1975 .....	.424			
1980 .....	.437			
	Projected, by alternative			
	I	II-A	II-B	III
1981	0.440	0.440	0.440	0.440
1985 .....	.431	.430	.428	.424
1990 .....	.424	.426	.420	.413
1995 .....	.422	.421	.411	.407
2000 .....	.416	.414	.403	.398
2005 .....	.410	.408	.395	.390
2010 .....	.405	.402	.388	.383
2015 .....	.399	.397	.380	.376
2020 .....	.393	.391	.373	.368
2025 .....	.388	.386	.366	.362
2030 .....	.382	.380	.359	.355
2035 .....	.377	.375	.352	.348
2040 .....	.371	.369	.346	.341
2045 .....	.366	.364	.339	.335
2050 .....	.361	.359	.333	.329
2055 .....	.356	.354	.327	.323

Note: The definitions of alternatives I, II-A, II-B, and III and taxable payroll are presented in the text.

INSURED POPULATION

There are three types of insured statuses under the OASDI program: fully, currently, and disability insured. Fully insured status is required of an aged worker for eligibility for a primary retirement benefit and for the eligibility of other persons to auxiliary benefits based on the worker's earnings. Fully insured status is also required of a deceased worker for survivors' eligibility for benefits (with the exception of child survivors and parents of eligible child survivors, who may alternatively be eligible if the deceased worker had currently insured status). Disability insured status, which is more restrictive than fully insured status, is required of a disabled worker for eligibility for a primary benefit and for the eligibility of other persons to auxiliary benefits based on the worker's earnings.

Projections of the percentage of the population which is fully insured were made by age and sex based on past and projected coverage rates, the requirement for fully insured status, and the historical relationship between these factors. Currently insured status was disregarded in the cost projection, because the number of cases in which eligibility for benefits is based solely on currently insured status is relatively small. Projections of the percentage of the population who are disability insured were developed from the percentages who are fully insured by using projections of historical trends relating the two. Finally, the fully insured and disability insured populations were developed from the projected total population by applying the percentages fully insured and disability insured.

The fully insured population by age and sex was further subdivided by marital status, in a manner consistent with the division of the total population by marital status. For males, it was assumed that the probability of being fully insured would not vary by marital status. For females, the probability of being fully insured was assumed to vary by marital status as follows: (1) single and divorced women were assumed to be more likely to be fully insured than married women or widowed women, but less likely to be fully insured than men, and (2) widowed women were assumed to be more likely to be fully insured than married women. The relative difference between a widowed woman's probability of being fully insured and a married woman's probability of being fully insured was assumed to decrease through time, reflecting the projected large increase in labor force participation among married women.

OLD-AGE AND SURVIVORS INSURANCE BENEFICIARIES

Several types of benefits, at different benefit levels, are payable under the OASI program. Hence, the numbers of beneficiaries were projected by type of benefit.

The projected numbers of retired-worker beneficiaries were based on the projected aged fully insured population. The percentages, by age and sex, of the insured population which were receiving benefits at the beginning of 1981 were projected to increase gradually on the basis of past trends (after adjustments for changes in the earnings test, in the mandatory retirement age, and in the level of unemployment). The proportions of retired-worker beneficiaries to aged population show gradual increases in the implicit retirement rates.

The number of wife beneficiaries aged 62 and over of retired-worker beneficiaries was estimated from the population projection by marital and insured status. All uninsured wives aged 62 and over—excluding those having husbands not receiving retired-worker benefits, those withheld according to the earnings test, and those eligible for a government pension from earnings in noncovered employment—were assumed to receive benefits. The number of husband beneficiaries aged 62 and over of retired-worker beneficiaries was estimated in an analogous manner.

The projected numbers of child beneficiaries of retired-worker beneficiaries were based on projected ratios of the number of such child beneficiaries to the number of retired workers by sex of worker, adjusted to reflect the fertility assumptions.

The number of young-wife beneficiaries was estimated by extrapolating the base-year ratio of the number of such beneficiaries to the estimated number of child beneficiaries of male retired-worker beneficiaries. The extrapolation reflects projected fertility and female labor force participation. Young-husband beneficiaries were not taken into account, because of the negligible cost involved.

The number of widow beneficiaries aged 60 and over was estimated from the population by marital and insured status. All uninsured widows aged 60 and over, excluding those whose deceased husbands were not fully insured, those withheld according to the earnings test, and those eligible for a government pension from earnings in noncovered employment, were assumed to receive benefits. In addition, some insured widows who had not applied for retired-worker benefits were assumed to receive widow benefits. The number of widower beneficiaries was estimated in an analogous manner.

The numbers of paternal, maternal, and full orphans under age 22 in the United States were estimated from the projected population at those ages by applying age-specific probabilities of being an orphan. These probabilities were derived by using distributions of age of parent at birth of child and death rates consistent with the population projections. To estimate the number of child-survivor beneficiaries, the number of orphans was adjusted to include eligible disabled orphans aged 18 and over and to eliminate orphans of uninsured deceased parents. For nondisabled children aged 18-21, a further reduction was made to exclude those not attending school.

The number of mother beneficiaries was estimated by a method similar to the one used to estimate the number of young-wife beneficiaries—i.e., extrapolating the present ratio of such beneficiaries to child-survivor beneficiaries (excluding those nondisabled children aged 18-21 who were attending school). The number of father beneficiaries was estimated in an analogous manner.

The number of parent beneficiaries was projected on the basis of the past trend in the number of such beneficiaries. A decrease was assumed from 15,000 at the beginning of 1980 to an ultimate level of 7,000 in 1995.

Table A4 shows the estimated numbers of beneficiaries under the OASI program. Included among the beneficiaries who receive retired-worker benefits are some persons who also receive residual benefits consisting of the excess of any potential auxiliary benefits over their own retired-worker benefit. Estimates of the number of such residual payments were made separately for wives, widows, husbands, and widowers. Residual payments to other beneficiaries were not taken into account, because of the negligible cost involved.

TABLE A4.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF JUNE 30 UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1960-2055
[In thousands]

Calendar year	Retired workers and auxiliaries			Survivors				Total
	Worker	Wife- husband	Child	Widow- widower	Mother- father	Child	Parent	
1960.....	7,813	2,224	260	1,471	388	1,549	35	13,740
1965.....	10,843	2,601	429	2,228	472	1,900	36	18,509
1970.....	13,066	2,651	535	3,151	514	2,673	29	22,618
1975.....	16,210	2,836	633	3,823	568	2,905	22	26,998
1976.....	16,789	2,867	638	3,939	576	2,911	21	27,740
1977.....	17,380	2,899	670	4,042	573	2,843	19	28,428
1978.....	17,924	2,942	662	4,147	569	2,800	18	29,062
1979.....	18,590	2,966	651	4,260	567	2,739	17	29,789
1980.....	19,167	2,987	633	4,354	560	2,668	15	30,384
Alternative I:								
1981.....	19,790	3,013	635	4,446	554	2,620	14	31,072
1985.....	22,430	3,105	614	4,663	537	2,338	10	33,697
1990.....	25,526	3,178	616	4,828	520	2,210	8	36,886
1995.....	26,875	3,238	573	4,694	579	2,315	7	38,281
2000.....	27,955	3,153	585	4,555	612	2,413	7	39,280
2005.....	29,558	3,107	633	4,430	615	2,464	7	40,814
2010.....	32,726	3,162	739	4,323	609	2,495	7	44,061
2015.....	37,689	3,312	884	4,263	618	2,549	7	49,322
2020.....	43,509	3,477	994	4,276	630	2,656	7	55,549
2025.....	49,323	3,591	1,039	4,364	627	2,765	7	61,716
2030.....	53,111	3,530	1,052	4,424	632	2,852	7	65,608
2035.....	54,623	3,364	1,020	4,462	650	2,929	7	67,055
2040.....	54,310	3,135	976	4,444	677	3,015	7	66,564
2045.....	54,239	3,026	983	4,379	702	3,121	7	66,457
2050.....	55,240	3,068	1,034	4,315	723	3,240	7	67,627
2055.....	56,765	3,162	1,076	4,261	743	3,351	7	69,365
Alternative II-A:								
1981.....	19,790	3,013	635	4,446	554	2,620	14	31,072
1985.....	22,495	3,114	614	4,699	533	2,321	10	33,786
1990.....	25,846	3,220	617	4,927	503	2,139	8	37,260
1995.....	27,618	3,373	579	4,785	543	2,171	7	39,076
2000.....	29,131	3,342	591	4,699	553	2,181	7	40,504
2005.....	31,160	3,348	633	4,602	543	2,156	7	42,449
2010.....	34,756	3,446	723	4,530	528	2,119	7	46,109
2015.....	40,212	3,640	856	4,481	529	2,109	7	51,834
2020.....	46,576	3,874	986	4,515	530	2,136	7	58,624
2025.....	53,039	4,061	1,088	4,584	520	2,171	7	65,470
2030.....	57,552	4,032	1,103	4,668	514	2,186	7	70,062
2035.....	59,799	3,892	1,074	4,743	516	2,191	7	72,222
2040.....	60,165	3,677	1,034	4,762	524	2,199	7	72,368
2045.....	60,663	3,569	1,049	4,761	529	2,218	7	72,796
2050.....	61,849	3,575	1,095	4,717	530	2,243	7	74,016
2055.....	63,092	3,632	1,128	4,649	532	2,265	7	75,305

TABLE A4.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF JUNE 30 UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1960-2055 (Cont.)
[In thousands]

Calendar year	Retired workers and auxiliaries			Survivors				Total
	Worker	Wife-husband	Child	Widow-widower	Mother-father	Child	Parent	
Alternative II-B:								
1981	19,790	3,013	635	4,446	554	2,620	14	31,072
1985	22,429	3,111	614	4,706	533	2,321	10	33,724
1990	25,646	3,209	617	4,945	503	2,139	8	37,067
1995	27,815	3,373	579	4,785	543	2,171	7	39,073
2000	29,129	3,342	591	4,699	553	2,181	7	40,502
2005	31,154	3,345	633	4,602	543	2,156	7	42,440
2010	34,750	3,444	723	4,531	528	2,119	7	46,102
2015	40,187	3,649	856	4,487	529	2,109	7	51,824
2020	46,544	3,884	986	4,517	530	2,136	7	58,604
2025	53,001	4,080	1,088	4,601	520	2,171	7	65,468
2030	57,513	4,048	1,103	4,675	514	2,186	7	70,046
2035	59,765	3,907	1,074	4,754	516	2,191	7	72,214
2040	60,140	3,689	1,034	4,775	524	2,199	7	72,368
2045	60,624	3,580	1,049	4,773	529	2,218	7	72,780
2050	61,832	3,582	1,095	4,722	530	2,243	7	74,011
2055	63,074	3,636	1,128	4,665	532	2,265	7	75,307
Alternative III:								
1981	19,790	3,013	635	4,446	554	2,620	14	31,072
1985	22,479	3,126	615	4,783	526	2,288	10	33,827
1990	26,157	3,284	618	5,146	474	2,012	8	37,699
1995	29,084	3,619	599	4,962	484	1,939	7	40,694
2000	31,483	3,704	607	4,969	463	1,8387	43,071	
2005	34,408	3,800	634	4,966	433	1,730	7	45,978
2010	38,941	3,995	717	4,977	414	1,627	7	50,678
2015	45,409	4,290	837	5,009	407	1,557	7	57,516
2020	52,929	4,640	991	5,092	398	1,516	7	65,573
2025	60,748	4,931	1,178	5,214	384	1,483	7	73,945
2030	66,767	4,994	1,200	5,336	370	1,444	7	80,118
2035	70,605	4,907	1,183	5,485	359	1,395	7	83,941
2040	72,582	4,701	1,149	5,599	352	1,349	7	85,739
2045	74,545	4,580	1,173	5,717	341	1,308	7	87,671
2050	76,694	4,514	1,220	5,814	330	1,279	7	89,858
2055	78,143	4,439	1,236	5,849	318	1,246	7	91,238

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text.

DISABILITY INSURANCE BENEFICIARIES

The number of disabled-worker beneficiaries was projected from the exposed population, which was developed from the disability insured population by removing those persons already entitled to disabled-worker benefits. The number of newly entitled beneficiaries was developed from the exposed population by applying disability incidence rates. To obtain the number of currently entitled beneficiaries, termination rates were applied to the population consisting of the newly entitled beneficiaries and those already currently entitled.

The incidence rates were projected by age, sex, and year of exposure to disability. Although disability awards declined by approximately 5 percent during 1980, age-sex specific incidence rates were assumed to increase over the period 1981-2000, to a level about 15 percent higher than the average for 1978-80 and to remain constant thereafter.

The termination rates were estimated by age, sex, and duration of entitlement. The mortality rates used throughout the projection period were assumed to be the same as those experienced by disabled-worker beneficiaries during 1976-79. The recovery rates were assumed to be 20 percent higher than those of the same period, thereby allowing for the assumed effect of the Disability Amendments of 1980. All disabled-worker benefits terminate at age 65, when retired-worker benefits become payable.

The number of children entitled to benefits was projected as a proportion of the number of disabled-worker beneficiaries, by sex, based on recent experience and allowing for projected changes in fertility.

The number of young-wife beneficiaries was projected as a proportion of the number of child beneficiaries of male disabled-worker beneficiaries, based on recent experience and allowing for projected changes in fertility and female labor force participation. The number of young-husband beneficiaries was projected in an analogous manner.

The number of aged-wife beneficiaries was projected as a proportion of the number of male disabled-worker beneficiaries. The number of aged-husband beneficiaries was projected in an analogous manner.

Table A5 shows the projected number of beneficiaries in the DI program.

TABLE A5.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF JUNE 30 UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1960-2055
[In thousands]

Calendar year	Disabled workers	Dependents of disabled workers			Total
		Wives and husbands	Children		
1960	371	56	94	522	
1965	944	187	518	1,648	
1970	1,436	271	861	2,568	
1975	2,363	429	1,333	4,125	
1976	2,602	468	1,462	4,533	
1977	2,755	482	1,496	4,733	
1978	2,858	491	1,512	4,861	
1979	2,877	483	1,466	4,826	
1980	2,863	468	1,403	4,734	
Alternative I:					
1981	2,857	454	1,386	4,697	
1985	2,758	435	1,282	4,475	
1990	2,917	410	1,211	4,538	
1995	3,005	413	1,185	4,603	
2000	3,376	445	1,301	5,122	
2005	3,872	316	1,206	5,394	
2010	4,316	366	1,292	5,974	
2015	4,576	410	1,370	6,356	
2020	4,646	433	1,448	6,527	
2025	4,532	427	1,472	6,431	
2030	4,373	406	1,438	6,217	
2035	4,380	397	1,439	6,216	
2040	4,560	401	1,509	6,470	
2045	4,810	412	1,630	6,852	
2050	4,971	423	1,711	7,105	
2055	5,079	433	1,745	7,257	
Alternative II-A:					
1981	2,857	454	1,386	4,697	
1985	2,785	439	1,295	4,519	
1990	3,053	430	1,267	4,750	
1995	3,325	432	1,257	5,014	
2000	3,824	472	1,394	5,690	
2005	4,438	404	1,511	6,353	
2010	4,976	475	1,606	7,057	
2015	5,289	535	1,685	7,509	
2020	5,373	569	1,761	7,703	
2025	5,228	568	1,765	7,561	
2030	5,017	542	1,691	7,250	
2035	4,985	531	1,657	7,173	
2040	5,120	532	1,700	7,352	
2045	5,296	540	1,792	7,628	
2050	5,344	543	1,834	7,721	
2055	5,329	544	1,824	7,697	

TABLE A5.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF JUNE 30 UNDER ALTERNATIVES I, II-A, II-B, AND III, CALENDAR YEARS 1960-2055 (Cont.)
[in thousands]

Calendar year	Dependents of disabled workers			Total
	Disabled workers	Wives and husbands	Children	
Alternative II-B:				
1981	2,857	454	1,386	4,697
1985	2,785	439	1,295	4,519
1990	3,053	430	1,267	4,750
1995	3,325	432	1,257	5,014
2000	3,822	472	1,392	5,686
2005	4,435	404	1,510	6,349
2010	4,975	475	1,606	7,056
2015	5,286	535	1,685	7,506
2020	5,369	568	1,760	7,697
2025	5,225	568	1,765	7,558
2030	5,015	542	1,690	7,247
2035	4,983	531	1,656	7,170
2040	5,119	532	1,699	7,350
2045	5,294	540	1,792	7,626
2050	5,343	543	1,834	7,720
2055	5,328	544	1,824	7,696
Alternative III:				
1981	2,856	454	1,385	4,696
1985	2,810	442	1,307	4,560
1990	3,187	448	1,322	4,958
1995	3,611	437	1,307	5,355
2000	4,251	474	1,450	6,175
2005	4,996	547	1,890	7,433
2010	5,637	650	1,981	8,268
2015	6,009	743	2,045	8,797
2020	6,104	801	2,100	9,005
2025	5,922	809	2,063	8,794
2030	5,644	779	1,921	8,344
2035	5,541	769	1,825	8,135
2040	5,587	767	1,814	8,168
2045	5,619	769	1,852	8,240
2050	5,471	755	1,830	8,056
2055	5,252	732	1,755	7,739

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text.

AVERAGE WAGES AND INFLATION

Future increases in the Consumer Price Index and in average wages will directly affect the OASDI program, because of the automatic adjustment provisions in the law which require that benefit payments be adjusted to reflect increases in the CPI and that the benefit formula, the taxable earnings base, the exempt amount in the earnings test, and the amount of earnings required for a quarter of coverage be adjusted to reflect increases in average wages.

The ultimate real-wage differentials were based on projections of productivity gains and of the factors linking productivity gains with the real-wage differential. Since 1951, annual increases in productivity have averaged 2.3 percent, the result of average increases of 2.6 percent, 2.8 percent, and 1.4 percent during the 1950's, the 1960's, and the 1970's, respectively. Meanwhile, the real-wage differential has averaged 1.3 percent since 1951, the result of average increases of 2.7 percent, 1.7 percent, and -0.4 percent during the 1950's, the 1960's, and the 1970's, respectively. The difference between increases in productivity and the real-wage differential, which has averaged roughly 1.0 percent since 1951, results from changes in such factors as the average number of hours worked per year, the degree to which employees share in productivity gains, and the proportion of employee compensation reflected in wages. The ultimate annual adjustment from these factors is assumed to be 0.50 percent in alternatives I and II-A and 0.75 percent in

alternatives II-B and III. The lower adjustment in alternatives I and II-A reflects the more robust economic experience assumed in those alternatives which results in a longer work week and an increase in the portion of employee compensation that is taxable for OASDI purposes. In alternative II-A, the ultimate annual increase in productivity is assumed to be 2.50 percent, which is consistent with the relatively high level of economic growth assumed. In alternative II-B, the ultimate annual increase in productivity is assumed to be 2.25 percent, which is close to the level experienced over the period 1951-80. These assumptions yield ultimate real-wage differentials of 2.0 percent and 1.5 percent for alternatives II-A and II-B, respectively. The ultimate real-wage differentials for alternatives I and III are assumed to be 2.5 percent and 1.0 percent, respectively. The ultimate real-wage differentials are assumed to be attained by the year 1992.

In alternative II-A, the CPI was assumed to increase ultimately at an annual rate of 3 percent, which assumes that the effective use of monetary policy will become more prevalent in the future. In alternative II-B, the CPI was assumed to increase ultimately at an annual rate of 4 percent, which is slightly lower than the average of 4.2 percent experienced over the last 30 years. The ultimate increases in the average annual CPI under alternatives I and III of 2 percent and 5 percent, respectively, were chosen so as to include a reasonable range of possible values.

The ultimate increases in average annual wages in covered employment were assumed to be 4.5, 5.0, 5.5, and 6.0 percent, for alternatives I, II-A, II-B, and III, respectively. These were obtained by adding the corresponding annual percentage increases in the CPI to the assumed real-wage differentials for each alternative.

AVERAGE BENEFITS

Future increases in the amount of the average retired-worker benefit awarded were projected by simulating the automatic benefit adjustment provisions and calculating future benefits for workers, by sex, at various earnings levels. Future increases in the average male and female retired-worker benefits in current-payment status were projected on the basis of the distribution of current beneficiaries by year of award, their average awarded benefits, and the increase in their benefits since the year of award. The average male and female disabled-worker benefits were projected similarly.

The average benefits for all persons receiving OASI or DI monthly benefits based on the earnings records of male workers (except recipients of residual payments to wives, widows, husbands, and widowers) were projected to increase at the same rate as the average male retired-worker or disabled-worker benefit, respectively. Similarly, the average benefits for all persons receiving OASI or DI monthly benefits based on the earnings records of female workers were assumed to increase at the same rate as the average female retired-worker or disabled-worker benefit, respectively.

BENEFIT PAYMENTS

For each category of beneficiary, monthly benefit payments were calculated as the product of the number of beneficiaries and the

corresponding average benefit. These amounts were then adjusted to include retroactive payments to newly awarded beneficiaries. Retroactive payments result from delays between the date of filing for benefits and the date of first payment, as well as from a provision in the law which allows a beneficiary to receive up to 6 months' benefits (or 12 months' benefits for disabled widows and widowers and for all DI beneficiaries) retroactively from the date of initial entitlement to benefits, on the condition that benefits are not thereby permanently reduced for early retirement.

Lump-sum death payments were calculated as the product of the number of such payments (which was projected by applying the assumed mortality rates to the projected fully insured population) and the amount of the lump-sum death payment (\$255).

ADMINISTRATIVE EXPENSES

The projection of administrative expenses through 1990 was based on assumed increases in average wages, increases in the CPI, and increases in the number of beneficiaries. For years after 1990, administrative expenses were assumed to increase at approximately the compounded rate of the estimated increases in the number of beneficiaries and in average wages in covered employment.

RAILROAD RETIREMENT FINANCIAL INTERCHANGE

The effect of the financial interchange with the Railroad Retirement program was evaluated on the basis of trends similar to those used in estimating the cost of the OASDI benefits. The resulting effect was an average annual long-range cost to the OASDI system of 0.01 percent of taxable payroll.

REIMBURSEMENT FOR NONCONTRIBUTORY CREDITS

Reimbursement from the general fund of the Treasury for noncontributory credits for military service has not been reflected in the cost estimates. The reduction of cost resulting from such reimbursement is estimated to be about 0.05 percent of taxable payroll currently, and to decrease as a percentage of taxable payroll until about 2015, after which it is negligible.

Reimbursement from the general fund of the Treasury for special benefits paid to certain persons aged 72 and over has not been reflected in the cost estimates. The reduction in cost resulting from such reimbursement is estimated to be 0.01 percent of taxable payroll currently, and to decrease to a negligible amount after 1984.

APPENDIX B.—SENSITIVITY ANALYSIS

This appendix illustrates the sensitivity of the medium-range and long-range cost estimates to changes in selected individual assumptions. Although the estimates under alternatives I, II-A, II-B, and III illustrate the variations in the projected cost of the OASDI program resulting from different combinations of assumptions, they do not show the variations resulting from changes in any single assumption. In the sensitivity analysis, alternative II-B is used as an illustrative set of assumptions. For each sensitivity test, only one assumption within that alternative is varied, and the resulting range of cost rates is estimated. Similar variations in the selected assumptions within alternatives I, II-A, and III would result in similar variations in cost rates (when expressed as percentage variations).

TOTAL FERTILITY RATE

Table B1 shows the estimated average cost rate under alternative II-B with various assumed ultimate total fertility rates. Those rates are 1.7 children per woman (as in alternative III), 2.1 (as in alternatives II-A and II-B), and 2.4 (as in alternative I). The rates are assumed to change gradually from their current levels and to reach their ultimate values in 2005.

TABLE B1.—ESTIMATED AVERAGE COST RATE OF OASDI SYSTEM UNDER ALTERNATIVE II-B WITH VARIOUS FERTILITY ASSUMPTIONS
[As percent of taxable payroll]

Calendar years	Ultimate total fertility rate ^a		
	1.7	2.1	2.4
1981-2005.....	11.52	11.51	11.51
2006-2030.....	14.52	13.87	13.46
2031-2055.....	19.75	16.81	15.09
1981-2055.....	15.26	14.07	13.35

^aThe total fertility rate for a given year is the number of children a woman would have during her lifetime if she were to experience the age-specific birth rates observed in that year and were to survive the entire child-bearing period. Ultimate rates are assumed to be attained by 2005.

Note: The definitions of alternative II-B and taxable payroll are presented in the text.

Over the medium-range period, the estimated average cost rate is nearly identical under the three fertility assumptions, varying only from 11.51 percent of taxable payroll (for 2.4 children per woman) to 11.52 percent (for 1.7 children per woman). By contrast, the estimated average long-range cost rate varies over a wide range, from 13.35 to 15.26 percent.

During the medium-range period, changes in fertility affect the working population only slightly and result in relatively minor changes in the number of child beneficiaries. Hence, the program cost is affected only slightly. Later in the 75-year period, however, under higher fertility, the labor force increases faster than the beneficiary population, so that the estimated average long-range cost rate decreases with increasing fertility.

MORTALITY

Table B2 shows the estimated average cost rate under alternative II-B with various assumptions about future mortality improvement, as meas-

ured by the percentage decrease from 1978 to 2055 in the age-sex-adjusted death rate. Those assumptions are that mortality will improve by about 22 percent (as in alternative I), 36 percent (as in alternatives II-A and II-B), and 58 percent (as in alternative III).

TABLE B2.—ESTIMATED AVERAGE COST RATE OF OASDI SYSTEM UNDER ALTERNATIVE II-B WITH VARIOUS MORTALITY ASSUMPTIONS
[As percent of taxable payroll]

Calendar years	Mortality improvement ¹		
	22 percent	36 percent	58 percent
1981-2005.....	11.35	11.51	11.86
2006-2030.....	13.25	13.87	15.23
2031-2055.....	15.57	16.81	19.53
1981-2055.....	13.39	14.07	15.54

¹The mortality improvement is the percentage decrease from 1978 to 2055 in the age-sex-adjusted death rate.

Note: The definitions of alternative II-B and taxable payroll are presented in the text.

Over the medium-range period, the estimated average cost rate increases with increasing mortality improvement from 11.35 percent of taxable payroll (for 22 percent mortality improvement) to 11.86 percent (for 58 percent improvement). Over the long-range period, a similar but more pronounced trend exists. The estimated average long-range cost rate increases from 13.39 to 15.54 percent.

The estimated average cost rate increases with increasing improvement in mortality because of the relationship between age and mortality. Any mortality improvement in the population over age 65, where mortality rates are the highest, extends the length of time that retirement benefits are paid. At ages 50-64, mortality improvement results in an increase in tax income, but this is more than offset by the resulting increase in benefits payable to the additional retirees at age 65. At ages 20-49, mortality rates are so low that even substantial improvement in the rates would not result in significant increases in the number of covered workers. Mortality improvement at ages under 20 has relatively little long-term effect on the relationship between income and outgo. Consequently, the net effect of mortality improvement is to increase outgo more than taxable income, thereby resulting in higher cost rates.

DISABILITY INCIDENCE RATES

Table B3 shows the estimated average cost rate under alternative II-B with various disability incidence rate assumptions. Those assumptions are that the ultimate disability incidence rates by age and sex will differ from the average rates by age and sex experienced in 1978-80 as follows: they will be about the same (as in alternative I), about 15 percent higher (as in alternatives II-A and II-B), and about 30 percent higher (as in alternative III). The rates are assumed to change gradually from their current levels and to reach their ultimate values in 2000.

TABLE B3.—ESTIMATED AVERAGE COST RATE OF OASDI SYSTEM UNDER ALTERNATIVE II-B WITH VARIOUS DISABILITY INCIDENCE ASSUMPTIONS
[As percent of taxable payroll]

Calendar years	Disability incidence rate increase ¹		
	None	15 percent	30 percent
1981-2005	11.42	11.51	11.60
2006-2030	13.66	13.87	14.08
2031-2055	16.60	16.81	17.02
1981-2055	13.89	14.07	14.23

¹The disability incidence rate increase is based on the ratio of the age-sex-adjusted incidence rate in 2000 and later to such rate during 1978-80, with an adjustment to reflect the effects of the Disability Amendments of 1980.

Note: The definitions of alternative II-B and taxable payroll are presented in the text.

Over the medium-range period, the estimated average cost rate varies with changing disability incidence from 11.42 percent of taxable payroll (for no increase) to 11.60 percent (for 30 percent increase). Over the long-range period, it varies from 13.89 percent to 14.23 percent.

CONSUMER PRICE INDEX

Table B4 shows the estimated average cost rate under alternative II-B with various CPI assumptions. These assumptions are that the ultimate annual CPI increase will be 2 percent (as in alternative I), 3 percent (as in alternative II-A), 4 percent (as in alternative II-B), 5 percent (as in alternative III), and 6 percent. In each case the ultimate real-wage differential is assumed to be 1.5 percent, yielding ultimate percentage increases in average annual wages of 3.5, 4.5, 5.5, 6.5, and 7.5 percent, respectively. The annual CPI increase is assumed to change gradually from its current level and to reach its ultimate value in 1990.

TABLE B4.—ESTIMATED AVERAGE COST RATE OF OASDI SYSTEM UNDER ALTERNATIVE II-B WITH VARIOUS CONSUMER PRICE INDEX ASSUMPTIONS
[As percent of taxable payroll]

Calendar years	Ultimate percentage increase in wages-CPI ¹				
	3.5-2	4.5-3	5.5-4	6.5-5	7.5-6
1981-2005	11.68	11.59	11.51	11.44	11.36
2006-2030	14.21	14.04	13.87	13.72	13.56
2031-2055	17.22	17.02	16.81	16.62	16.44
1981-2055	14.37	14.22	14.07	13.93	13.79

¹The first value in each pair is the assumed annual percentage increase in average wages in 1991 and later years. The second value is the assumed annual percentage increase in CPI in 1990 and later years. The assumptions used in earlier years gradually merge into the ultimate values.

Note: The definitions of alternative II-B and taxable payroll are presented in the text.

Over both the medium-range and long-range periods, the estimated average cost rate varies as the assumed rate of change in the CPI increases. Over the medium range, the estimated average cost rate decreases from 11.68 percent of taxable payroll (for CPI increases of 2 percent) to 11.36 percent (for CPI increases of 6 percent). Over the long-range, it varies from 14.37 percent to 13.79 percent.

The relationship described above results primarily from the time lag between the effect on income and on benefit outgo. When assuming a higher rate of increase in the CPI (in conjunction with a constant real-wage differential), the effect on income of the implied higher rate of increase in wages is experienced immediately, while the effect on

benefits of the higher rate of increase in the CPI is experienced with about a half-year lag. In addition, the earliest effect on benefits of the higher rate of increase in wages is experienced with about a 2-year lag.

REAL-WAGE DIFFERENTIAL

Table B5 shows the estimated average cost rate under alternative II-B with various real-wage assumptions. These assumptions are that the ultimate real-wage differential will be 1 percent (as in alternative III), 1.5 percent (as in alternative II-B), 2 percent (as in alternative II-A), and 2.5 percent (as in alternative I). In each case the ultimate annual CPI increase is assumed to be 4 percent, yielding ultimate percentage increases in average annual wages of 5, 5.5, 6, and 6.5 percent, respectively. The real-wage differential is assumed to change gradually from its current level and to reach its ultimate value in 1991.

TABLE B5.—ESTIMATED AVERAGE COST RATE OF OASDI SYSTEM UNDER ALTERNATIVE II-B WITH VARIOUS REAL-WAGE ASSUMPTIONS
[As percent of taxable payroll]

Calendar years	Ultimate percentage increase in wages-CPI ¹			
	5-4	5.5-4	6-4	6.5-4
1981-2005	11.93	11.51	11.12	10.75
2006-2030	14.77	13.87	13.06	12.31
2031-2055	18.03	16.81	15.73	14.72
1981-2055	14.91	14.07	13.30	12.59

¹The first value in each pair is the assumed annual percentage increase in average wages in 1991 and later years. The second value is the assumed annual percentage increase in CPI in 1990 and later years. The difference between the two values is the real-wage differential. The assumptions used in earlier years gradually merge into the ultimate values.

Note: The definitions of alternative II-B and taxable payroll are presented in the text.

Over the medium-range period, the estimated average cost rate varies from 11.93 percent of taxable payroll (for real-wage differentials of 1 percent) to 10.75 percent (for differentials of 2.5 percent). Over the long-range period, it varies from 14.91 percent to 12.59 percent.

The average cost rate decreases with increasing real-wage differentials for two reasons. One is that there is a lag between the time when workers pay taxes based on the higher earnings and the time when they draw benefits based on those earnings. The other is that the benefits to those already eligible—benefits which increase according to the increase in the CPI, not wages—are smaller relative to the payrolls based on the higher real-wage differentials.

APPENDIX C.—CYCLIC ANALYSIS

INTRODUCTION

The main body of this report presents projections of the operations of the Old-Age, Survivors, and Disability Insurance system under four separate sets of assumptions, which are referred to as alternatives I, II-A, II-B, and III. From an economic point of view, all four of these alternative sets are based on trend assumptions; that is, after completing the present economic cycle each one of them immediately moves into a relatively steady growth projection in which there are no economic cycles. There are certain advantages in the adoption of those types of projections. For instance, it frees the projector from the difficult task of having to develop various sets of economic cycles. The significant unpredictability of the timing and amplitude of these cycles could lead to widespread disagreement over the particular sequence chosen, thereby diverting attention from the much more significant average level of the experience over the cycles. Also, it can be argued that, for long-range purposes, the trend projection is just as useful because the cumulative effects of the upswings and downswings in the cycles tend to offset each other, producing a net result not too dissimilar from the average or trend.

Because the OASDI system is projected to operate in the near future with relatively small reserves under the trend assumptions, it is advisable to consider the effect that economic cycles could have on the projected financial conditions of the system. The projected fund balances might not be large enough to protect the system against the effects of a normal downswing in the economy. The purpose of this appendix is not to test whether the present OASDI system could withstand a deep and protracted recession; this could be done using a set of pessimistic assumptions. The purpose is to test how well the system would operate in the near future during a normal economic slowdown under intermediate assumptions, and to test the financial situation of the system in the near future during a normal economic upswing, also under intermediate assumptions.

This type of exercise should provide an indication of the safety margin that needs to be built into the short-range financing of the OASDI system if it is to survive normal economic cycles that revolve about the intermediate assumptions. Obviously, if protection were desired against the more severe conditions of a deep and protracted recession it would be necessary to simulate the operations of the system under some set of pessimistic assumptions, which would undoubtedly indicate the need for more financing. Similarly, the exercise should provide information as to whether a cut in tax rates could be enacted in the near future if the national economy were to operate at a very favorable pace.

DESCRIPTION OF THE PROJECTED ECONOMIC CYCLES

The operations of the OASDI system are projected in this appendix under two different assumed cyclical paths, both of which revolve around the trend path of alternative II-B previously described in the main body of the report. Because the value of the exercise in this appendix consists principally of providing an idea of the safety margin needed in the financing of the system, the two cyclical paths were

superimposed on alternative II-B, the less optimistic of the two intermediate sets of assumptions presented in the report.

The projected cyclical paths are limited to the 10-year period 1981-90, because further elongation of this period would not add significant information to that already conveyed by the trend path projection. All three paths (the two cyclical and the trend) result in about the same projected average real GNP during 1981-90. Their difference is in the route they follow from the first quarter of 1981 through the fourth quarter of 1990.

The principal economic assumptions for the paths are shown in Table C1. The two cyclical paths assume that the national economy was at different points in the cycle at the end of the first quarter of 1981. The first path, which is referred to as "cycle-up," assumes that, at the end of the first quarter of 1981, the national economy was in the midst of a long upswing from the trough in the second quarter of 1980 and that it will reach its greatest divergence from the alternative II-B path in the second quarter of 1984. The second cyclical path, which is referred to as "cycle-down," assumes that economic activity will be declining until a low point is reached in the fourth quarter of 1981.

TABLE C1.—SELECTED ECONOMIC ASSUMPTIONS IN CYCLE-UP, ALTERNATIVE II-B, AND CYCLE-DOWN, CALENDAR YEARS 1980-1990

Calendar year	Average annual percentage increase in—					Average annual unemployment rate (percent)
	Real GNP	Average wages in covered employment	Consumer Price Index	Real-wage differential (percent)	Average annual interest rate (percent)	
1980	-0.1	8.5	13.5	-5.0	11.0	7.1
Cycle-up:						
1981	2.6	10.6	10.2	.4	12.1	7.5
1982	3.6	9.2	8.9	.3	10.1	7.2
1983	3.9	8.4	7.9	.5	8.8	6.5
1984	3.0	9.0	8.1	.9	8.4	6.1
1985	-7	8.9	10.1	-1.2	8.7	6.9
1986	2.5	8.6	7.0	1.6	7.9	7.8
1987	4.7	7.7	5.7	2.0	7.2	6.8
1988	4.2	7.1	5.7	1.4	7.0	6.1
1989	3.3	7.8	7.0	.8	7.3	5.4
1990 .....	.5	8.1	8.0	.1	7.6	6.0
Alternative II-B:						
1981	1.1	10.2	11.1	-.9	11.4	7.8
1982	3.7	9.6	9.4	.2	9.9	7.5
1983	3.5	9.7	9.0	.7	9.1	7.2
1984	2.9	8.8	8.2	.6	8.4	7.0
1985	2.9	8.1	7.4	.7	7.9	6.8
1986	2.9	7.3	6.6	.7	7.4	6.6
1987	2.9	6.8	5.8	1.0	7.1	6.4
1988	2.9	6.2	5.0	1.2	6.7	6.2
1989	3.0	5.5	4.2	1.3	6.4	6.0
1990	3.0	5.4	4.0	1.4	6.1	5.9
Cycle-down:						
1981 .....	.8	10.0	11.1	-1.1	12.1	7.9
1982	2.8	9.6	9.6	.0	10.2	8.5
1983	4.3	8.6	8.2	.4	9.0	7.5
1984	4.0	8.6	7.9	.7	8.4	6.9
1985	3.7	8.3	7.5	.8	7.9	6.3
1986	3.3	8.8	8.0	.8	8.1	5.9
1987 .....	.8	8.9	9.2	-.3	7.7	6.1
1988 .....	.7	8.0	7.4	.6	7.7	7.4
1989	5.2	7.6	4.7	2.9	6.8	6.6
1990	5.0	7.3	4.7	2.6	6.5	5.5

In the fourth quarter of 1990, the cycle-up path reaches a cyclical trough where real GNP is 3.9 percent lower than the alternative II-B

trend assumptions, and the cycle-down path reaches a cyclical peak where real GNP is 1.8 percent higher than the trend assumptions. Thus, although the average real GNP during the decade is about the same for the two cyclical paths, during the fourth quarter of 1990 there is a 5.7 percent difference between the real GNP assumption in the two paths. Because the two cyclical paths are at different points in the cycle at the end of 1990, point to point comparisons from 1981 to 1990 may be misleading for some of the economic parameters. However, the average level of all of the economic assumptions is about the same.

The annual increase in the CPI was difficult to cycle about the trend assumption without assuming some years of very low price increases. As a result, the average annual increase in the CPI from 1981 through 1990 is about 7.8 percent for the two cyclical paths, while it is only 7.1 percent for the trend assumptions.

In the cycle-up path, the average annual unemployment rate declines from an assumed 7.5 percent in 1981 to 6.1 percent in 1984. As a result of the assumed recession in 1985, unemployment rises to 7.8 percent in 1986, and then declines to 5.4 percent in 1989 during the ensuing recovery. The unemployment rate rises to 6.0 percent in 1990 as the economy dips into the second recession. The annual rate of increase in average wages in covered employment fluctuates between 10.6 percent in 1981 and 7.1 percent in 1988, while the annual rate of increase in the CPI fluctuates between 10.2 percent in 1981 and 5.7 percent in 1987 and 1988. The general trend of both wage and CPI increases, as in the alternative II-B trend assumptions, is downward. The real-wage differential fluctuates between -1.2 percent in 1985 and +2.0 percent in 1987. The annual interest rate is assumed to decline from 12.1 percent in 1981 to 7.0 percent in 1988, and then to increase to 7.6 percent in 1990.

In the cycle-down path, because of the assumed recession in 1981, the average annual unemployment rate rises from 7.1 percent in 1980 to 8.5 percent in 1982, and then drops to 5.9 percent in 1986 during the ensuing recovery. During the next recession, the unemployment rate rises to 7.4 percent in 1988 and then falls to 5.5 percent in 1990. The annual rate of increase in average wages in covered employment fluctuates between 10.0 percent in 1981 and 7.3 percent in 1990, while the annual rate of increase in the CPI fluctuates between 11.1 percent in 1981 and 4.7 percent in 1989 and 1990. As in the alternative II-B trend assumptions, the general trend of both the wage and CPI assumptions is downward during the 1980's. The real-wage differential fluctuates between -1.1 percent in 1981 and 2.9 percent in 1989. The annual interest rate is assumed to decline from 12.1 percent in 1981 to 7.9 percent in 1985, and then to rise to 8.3 percent in 1987 before dropping to 6.5 percent in 1990.

*ESTIMATED OPERATIONS AND STATUS OF THE TRUST FUNDS UNDER THE
CYCLICAL ECONOMIC ASSUMPTIONS*

Estimates of the operations and status of the OASI Trust Fund, the DI Trust Fund, and the OASDI Trust Funds combined during calendar years 1980-90 are shown in Table C2 for three economic paths.

TABLE C2.—ESTIMATED OPERATIONS OF THE OASI, DI, AND COMBINED OASDI TRUST FUNDS
DURING CALENDAR YEARS 1980-90 UNDER THREE ECONOMIC PATHS
[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Fund at beginning of year as a percentage of disbursements during year
OASI:					
"Cycle-up":					
1980	\$105.8	\$107.7	-1.8	\$22.8	23
1981	124.2	127.0	-2.9	20.0	18
1982	133.3	144.5	-11.2	8.8	14
1983	146.2	161.8	-15.6	-6.8	5
1984	161.1	180.2	-19.1	-25.9	-4
1985	181.0	201.6	-20.6	-46.5	-13
1986	194.7	225.7	-31.0	-77.5	-21
1987	213.2	248.2	-35.0	-112.5	-31
1988	231.9	268.8	-36.9	-149.4	-42
1989	253.2	291.3	-38.0	-187.4	-51
1990	293.9	318.8	-24.9	-212.3	-59
Alternative II-B:					
1980	105.8	107.7	-1.8	22.8	23
1981	123.3	127.0	-3.7	19.1	18
1982	132.7	144.8	-12.1	7.0	13
1983	146.3	163.3	-17.0	-10.0	4
1984	160.1	183.3	-23.2	-33.2	-5
1985	181.1	203.8	-22.7	-55.9	-16
1986	196.4	224.7	-28.3	-84.2	-25
1987	211.4	245.6	-34.2	-118.4	-34
1988	225.8	265.9	-40.1	-158.5	-45
1989	239.8	285.3	-45.5	-204.0	-56
1990	274.1	304.3	-30.2	-234.2	-67
"Cycle-down":					
1980	105.8	107.7	-1.8	22.8	23
1981	123.2	127.0	-3.8	19.0	18
1982	130.9	145.6	-14.7	4.4	13
1983	143.7	164.3	-20.6	-16.3	3
1984	157.6	183.3	-25.7	-42.0	-9
1985	178.9	203.3	-24.3	-66.3	-21
1986	196.9	224.4	-27.5	-93.8	-30
1987	214.6	249.3	-34.7	-128.5	-38
1988	227.4	277.5	-50.1	-178.6	-46
1989	247.4	303.1	-55.8	-234.4	-59
1990	291.9	325.2	-33.2	-267.6	-72
DI:					
"Cycle-up":					
1980	13.9	15.9	-2.0	3.6	35
1981	17.1	18.1	-1.0	2.7	20
1982	24.0	19.5	4.4	7.1	14
1983	27.5	20.8	6.6	13.7	34
1984	31.1	22.4	8.7	22.4	61
1985	39.4	24.4	15.1	37.4	92
1986	44.1	26.6	17.5	55.0	141
1987	49.7	28.8	20.9	75.9	191
1988	55.5	30.9	24.5	100.5	245
1989	62.1	33.5	28.6	129.1	300
1990	77.9	36.7	41.1	170.3	351
Alternative II-B:					
1980	13.9	15.9	-2.0	3.6	35
1981	17.0	18.1	-1.1	2.5	20
1982	23.9	19.6	4.3	6.8	13
1983	27.5	21.0	6.5	13.3	32
1984	31.0	22.8	8.2	21.5	58
1985	39.4	24.6	14.9	36.3	87
1986	44.3	26.4	17.9	54.2	138
1987	49.1	28.5	20.6	74.9	191
1988	53.9	30.7	23.3	98.1	244
1989	58.8	32.8	26.0	124.1	299
1990	72.2	35.1	37.2	161.3	354
"Cycle-down":					
1980	13.9	15.9	-2.0	3.6	35
1981	17.0	18.1	-1.1	2.5	20
1982	23.5	19.7	3.9	6.4	13
1983	27.1	21.1	5.9	12.3	30
1984	30.5	22.7	7.8	20.1	54
1985	39.0	24.4	14.6	34.7	82
1986	44.5	26.3	18.2	52.9	132
1987	50.2	28.8	21.4	74.3	184
1988	55.3	31.9	23.4	97.8	233
1989	61.8	34.6	27.2	124.9	283
1990	77.9	37.1	40.8	165.8	337

TABLE C2.—ESTIMATED OPERATIONS OF THE OASI, DI, AND COMBINED OASDI TRUST FUNDS DURING CALENDAR YEARS 1980-90 UNDER THREE ECONOMIC PATHS (Cont.)
[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Fund at beginning of year as a percentage of disbursements during year
OASDI:					
"Cycle-up":					
1980 ¹	119.7	123.6	-3.8	26.5	25
1981.....	141.2	145.1	-3.8	22.6	18
1982.....	157.3	164.0	-6.7	15.9	14
1983.....	173.7	182.6	-8.9	7.0	9
1984.....	192.2	202.6	-10.4	-3.5	3
1985.....	220.4	226.0	-5.6	-9.0	-2
1986.....	238.8	252.2	-13.5	-22.5	-4
1987.....	262.9	277.0	-14.1	-36.5	-8
1988.....	287.4	299.8	-12.3	-48.9	-12
1989.....	315.4	324.8	-9.4	-58.3	-15
1990.....	371.8	355.6	16.3	-42.0	-16
Alternative II-B:					
1980 ¹	119.7	123.6	-3.8	26.5	25
1981.....	140.2	145.1	-4.8	21.6	18
1982.....	156.6	164.4	-7.8	13.8	13
1983.....	173.8	184.4	-10.6	3.2	7
1984.....	191.1	206.0	-15.0	-11.7	2
1985.....	220.6	228.4	-7.9	-19.6	-5
1986.....	240.7	251.1	-10.4	-30.0	-8
1987.....	260.4	274.0	-13.6	-43.6	-11
1988.....	279.7	296.5	-16.8	-60.4	-15
1989.....	298.6	318.1	-19.5	-79.9	-19
1990.....	346.3	339.4	7.0	-73.0	-24
"Cycle-down":					
1980 ¹	119.7	123.6	-3.8	26.5	25
1981.....	140.2	145.1	-4.9	21.6	18
1982.....	154.4	165.2	-10.8	10.8	13
1983.....	170.7	185.4	-14.7	-3.9	6
1984.....	188.2	206.1	-17.9	-21.8	-2
1985.....	218.0	227.7	-9.7	-31.6	-10
1986.....	241.5	250.7	-9.3	-40.9	-13
1987.....	264.8	278.1	-13.3	-54.2	-15
1988.....	282.7	309.4	-26.6	-80.8	-18
1989.....	309.2	337.8	-28.6	-109.4	-24
1990.....	369.8	362.2	7.6	-101.8	-30

¹Actual experience.

A more detailed analysis of the general trend underlying these estimates, and in particular the assumptions used in alternative II-B, is contained in section VI in the body of this report. This appendix highlights the deviation that could occur from the alternative II-B trend path as a result of cyclical patterns that are typical to the U.S. economy.

A comparison of the estimates under alternative II-B and the cycle-up path shows that the favorable effects on the trust funds of a long period of expansion can offset the unfavorable effects of a subsequent recession. For example, the cycle-up path assumes that the economy operates at a level of real GNP that is higher and generally growing faster from the first quarter of 1981 through the second quarter of 1984. The fund ratios fall less rapidly under the cycle-up path than under alternative II-B, so that at the beginning of 1986, the fund ratios are about 4 percentage points higher in each instance than under alternative II-B. As a result of the assumed 1985 recession, the fund ratios fall more quickly than under alternative II-B, but generally remain slightly higher than those under that estimate.

A comparison of the estimates under alternative II-B and the cycle-down path shows that the effects of a recession on the trust fund last for

several years after the recession ends. For example, in the cycle-down path, a trough is reached in the fourth quarter of 1981, but real GNP is projected to increase faster than under alternative II-B from the first quarter of 1982 through the second quarter of 1986. Nevertheless, the estimated trust fund ratio at the beginning of 1986 is 5 percentage points lower in all instances under the cycle-down path than under the alternative II-B trend assumptions. It is not until 1986 and 1987 that the experience under the cycle-down path shows a smaller decrease in the combined OASDI Trust Funds than under the alternative II-B assumptions, and the fund ratio recovers slightly to within 3 percentage points of the ratio under alternative II-B. However, the cycle-down path enters into a second recession.

Under alternative II-B and the cycle-down path, the combined OASDI Trust Funds become unable to pay benefits when due in 1982, while under the cycle-up path this occurs in early 1983. Also, as may be noted from Table C3, the difference between the cost rates and the tax rates varies among the paths. During 1982-84, the cost rates are higher than the tax rates by an average of 0.57 percentage points under the cycle-up path, 0.69 percentage points under alternative II-B, and 0.88 percentage points under cycle-down. During 1985-89, the corresponding averages of the excess percentage points of disbursements over revenues are 0.30, 0.39, and 0.46, respectively.

TABLE C3.—ESTIMATED COST RATES FOR THE OASI AND DI TRUST FUNDS COMPARED WITH COMBINED EMPLOYEE-EMPLOYER CONTRIBUTION RATES, FOR CALENDAR YEARS 1980-90 UNDER THREE ECONOMIC PATHS

Calendar year	OASI Trust Fund			DI Trust Fund			OASI and DI Trust Funds, combined		
	Estimated cost rate	Combined employee-employer contribution rate	Difference	Estimated cost rate	Combined employee-employer contribution rate	Difference	Estimated cost rate	Combined employee-employer contribution rate	Difference
Cycle-up:									
1980 ¹	9.39	9.04	-0.35	1.38	1.12	-0.26	10.77	10.16	-0.61
1981	9.82	9.40	-0.42	1.40	1.30	-0.10	11.21	10.70	-0.51
1982	10.02	9.15	-0.87	1.36	1.65	.29	11.38	10.80	-0.58
1983	10.07	9.15	-0.92	1.30	1.65	.35	11.37	10.80	-0.57
1984	10.09	9.15	-0.94	1.25	1.65	.40	11.35	10.80	-0.55
1985	10.34	9.50	-0.84	1.25	1.90	.65	11.59	11.40	-0.19
1986	10.65	9.50	-1.15	1.25	1.90	.65	11.90	11.40	-0.50
1987	10.59	9.50	-1.09	1.23	1.90	.67	11.82	11.40	-0.42
1988	10.47	9.50	-0.97	1.21	1.90	.69	11.68	11.40	-0.28
1989	10.33	9.50	-0.83	1.19	1.90	.71	11.52	11.40	-0.12
1990	10.45	10.20	-0.25	1.20	2.20	1.00	11.65	12.40	.75
Alternative II-B:									
1980 ¹	9.39	9.04	-0.35	1.38	1.12	-0.26	10.77	10.16	-0.61
1981	9.89	9.40	-0.49	1.41	1.30	-0.11	11.30	10.70	-0.60
1982	10.08	9.15	-0.93	1.36	1.65	.29	11.45	10.80	-0.65
1983	10.15	9.15	-1.00	1.31	1.65	.34	11.45	10.80	-0.65
1984	10.29	9.15	-1.14	1.28	1.65	.37	11.57	10.80	-0.77
1985	10.38	9.50	-0.88	1.25	1.90	.65	11.63	11.40	-0.23
1986	10.49	9.50	-0.99	1.23	1.90	.67	11.73	11.40	-0.33
1987	10.57	9.50	-1.07	1.22	1.90	.68	11.79	11.40	-0.39
1988	10.83	9.50	-1.13	1.23	1.90	.67	11.86	11.40	-0.46
1989	10.65	9.50	-1.15	1.23	1.90	.67	11.88	11.40	-0.48
1990	10.64	10.20	-0.44	1.23	2.20	.97	11.86	12.40	.54
Cycle-down:									
1980 ¹	9.39	9.04	-0.35	1.38	1.12	-0.26	10.77	10.16	-0.61
1981	9.90	9.40	-0.50	1.41	1.30	-0.11	11.30	10.70	-0.60
1982	10.28	9.15	-1.13	1.39	1.65	.26	11.66	10.80	-0.86
1983	10.35	9.15	-1.20	1.33	1.65	.32	11.68	10.80	-0.88
1984	10.40	9.15	-1.25	1.29	1.65	.36	11.69	10.80	-0.89
1985	10.43	9.50	-0.93	1.25	1.90	.65	11.68	11.40	-0.28
1986	10.40	9.50	-0.90	1.22	1.90	.68	11.62	11.40	-0.22
1987	10.52	9.50	-1.02	1.22	1.90	.68	11.74	11.40	-0.34
1988	10.91	9.50	-1.41	1.25	1.90	.65	12.17	11.40	-0.77
1989	10.83	9.50	-1.33	1.24	1.90	.66	12.07	11.40	-0.67
1990	10.56	10.20	-0.36	1.20	2.20	1.00	11.76	12.40	.64

¹Actual experience.

As mentioned in the body of the report, when the fund ratio of either the OASI program or the DI program falls below 9 percent, the assets of the fund become insufficient to pay benefits when due. One must be aware that, if the fund ratio were to go as low as 9 percent at the beginning of any month, on the 3rd of that month the trust funds would be nearly depleted with only a nominal amount of cash. Income during the month would have to be relied upon to make payments on the 3rd of the following month.

The results of this analysis show that fluctuations in the fund ratio of about 5 percentage points in either direction of the trend are likely to occur, because of the normal cyclical behavior of the U.S. economy. Since the system needs a fund ratio of about 9 percent to be able to meet its monthly benefit payments, it could be concluded that a projected fund ratio of at least 14 percent would be needed to protect the benefit payments against normal cycles in the economy. It should be recognized, however, that all of the other factors used in the projections could also fluctuate about their assumed trends. For a particular year the net effect of the fluctuations of these other factors could adversely affect the system causing the actual fund ratio to be significantly lower than projected. Prudence would require a safety margin with respect to these other factors of at least another 5 percentage points in the fund ratio. Thus, a projected fund ratio of less than 20 percent should be considered a clear call for action to satisfactorily assure the payment of monthly benefits as projected under the trend assumptions. Of course, such a ratio would not provide an adequate margin of safety against actual future trends different than assumed, but only against temporary cyclical fluctuations.

APPENDIX D.—DETERMINATION AND ANNOUNCEMENT OF SOCIAL SECURITY BENEFIT INCREASES¹

I hereby determine and announce a cost-of-living increase of 14.3 percent in benefits under titles II and XVI of the Social Security Act.

Under title II, Old-Age, Survivors and Disability Insurance benefits will increase by 14.3 percent beginning with the June 1980 benefits which are payable on July 3, 1980. This increase is based on the authority contained in section 215(i) of the Social Security Act (42 U.S.C. 415(i)), as amended by section 201 of Pub. L. 95-216 enacted December 20, 1977.

Under title XVI, supplemental security income payment levels will increase by 14.3 percent effective for payments made on July 1, 1980. This is based on the authority contained in section 1617 of the Social Security Act (42 U.S.C. 1382f).

TITLE II BENEFITS

Title II benefits are payable under the Federal Old-Age, Survivors and Disability Insurance program. Individuals entitled under this program include insured workers, wives, husbands, children, widows, widowers, mothers, fathers and parents.

In accordance with section 215(i)(4) of the Social Security Act (the Act), the primary insurance amounts and the maximum family benefits shown in columns IV and V of the revised benefit table (table 1) set forth below were obtained by increasing by 14.3 percent the corresponding amounts established by: (1) the last cost-of-living increase; and (2) the extension of the benefit table made under section 215(i)(4) and published on November 1, 1979 at 44 FR 62956. The table applies only to those persons who attained age 62, became disabled or died before January 1979 and is deemed to appear in section 215(a) of the Act. Note that this table does not apply to those individuals who become eligible for retirement benefits, become disabled, or die after 1978; their benefits will generally be determined by a new benefit formula provided by the Social Security Amendments of 1977 (Pub. L. 95-216). For such persons first eligible for benefits in 1979 and 1980, the 14.3 percent increase will apply beginning June 1980; but the 14.3 percent increase will not apply for persons first becoming eligible for benefits after 1980.

Section 215(i)(2)(D) of the Act also requires that, when the Secretary determines a cost-of-living increase in Social Security benefits, the Secretary shall publish in the Federal Register a revision of the range of the primary insurance amounts, and corresponding maximum family benefits, based on the dollar amount and other provisions described in section 215(a)(1)(C)(i)(II). These benefits are referred to as "special minimum benefits" and are payable to certain individuals with long periods of relatively low earnings. In accordance with section 215(a)(1)(C)(i)(II), the attached Table 2 shows the revised range of primary insurance amounts and corresponding maximum family benefit amounts after the 14.3 percent benefit increase.

Section 227 of the Act provides limited benefits to a worker who became age 72 before 1969 and was not insured under the usual

¹This statement, edited for presentation here, was published in the Federal Register for May 14, 1980 (Vol. 45, No. 95, pp. 31781-82)

requirements, and to his wife or widow. Section 228 of the Act provides similar benefits at age 72 for certain uninsured persons. The current monthly benefit amounts of \$92.00 and \$46.10 established under sections 227 and 228 of the Act are increased by 14.3 percent to obtain the new amounts of \$105.20 and \$52.70.

TITLE XVI BENEFITS

Section 1617 of the Act provides that whenever title II benefits are increased under section 215(i), the amounts in sections 1611(a)(1)(A), 1611(a)(2)(A), 1611(b)(1) and 1611(b)(2) of the Act and in section 211(a)(1)(A) of Pub. L. 93-66 shall be increased. The new amounts are effective for months after the month in which the title II increase is effective. The percentage increase is the same as the title II benefit increase and the annual payment amount is rounded, when not a multiple of \$1.20, to the next higher multiple of \$1.20.

In accordance with section 1617, Federal Supplemental Security Income (SSI) guarantees for the aged, blind and disabled are increased effective with July 1980 by 14.3 percent. The current yearly Federal SSI guarantees of \$2,498.40 for an eligible individual and \$3,747.60 for an eligible individual with an eligible spouse are thereby increased to \$2,856.00 and \$4,284.00 respectively. The monthly payment is determined by dividing the yearly guarantee by 4, subtracting quarterly countable income, and dividing the remainder by 3. In the case of an eligible individual with an eligible spouse, the amount payable is further divided equally between the two spouses. The amount by which the Federal SSI guarantee amount is increased because of the presence of an essential person in the home, currently \$1,250.40 per year for each essential person under section 211(a)(1)(A) of Pub. L. 93-66, is also increased by 14.3 percent to obtain a new amount of \$1,430.40.

AUTOMATIC BENEFIT INCREASE DETERMINATION

Section 215(i) of the Act requires that when certain conditions are met in the first calendar quarter of a year, the Secretary shall determine that a cost-of-living increase in benefits is due. Section 215(i) of the Act also specifies the formula for determining the amount of any cost-of-living increase in benefits. This formula utilizes the Consumer Price Index for urban wage earners and clerical workers reported by the Department of Labor.

Section 215(i)(2)(A) of the Act requires the Secretary to determine each year, whether there is a cost-of-living computation quarter in that year. If the Secretary so determines, the Secretary shall, effective with June of that year, increase benefits for individuals entitled under sections 227 and 228 of the Act, and shall increase the primary insurance amounts of all other individuals entitled under title II of the Act, subject to the limitations provided in section 215(i)(2)(A) of the Act. Section 1617 of the Act requires that SSI benefits be increased by the same percentage increase as title II benefits, whenever title II benefits are increased under section 215(i). The percentage increase is equal to the percentage increase in the Consumer Price Index for the cost-of-living computation quarter over the index for the most recent cost-of-living computation quarter.

Section 215(i)(1) of the Act defines a base quarter as a calendar quarter ending on March 31 in each year after 1974, or any other calendar quarter in which occurs the effective month of a general benefit increase. Section 215(i)(1) also defines a cost-of-living computation quarter as a base quarter in which the Consumer Price Index prepared by the Department of Labor exceeds by not less than 3 percent the index in the later of (1) the last prior cost-of-living computation quarter or (2) the most recent calendar quarter in which a general benefit increase was effective. It is specified, however, that there shall be no cost-of-living computation quarter in any calendar year if, in the prior year, a general benefit increase was enacted or became effective. Section 215(i)(1) of the Act also provides that the Consumer Price Index for a cost-of-living computation quarter shall be the arithmetical mean of such index for the 3 months in that quarter.

The Department of Labor's revised Consumer Price Index for urban wage earners and clerical workers for each month in the quarter ending March 31, 1979, was: for January 1979, 204.0; for February 1979, 207.1; and for March 1979, 209.3. The arithmetical mean for that calendar quarter was 207.0. The corresponding Consumer Price Index for each month in the quarter ending March 31, 1980, was: for January 1980, 233.3; for February 1980, 236.5; and for March 1980, 239.9. The arithmetical mean for this calendar quarter is 236.6. The increase for the calendar quarter ending March 31, 1980, is 14.3 percent. Thus, since the percentage of increase in the Consumer Price Index from the calendar quarter ending March 31, 1979, to the calendar quarter ending March 31, 1980, is not less than 3 percent, the quarter ending March 31, 1980, is a cost-of-living computation quarter. Consequently, a cost-of-living benefit increase of 14.3 percent is effective for benefits under title II of the Act beginning June 1980.

(Catalog of Federal Domestic Assistance Programs Nos. 13.802-5, and 13.807 Social Security Programs.)

Dated: May 8, 1980.

Nathan J. Stark,
Acting Secretary of Health and Human Services

(The revised tables of benefits which were published at the end of the above announcement in the Federal Register are not reproduced here because of their length.)

APPENDIX E.—DETERMINATION AND ANNOUNCEMENT OF SOCIAL SECURITY CONTRIBUTION AND BENEFIT BASE, QUARTER OF COVERAGE AMOUNT, RETIREMENT TEST EXEMPT AMOUNTS, AVERAGE OF THE TOTAL WAGES, FORMULAS FOR COMPUTING BENEFITS AND EXTENDED TABLE OF BENEFIT AMOUNTS FOR 1981¹

Summary

The Secretary has determined—

(1) The Social Security contribution and benefit base to be \$29,700 for remuneration paid in 1981 and self-employment income earned in taxable years beginning in 1981;

(2) The amount of earnings a person must have to be credited with a quarter of coverage in 1981 to be \$310;

(3) The monthly exempt amount under the Social Security retirement test for taxable years ending in calendar year 1981 to be \$458.33 $\frac{1}{3}$ for beneficiaries aged 65 and over and \$340 for beneficiaries under age 65; and

(4) The average of the total wages for 1979 to be \$11,479.46.

The formulas we use to compute the benefits for a worker and his or her family who first becomes eligible for benefits in 1981 are also described below.

Finally, a table reflecting the new higher average monthly wage and related benefit amounts made possible by the higher contribution and benefit base is also published. The table will be used primarily to compute the retirement benefits of workers who reached age 62 before 1979.

Supplementary information

Sections 203(f)(8), 213(d) and 230(a) of the Social Security Act (42 U.S.C. 403(f)(8), 413(d) and 430(a)) require the Secretary of Health and Human Services to publish in the Federal Register on or before November 1, 1980, the contribution and benefit base, the amount of earnings required for a quarter of coverage, and the retirement test exempt amount, for calendar year 1981. In addition, section 215(a)(1)(D) requires that we publish by November 1, 1980 the formula for computing a primary insurance amount for workers who become eligible for benefits or die in 1981, and section 203(a)(2)(C) requires that we publish by November 1, 1980 the formula for computing a family's maximum benefits for families of workers who become eligible for old-age benefits or die in 1981.

CONTRIBUTION AND BENEFIT BASE

The contribution and benefit base serves two purposes:

(1) It is the maximum annual amount of earnings on which Social Security taxes are paid.

(2) It is the maximum annual amount used in figuring a person's Social Security benefits.

Section 230(c) of the Social Security Act specifies that the amount of the contribution and benefit base for 1981 is \$29,700.

¹This statement, edited for presentation here, was published in the Federal Register for November 18, 1980 (Vol. 45, No. 224, pp. 76252-54).

AVERAGE OF THE TOTAL WAGES FOR 1979

The determination of the average wage figure for 1979 is based on the 1978 average wage figure of \$10,556.03 announced in the Federal Register on November 1, 1979 (44 FR 62956) along with the percentage increase in average wages from 1978 to 1979 measured by annual wage data tabulated by the Internal Revenue Service (IRS). The average amounts of wages calculated directly from IRS data were \$10,840.68 and \$11,789.01 for 1978 and 1979, respectively. To determine an average wage figure for 1979 at a level that is consistent with the series of average wages for 1951-1977 (published December 29, 1978 at 43 FR 61016), we multiplied the 1978 average wage figure of \$10,556.03 by the percentage increase in average wages from 1978 to 1979 (based on IRS data) as follows (with the result rounded to the nearest cent):

$$\text{Average wage for 1979} = \$10,556.03 \times (\$11,789.01/\$10,840.68) = \$11,479.46.$$

Therefore, the average wage for 1979 is determined to be \$11,479.46.

*QUARTER OF COVERAGE AMOUNT**Computation*

The 1981 amount of earnings required for a quarter of coverage is \$310. A quarter of coverage is the basic unit for determining whether a worker is insured under the Social Security program. For years before 1978, an individual generally was credited with a quarter of coverage for each quarter in which wages of \$50 or more were paid, or for which \$100 or more of self-employment income were credited, to the individual. Beginning in 1978, wages generally are no longer reported quarterly; annual reports are made. With the change to annual reporting, section 352(b) of the Social Security Amendments of 1977 (Pub. L. 95-216) amended section 213(d) of the Social Security Act to provide that a quarter of coverage would be credited for each \$250 of an individual's total wages and self-employment income for calendar year 1978 (up to a maximum of 4 quarters of coverage for the year). Section 213(d) also provides that this \$250 amount shall be redetermined each year and any change published in the Federal Register no later than November 1 of the year preceding the year for which the change is effective. Under the prescribed formula, the quarter of coverage amount for 1981 shall be equal to the 1978 amount of \$250 multiplied by the ratio of (1) the average amount, per employee, of total wages for calendar year 1979 to (2) the average amount of those wages reported for calendar year 1976. The section further provides that if the amount so determined is not a multiple of \$10, it shall be rounded to the nearest multiple of \$10.

Average wages

The average wage for calendar year 1976 was previously determined to be \$9,226.48. This was published in the Federal Register on December 29, 1978, at 43 FR 61016. The average wage for calendar year 1979 has been determined to be \$11,479.46 as stated in a previous section.

Amount

The ratio of the average wage for 1979, \$11,479.46, compared to 1976, \$9,226.48, is 1.244186. Multiplying the 1978 quarter of coverage amount of \$250 by the ratio of 1.244186 produces the amount of \$311.05, which must then be rounded to \$310. Accordingly, the quarter of coverage amount for 1981 is \$310.

*RETIREMENT TEST EXEMPT AMOUNT**Computation*

The 1981 amount of \$458.33½ for the retirement test monthly exempt amount for beneficiaries aged 65 through 71 is stated in the law. The corresponding annual retirement test exempt amount for those individuals is \$5,500. Section 301 of the Social Security Amendments of 1977 amended section 203 of the Social Security Act to provide a higher retirement test exempt amount for beneficiaries aged 65 through 71 than for those beneficiaries under age 65.

The monthly exempt amount of \$340 for beneficiaries under age 65 is determined according to a formula specified in the law, which automatically produces a mathematical result based upon reported statistics. Section 203(f)(8) of the Social Security Act provides that the retirement test monthly exempt amount for 1981 shall be equal to the 1980 amount of \$310 multiplied by the ratio of (1) the average amount, per employee, of the wages of all employees reported under the program for calendar year 1979 to (2) the average amount of those wages reported for calendar year 1978. The section further provides that if the amount so determined is not a multiple of \$10, it shall be rounded to the nearest multiple of \$10.

There is no limit on the amount an individual aged 72 or over may earn and still receive Social Security benefits. (Beginning in 1982, the age at which the retirement test no longer applies will be reduced from age 72 to age 70.)

Average wages

Average wages for this purpose are determined in the same way as for a quarter of coverage. Therefore, the ratio of the average wages for 1979, \$11,479.46, compared to 1978, \$10,556.03, is 1.087479.

Exempt amount for persons under age 65

Multiplying the 1980 retirement test monthly exempt amount of \$310 by the ratio of 1.087479 produces the amount of \$337.12. This must then be rounded to \$340. Accordingly, the retirement test monthly exempt amount for persons under age 65 is determined to be \$340 for 1981. The corresponding annual exempt amount for 1981 is \$4,080.

COMPUTING BENEFITS AFTER 1978

The Social Security Amendments of 1977 changed the formula for determining an individual's primary insurance amount after 1978. This basic new formula is based on "wage indexing," and was fully explained with interim regulations published in the Federal Register on December 29, 1978 at 43 FR 60877. It generally applies when a worker after 1978 attains age 62, becomes disabled, or dies before age 62. This formula uses the worker's earnings after they have been adjusted, or "indexed," in proportion to the increase in average wages of all workers. Using this

method, we determine the worker's "average indexed monthly earnings." We then compute the primary insurance amount, using the worker's "average indexed monthly earnings" and also adjust the computation formula to reflect changes in general wage levels.

Average indexed monthly earnings

To assure that a worker's future benefits reflect the general rise in the standard of living that occurs during their working lifetime, we adjust or "index" the worker's past earnings to take into account the change in general wage levels that has occurred during the worker's years of employment. These adjusted earnings are then used to compute the worker's primary insurance amount.

For example, to compute the average indexed monthly earnings for a worker attaining age 62, becoming disabled, or dying before attaining age 62, in 1981, we divide the average of the total wages for 1979, \$11,479.46, by the average of the total wages for each year prior to 1978 in which the worker had earnings. We then multiply the actual wages and self-employment income credited for those years by this ratio to obtain the worker's adjusted earnings for that year. After determining the number of years we must use to compute the primary insurance amount, we pick those years with highest indexed earnings, total those indexed earnings and divide by the total number of months in those years. This figure is rounded down to the next lower dollar amount, and becomes the average indexed monthly earnings figure to be used in computing the worker's primary insurance amount for 1981.

Computing the primary insurance amount

The primary insurance amount is the sum of three separate percentages of portions of the average indexed monthly earnings. In 1979 (the first year the formula was in effect), these portions were the first \$180, the amount between \$180 and \$1,085, and the amount over \$1,085. The amounts for 1981 are obtained by multiplying the 1979 amounts by the ratio between the average of the total wages for 1979, \$11,479.46, and for 1977, \$9,779.44. These results are then rounded to the nearer dollar. For 1981 the ratio is 1.173836. Multiplying the 1979 amounts of \$180 and \$1,085 by 1.173836 produces the amounts of \$211.29 and \$1,273.61. These must then be rounded to \$211 and \$1,274. Accordingly, the portions of the average indexed monthly earnings to be used in 1981 are determined to be the first \$211, the amount between \$211 and \$1,274, and the amount over \$1,274.

Consequently, for individuals who first become eligible for old-age insurance benefits or disability insurance benefits in 1981 or who die in 1981 before becoming eligible for benefits, we will compute their primary insurance amount by adding the following:

- (a) 90 percent of the first \$211 of their average indexed monthly earnings, plus
- (b) 32 percent of the average indexed monthly earnings over \$211 and through \$1,274, plus
- (c) 15 percent of the average indexed monthly earnings over \$1,274.

This amount is then rounded to the next higher multiple of \$.10 if it is not already a multiple of \$.10. This formula and the adjustments we have

described are contained in section 215(a) of the Social Security Act (42 U.S.C. 415(a)).

MAXIMUM BENEFITS PAYABLE TO A FAMILY

The 1977 Amendments continued the long established policy of limiting the total monthly benefits which a worker's family may receive based on his or her primary insurance amount. Those amendments also continued the then existing relationship between maximum family benefits and primary insurance amounts but did change the method of computing the maximum amount of benefits which may be paid to a worker's family. The 1980 Amendments (P.L. 96-265) established a new formula for computing the maximum benefits payable to the family of a disabled worker. This new formula is to be applied to the family benefits of workers who first become entitled to disability insurance benefits after June 30, 1980, based on a disability that began after 1978. We are preparing a Notice of Proposed Rule Making for publication in the Federal Register that explains this new formula. For disabled workers initially entitled to disability benefits before July 1980, or whose disability began before 1979, the family maximum payable is computed the same as the old-age and survivor family maximum.

Computing the old-age and survivor family maximum

The formula used to compute the family maximum is similar to that used to compute the primary insurance amount. It involves computing the sum of four separate percentages of portions of the worker's primary insurance amount. In 1979, these portions were the first \$230, the amount between \$230 and \$332, the amount between \$332 and \$433, and the amount over \$433. The amounts for 1981 are obtained by multiplying the 1979 amounts by the ratio between the average of the total wages for 1979, \$11,479.46, and for 1977, \$9,779.44. This amount is then rounded to the nearer dollar. For 1981, the ratio is 1.173836. Multiplying the amounts of \$230, \$332, and \$433 by 1.173836 produces the amounts of \$269.98, \$389.71 and \$508.27. These amounts are then rounded to \$270, \$390, and \$508. Accordingly, the portions of the primary insurance amounts to be used in 1981 are determined to be the first \$270, the amount between \$270 and \$390, the amount between \$390 and \$508, and the amount over \$508.

Consequently, for the family of a worker who reaches age 62 or dies in 1981, the total amount of benefits payable to them will be computed so that it does not exceed:

- (a) 150 percent of the first \$270 of the worker's primary insurance amount, plus
- (b) 272 percent of the worker's primary insurance amount over \$270 through \$390, plus
- (c) 134 percent of the worker's primary insurance amount over \$390 through \$508, plus
- (d) 175 percent of the worker's primary insurance amount over \$508.

This amount is then rounded to the next higher multiple of \$.10 if it is not already a multiple of \$.10. This formula and the adjustments we have described are contained in section 203(a) of the Social Security Act (42 U.S.C. 403(a)).

EXTENSION OF BENEFIT TABLE EFFECTIVE JANUARY 1981

The following is an extension of the table for Determining Primary Insurance Amount and Maximum Family Benefits provided in section 215(a)(5) of the Social Security Act. This extension reflects the higher average monthly wage and related benefit amounts now possible under the increased contribution and benefit base published by this Notice effective January 1981 in accordance with section 215(i) of the Social Security Act. The extended portion of the benefit table shown here will apply primarily to benefits based on earnings of workers who reached age 62 before 1979.

(Catalog of Federal Domestic Assistance Programs Nos. 13.802-13.805, and 13.807 Social Security Programs.)

Dated: November 13, 1980.

Patricia Roberts Harris,

Secretary of Health and Human Services

(The extended benefit table which was published at the end of the above announcement in the Federal Register is not reproduced here because of its length.)

**APPENDIX F.—AUTOMATIC ADJUSTMENTS UNDER OLD-AGE,
SURVIVORS, AND DISABILITY INSURANCE**

The Social Security Act specifies that certain program amounts affecting the determination of OASDI benefits are to be adjusted annually to reflect changes in the general economy. Specific formulas are prescribed by the law which, when applied to reported statistics, produce "automatic" revisions in these program amounts and hence in the benefit computation procedures.

In this appendix, values are shown for the program amounts that are subject to automatic adjustment from the time that such adjustments became effective through the present time. Projected values for future years through 1986, based on the two intermediate sets of assumptions (alternatives II-A and II-B), are also shown. These assumptions are summarized earlier in this report in the section entitled "Economic and Demographic Assumptions" and were shown in Tables 10 and 11. The section entitled "Automatic Adjustments," and Appendices D and E, should be referred to for a more complete description of the program amounts affected by the automatic adjustment procedures.

Under section 215(b)(3) of the Social Security Act, the average amount of total wages for each year after 1950 is used to index the earnings of persons newly eligible for benefits in 1979 or later. This procedure converts a worker's past earnings to approximately their equivalent values near the time of the worker's retirement or other eligibility, and these values are used to calculate the worker's Average Indexed Monthly Earnings (AIME). The average amount of total wages for each year is also used to adjust most of the program amounts that are subject to the automatic provisions. The announcement of the average wage determination for 1979, including a brief description of its derivation, is shown in Appendix E. Appendix E also describes the determinations of other program amounts that are in effect for 1981. Table F1 shows the average amount of total wages as announced for 1951 through 1979, together with projected values for 1980 through 1986 based on the two intermediate sets of assumptions.

TABLE F1.—AVERAGE AMOUNT OF TOTAL WAGES, 1951-79, AND PROJECTED FUTURE AMOUNTS FOR 1980-86 UNDER THE TWO INTERMEDIATE SETS OF ASSUMPTIONS

Calendar year	Actual amounts	
1951		\$2,799.16
1952		2,973.32
1953		3,139.44
1954		3,155.64
1955		3,301.44
1956		3,532.36
1957		3,641.72
1958		3,673.80
1959		3,855.80
1960		4,007.12
1961		4,086.76
1962		4,291.40
1963		4,396.64
1964		4,576.32
1965		4,658.72
1966		4,938.36
1967		5,213.44
1968		5,571.76
1969		5,893.76
1970		6,186.24
1971		6,497.08
1972		7,133.80
1973		7,580.16
1974		8,030.76
1975		8,630.92
1976		9,226.48
1977		9,779.44
1978		10,556.03
1979		11,479.46
	Projected future amounts by alternative—	
	II-A	II-B
1980	\$12,454.00	\$12,454.00
1981	13,727.00	13,729.00
1982	15,070.00	15,045.00
1983	16,372.00	16,509.00
1984	17,665.00	17,961.00
1985	18,919.00	19,418.00
1986	20,237.00	20,838.00

Note: The assumptions underlying the projections are described in the section entitled "Economic and Demographic Assumptions" and are shown in Table 10.

The provisions for automatic cost-of-living increases in OASDI benefits were enacted in 1972 and first became effective with the benefit increase for June 1975. The notice announcing the June 1980 benefit increase is shown in Appendix D. Table F2 shows the automatic benefit increases determined for each year 1975-81 and the benefit increases for each year 1982-86 projected on the basis of the two intermediate sets of assumptions.

TABLE F2.—BENEFIT INCREASE AND OTHER OASDI PROGRAM AMOUNTS DETERMINED UNDER THE AUTOMATIC PROVISIONS, 1975-81, AND ESTIMATED FUTURE AMOUNTS FOR 1982-86, UNDER THE TWO INTERMEDIATE SETS OF ASSUMPTIONS

Calendar year	Benefit increase ¹ (percent)	Contribution and benefit base	"Old-law" contribution and benefit base ²	Retirement test exempt amount		Amount of earnings required for quarter of coverage ³	AIME "bend points" in PIA formula		PIA "bend points" in maximum family benefit formula		
				Under age 65	Age 65 and over		First	Second	First	Second	Third
Actual experience:											
1975	8.0	\$14,100	(*)	\$2,520	\$2,520	(*)	(*)	(*)	(*)	(*)	(*)
1976	6.4	15,300	(*)	2,760	2,760	(*)	(*)	(*)	(*)	(*)	(*)
1977	5.9	16,500	(*)	3,000	3,000	(*)	(*)	(*)	(*)	(*)	(*)
1978	6.5	17,700	(*)	3,240	*4,000	*\$250	(*)	(*)	(*)	(*)	(*)
1979	9.9	*22,900	\$18,900	3,480	*4,500	260	*\$180	*\$1,085	*\$230	*\$332	*\$433
1980	14.3	*25,900	20,400	3,720	*5,000	290	194	1,171	248	358	467
1981	11.2	*29,700	22,200	4,080	*5,500	310	211	1,274	270	390	508
Projected future experience:											
Alternative II-A:											
1982	9.3	32,100	24,000	4,440	*6,000	340	229	1,382	293	423	551
1983	6.6	35,400	26,400	4,920	6,600	370	253	1,523	323	466	608
1984	5.8	39,000	29,100	5,400	7,200	410	277	1,672	354	512	667
1985	4.9	42,300	31,500	5,880	7,800	440	301	1,816	385	556	725
1986	4.4	45,600	33,900	6,360	8,400	480	325	1,960	415	600	782
Alternative II-B:											
1982	9.7	32,100	24,000	4,440	*6,000	340	229	1,382	293	423	551
1983	9.2	35,400	26,400	4,920	6,600	370	253	1,523	323	466	608
1984	8.5	38,700	28,800	5,400	7,200	410	277	1,669	354	511	666
1985	7.7	42,600	31,500	5,880	7,920	450	304	1,832	388	560	731
1986	6.9	46,200	34,200	6,360	8,640	490	331	1,993	422	610	795

¹Effective with benefits payable for the month of June in each year shown.

²Contribution and benefit base that would have been determined automatically under the law in effect prior to the Social Security Amendments of 1977.

³See Appendix E for a description of quarter-of-coverage requirements prior to 1978.

*No provision in law for this amount in this year.

*Amount not subject to automatic provisions in this year.

*Amount represents ad hoc increase specified by Social Security Amendments of 1977.

*Amount specified for first year by Social Security Amendments of 1977; amounts for subsequent years subject to automatic provisions.

Note: The assumptions underlying the projections are described in the section entitled "Economic and Demographic Assumptions" and are shown in Table 10.

The law provides for an automatic increase in the contribution and benefit base for the year following a year in which an automatic benefit increase became effective. The base for 1975 was the first one determined on this basis. (Amendments enacted in December 1973 provided that the 11-percent general benefit increase that became effective in 1974 would be considered an automatic cost-of-living benefit increase for purposes of the automatic provisions.) The bases for 1979-81 were set by the 1977 amendments at levels above those which were expected to occur under the automatic provisions (and which, in fact, as the experience developed, were above such levels). Starting again in 1982, the bases will be determined automatically on the basis of increases in average wages. Table F2 shows past and estimated future amounts for the contribution and benefit base.

As mentioned in the section "Automatic Adjustments," the Social Security Act also provides for the determination of the contribution and benefit base that would have been in effect in each year after 1978 under the law as in effect prior to the enactment of the 1977 amendments. Table F2 presents such amounts as determined for 1979-81, together with projections for 1982-86 under the two intermediate sets of assumptions.

The 1972 amendments also specified that the amount of earnings exempted from the withholding of benefits under the earnings retirement test would increase automatically in the year following a year in which an automatic cost-of-living benefit increase became effective. The 1977 amendments modified this procedure by establishing different exempt amounts for those under age 65 and those aged 65 and over. The former amounts continue to increase automatically, while the latter amounts are set at specific levels for 1978-82, after which time they will again increase automatically. The announcement of the exempt amounts for 1981 is shown in Appendix E, and Table F2 shows both sets for 1975-86.

The 1977 amendments provided for an amount of earnings to be used in 1978 to credit a "quarter of coverage," and for automatic adjustment of this amount for future years. Appendix E describes the determination of the amount for 1981. Table F2 shows the amounts for 1978-86.

As mentioned previously, the 1977 amendments substantially revised the method of computing benefits for people first becoming eligible for benefits in 1979 and later. The formula used to compute an individual's Primary Insurance Amount (PIA) for persons newly eligible in 1979 is:

90 percent of the first \$180 of AIME, plus
 32 percent of AIME in excess of \$180
 but not in excess of \$1,085, plus
 15 percent of AIME in excess of \$1,085.

The amounts separating the individual's AIME into intervals are called "bend points." They are adjusted automatically by the changes in average wages as specified in section 215(a)(1)(B) of the Social Security Act. (A minimum benefit of \$122 and a "special minimum benefit" varying by "years of coverage" are also provided.) The determination of the bend points for the 1981 PIA formula is described in Appendix E.

The bend points for 1979-81, and the amounts estimated for 1982-86, are shown in Table F2.

A similar formula is used to compute the maximum amount of total monthly benefits payable on the basis of the earnings of a retired or deceased individual. This formula is a function of the individual's PIA, and is shown below for persons newly eligible in 1979:

150 percent of the first \$230 of PIA, plus
272 percent of the PIA in excess of \$230
but not in excess of \$332, plus
134 percent of the PIA in excess of \$332
but not in excess of \$433, plus
175 percent of the PIA in excess of \$433.

These PIA-interval bend points are adjusted automatically, in accordance with section 203(a)(2). Appendix E contains the announcement of the 1981 family maximum formula bend points. The past and projected amounts are shown in Table F2.

**APPENDIX G.—ACTUARIAL COST PROJECTIONS OF THE OASI, DI,
AND HI PROGRAMS, COMBINED**

Cost projections for the OASI, DI, and Hospital Insurance Trust Funds will now be summarized, so as to facilitate analysis of the adequacy of the combined income and assets of these three trust funds relative to their combined expenditures. These projections generally represent the combination of projections shown in this report and in the similar report for the HI Trust Fund. Table G1 shows estimated assets of the combined funds as a percentage of combined annual expenditures for calendar years 1981-90, based on the five alternative sets of assumptions used in this report.

As shown in column 1, the assets of the OASI Trust Fund are projected to be insufficient to pay benefits when due within about 1½ years under all five sets of assumptions. Column 2 indicates that, after 1982, the DI Trust Fund is expected to experience rapid growth for the remainder of this decade under all five sets of assumptions. Combined OASI and DI assets (shown in column 3) would be insufficient to pay combined benefits when due in the near future under each of the alternatives. Column 4 shows that the assets of the HI Trust Fund will increase steadily during the 1980's only under the optimistic assumptions; under the other sets of assumptions, projected assets increase during the early part of the decade, but they begin to decline rapidly during the second half of the decade. As described in the HI Annual Report, the HI Trust Fund is estimated to be exhausted as early as 1989 under alternative III. Exhaustion is also projected under alternatives II-B, II-A, and I, with this estimated to occur in 1991, 1993, and 1998, respectively. The "worst-case" assumptions do not extend beyond 1986; the HI Trust Fund, however, would be depleted within a few more years if such economic conditions continued.

Assets of the combined OASI, DI, and HI Trust Funds as a percentage of combined annual expenditures (shown in the last column) are estimated under alternatives I and II-A to continue to decline through the beginning of 1985, reaching a low point of 19 and 13 percent, respectively, before beginning to increase. Under alternatives II-B and III, and the "worst-case" assumptions, the fund ratios for the three trust funds combined decline throughout the period shown and would be insufficient to pay combined benefits when due within a few years.

The question has frequently been raised concerning whether reallocation of tax rates among the OASI, DI, and HI programs, or the authorization of loans from one fund to another, would be sufficient to prevent the OASI Trust Fund's imminent financing problems. Under "interfund borrowing," a fund with assets nearing depletion could borrow from the assets of another, better endowed, trust fund with the loan to be repaid with interest when the deficient fund's assets recover sufficiently. Interest would be determined at the rate the lending fund would have received if it had invested the loan amount in the normal manner. Such proposals have normally encompassed the OASI, DI, and HI Trust Funds, these being the three funds financed by the Social Security payroll tax.

As indicated by the projections in Table G1, under the optimistic and intermediate II-A sets of assumptions, projected OASDI and HI tax income under present law would be sufficient to allow timely payment of projected OASDI and HI benefits in the aggregate for the remainder of this decade. However, it should be noted that under these assumptions a wide margin of safety would not exist. In other words, if actual future economic and demographic conditions are somewhat less favorable than those assumed in alternative II-A, scheduled OASDI and HI tax income would be insufficient and tax rate reallocation or interfund borrowing could only postpone temporarily the need for additional income or reduced benefits. In particular, under alternatives II-B and III, and the "worst-case" assumptions, the assets of the combined funds are insufficient to pay benefits when due beginning in about 1984. Thus tax rate reallocation or interfund borrowing alone cannot be prudently relied upon to prevent the depletion of the OASI Trust Fund within the relatively near future.

TABLE G1.—PROJECTED ASSETS OF THE OASI, DI, AND HI TRUST FUNDS, SEPARATE AND COMBINED, AT BEGINNING OF YEAR AS A PERCENTAGE OF ANNUAL EXPENDITURES DURING YEAR UNDER THE FIVE ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1981-90

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
Alternative I:					
1981	18	20	18	46	23
1982	¹ 14	13	14	58	21
1983	¹ 6	35	² 9	69	20
1984	¹ -1	66	² 6	77	19
1985	¹ -8	104	² 4	82	19
1986	¹ -11	169	8	87	24
1987	¹ -12	246	14	96	31
1988	¹ -11	325	24	103	40
1989	¹ -9	405	33	106	49
1990	¹ -6	487	45	106	59
Alternative II-A:					
1981	18	20	18	46	23
1982	¹ 13	13	13	57	21
1983	¹ 5	33	² 8	66	18
1984	¹ -4	62	² 3	70	15
1985	¹ -13	96	² 1	70	13
1986	¹ -18	155	² 1	69	15
1987	¹ -21	219	² 4	70	18
1988	¹ -24	285	9	68	22
1989	¹ -26	352	14	61	25
1990	¹ -28	418	20	51	27
Alternative II-B:					
1981	18	20	18	46	23
1982	¹ 13	13	13	57	21
1983	¹ 4	32	² 7	64	18
1984	(²)	58	² 2	67	14
1985	(²)	87	² -5	65	² 8
1986	(²)	138	² -8	62	² 6
1987	(²)	191	² -11	61	² 4
1988	(²)	244	² -15	56	(²)
1989	(²)	299	² -19	46	(²)
1990	(²)	354	² -24	34	(²)
Alternative III:					
1981	18	20	18	46	23
1982	¹ 13	13	13	56	21
1983	¹ 4	31	² 7	62	17
1984	(²)	52	(²)	60	² 9
1985	(²)	75	(²)	53	² 1
1986	(²)	118	(²)	43	(²)
1987	(²)	163	(²)	34	(²)
1988	(²)	206	(²)	21	(²)
1989	(²)	248	(²)	¹ 3	(²)
1990	(²)	288	(²)	(²)	(²)

TABLE G1.—PROJECTED ASSETS OF THE OASI, DI, AND HI TRUST FUNDS, SEPARATE AND COMBINED, AT BEGINNING OF YEAR AS A PERCENTAGE OF ANNUAL EXPENDITURES DURING YEAR UNDER THE FIVE ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1981-90 (Cont.)

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
"Worst-case":					
1981	18	20	18	46	23
1982	13	13	13	56	20
1983	2	29	5	61	15
1984	(^a)	47	(^a)	60	5
1985	(^a)	68	(^a)	55	(^a)
1986	(^a)	111	(^a)	51	(^a)

^aAssets of OASI Trust Fund will be insufficient to pay benefits when due during part or all of this year.

^bAssets of combined trust funds will be insufficient to pay combined benefits when due during part or all of this year.

^cAssets are projected to be negative, and are projected not to recover before the end of the long-range projection period.

^dBetween 0.0 percent and 0.5 percent.

^eUnderlying assumptions extend through 1986 only.

Note: The assumptions underlying the projections are described in the section entitled "Economic and Demographic Assumptions" of this report and in Appendix A of the HI Annual Report. The OASI, OASDI, and combined OASDI and HI Trust Fund ratios in 1982 and later under each alternative are theoretical, because the OASI Trust Fund is projected to be depleted, and no provision for additional income exists in present law. See text for details.

Table G2 shows projected cost rates for the OASI, DI, and HI programs during the period 1981-2005 under alternatives II-A and II-B. HI cost projections for years after 2005 are not shown in the HI Annual Report. The program's expenditures as a percentage of taxable payroll would, nonetheless, be subject to the same demographic effects that will cause OASDI costs to increase rapidly after the year 2010. Total cost rates for the three trust funds combined are shown in column 4 of Table G2 and are compared to total employee-employer tax rates in column 5. The resulting surplus or deficiency is presented in column 6. As previously explained, cost rates represent program expenditures as a percentage of effective taxable payroll. It is important to note that the definition of effective taxable payroll is slightly different for OASDI compared to HI, due to the different tax treatment of self-employment earnings. This difference does not materially affect the comparisons. It should also be noted that the cost rates shown exclude any cost associated with rebuilding the trust funds to a level suitable as a contingency reserve, or the cost of maintaining such a level once reached. The text of this report and Table 8 of the HI Annual Report present these additional costs.

TABLE G2.—ESTIMATED COST RATES OF THE OASI, DI, AND HI PROGRAMS UNDER ALTERNATIVES II-A AND II-B AND COMPARISON WITH TAX RATES, CALENDAR YEARS 1981-2005 [As percent of taxable payroll¹]

Calendar year	Estimated cost rate ^a				Total tax rate	Difference ^a
	OASI	DI	HI	Total		
Alternative II-A:						
1981	9.89	1.41	2.27	13.57	13.30	-0.27
1982	10.07	1.36	2.35	13.78	13.40	-.38
1983	10.04	1.29	2.43	13.76	13.40	-.36
1984	9.97	1.24	2.55	13.76	13.40	-.36
1985	9.90	1.20	2.67	13.77	14.10	.33
1986	9.78	1.16	2.80	13.74	14.30	.56
1987	9.69	1.14	2.94	13.77	14.30	.53
1988	9.68	1.14	3.10	13.90	14.30	.40
1989	9.59	1.14	3.23	13.96	14.30	.34

TABLE G2.—ESTIMATED COST RATES OF THE OASI, DI, AND HI PROGRAMS UNDER ALTERNATIVES II-A AND II-B AND COMPARISON WITH TAX RATES, CALENDAR YEARS 1981-2005 (Cont.)
[As percent of taxable payroll¹]

Calendar year	Estimated cost rate ^a			Total	Total tax rate	Difference ^a
	OASI	DI	HI			
Alternative II-A: (Cont.)						
1990	9.55	1.14	3.39	14.08	15.30	1.22
1991	9.52	1.14	3.57	14.23	15.30	1.07
1992	9.50	1.15	3.75	14.39	15.30	.91
1993	9.47	1.15	3.94	14.56	15.30	.74
1994	9.44	1.15	4.10	14.69	15.30	.61
1995	9.43	1.16	4.27	14.85	15.30	.45
1996	9.33	1.19	4.44	14.96	15.30	.34
1997	9.25	1.21	4.60	15.06	15.30	.24
1998	9.17	1.24	4.77	15.17	15.30	.13
1999	9.08	1.26	4.90	15.24	15.30	.06
2000	8.99	1.28	5.04	15.31	15.30	-.01
2001	8.94	1.31	5.18	15.43	15.30	-.13
2002	8.91	1.34	5.33	15.58	15.30	-.28
2003	8.89	1.37	5.48	15.74	15.30	-.44
2004	8.87	1.40	5.64	15.91	15.30	-.61
2005	8.87	1.42	5.80	16.09	15.30	-.79
25-year average (1981-2005)	9.43	1.24	3.94	14.61	14.78	.17
Alternative II-B:						
1981	9.89	1.41	2.27	13.57	13.30	-.27
1982	10.08	1.36	2.36	13.81	13.40	-.41
1983	10.15	1.31	2.46	13.91	13.40	-.51
1984	10.29	1.28	2.58	14.15	13.40	-.75
1985	10.38	1.25	2.73	14.36	14.10	-.26
1986	10.49	1.23	2.88	14.61	14.30	-.31
1987	10.57	1.22	3.04	14.83	14.30	-.53
1988	10.63	1.23	3.20	15.06	14.30	-.76
1989	10.65	1.23	3.37	15.25	14.30	-.95
1990	10.64	1.23	3.55	15.41	15.30	-.11
1991	10.61	1.22	3.74	15.57	15.30	-.27
1992	10.57	1.22	3.95	15.75	15.30	-.45
1993	10.53	1.22	4.17	15.92	15.30	-.62
1994	10.48	1.23	4.35	16.06	15.30	-.76
1995	10.47	1.23	4.55	16.25	15.30	-.95
1996	10.35	1.26	4.74	16.35	15.30	-1.05
1997	10.22	1.28	4.92	16.42	15.30	-1.12
1998	10.09	1.30	5.12	16.51	15.30	-1.21
1999	9.95	1.32	5.27	16.54	15.30	-1.24
2000	9.85	1.34	5.44	16.63	15.30	-1.33
2001	9.80	1.37	5.62	16.78	15.30	-1.48
2002	9.74	1.39	5.80	16.93	15.30	-1.63
2003	9.68	1.42	5.98	17.08	15.30	-1.78
2004	9.64	1.45	6.18	17.27	15.30	-1.97
2005	9.61	1.48	6.39	17.48	15.30	-2.18
25-year average (1981-2005)	10.21	1.30	4.19	15.70	14.78	-.92

¹Effective taxable payroll is slightly different for OASDI compared to HI, due to the different tax treatment of self-employment earnings. The difference does not materially affect the comparisons.

^aCost rates exclude amounts required for trust fund building and maintenance.

^aThe difference is the tax rate minus the OASDI cost rate. Positive differences are referred to as surpluses, and negative differences, as deficits.

Note: The definitions of alternatives II-A and II-B, cost rate, tax rate, and taxable payroll are presented in the text.

The pattern of projected OASI and DI cost rates for the balance of this century has already been discussed in this report. The HI costs as a percentage of taxable payroll are projected to continue increasing throughout this period under both alternatives II-A and II-B, for reasons described in the HI Annual Report. Total OASDI and HI costs would also increase from their current level of 13.57 percent of taxable payroll, reaching 16.09 percent by the year 2005 under alternative II-A and 17.48 percent under alternative II-B.

Under alternative II-A, projected total cost rates for OASDI and HI combined exceed the combined employee-employer tax rates until 1985,

at which time a scheduled tax increase would become effective. Tax income would then exceed expenditures until about the year 2000, when annual shortfalls would recur. On average, over the 25-year period, scheduled OASDHI tax income exceeds OASDHI costs by 0.17 percent of taxable payroll under alternative II-A. Under the less favorable economic conditions assumed in alternative II-B, however, combined program costs are projected to exceed total payroll tax income in every year 1981-2005, with the shortfalls increasing in magnitude over time. On average during this period, an actuarial deficit of 0.92 percent of taxable payroll is projected under alternative II-B.

APPENDIX H.—STATEMENT OF ACTUARIAL OPINION

It is my opinion (1) that the techniques and methodology used herein in evaluating the actuarial status of the Old-Age and Survivors Insurance and the Disability Insurance Trust Funds are generally accepted within the actuarial profession; and (2) the assumptions used and the resulting cost estimates are, in the aggregate, reasonable for the purposes for which they are intended, as described in the body of this report, taking into consideration the experience and expectations of the program.

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