IV. SUMMARY OF THE OPERATIONS OF THE OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS, FISCAL YEAR 1987

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 1987, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table 2.

TABLE 2.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND DURING FISCAL YEAR 1987
[In thousands]

Total assets, September 30, 1986		$37,519,378
Receipts:		
Contributions:		
Appropriations:		
Employment taxes	$192,601,710	
Tax credits	1,652,655	
Total appropriations	194,254,366	
Deposits arising from State agreements	5,324,577	
Payment from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service in 1987	348,391	
Gross contributions	199,927,333	
Less payment to the general fund of the Treasury for contributions subject to refund	373,170	
Net contributions		199,554,163
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens	66,717	
All other, not subject to withholding[1]	3,256,000	
Total income from taxation of benefits		3,322,717
Reimbursement from general fund of the Treasury for costs of payments to uninsured persons who attained age 72 before 1968		69,394
Investment income and interest adjustments:		
Interest on investments	4,496,366	
Interest on transfers from the general fund account for the Supplemental Security Income program due to adjustment in allocation of administrative expenses	1,098	
Gross investment income and interest adjustments	4,497,463	
Less interest on interfund transfers due to adjustment in allocation of administrative expenses	2,510	
Less interest on general fund advance tax transfers	625,017	
Net investment income and interest adjustments		3,869,936
Income from merger of the Northern Mariana Islands Social Security Retirement Fund with the United States Social Security program		29,434
Gifts		454
Total receipts		206,846,097

TABLE 2.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND DURING FISCAL YEAR 1987 (Cont.)
[In thousands]

Disbursements:		
Benefit payments:		
Gross benefit payments	$182,776,333	
Less collected overpayments	721,286	
Less reimbursement for unnegotiated checks	52,229	
Net benefit payments		$182,002,819
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account"		2,557,282
Administrative expenses:		
Department of Health and Human Services	1,401,906	
Department of the Treasury	140,442	
Gross administrative expenses	1,542,348	
Less reimbursements from general fund of the Treasury for costs of furnishing information on deferred vested pension benefits	691	
Less receipts from sales of supplies, materials, etc.	1,023	
Net administrative expenses		1,540,633
Total disbursements		186,100,734
Net increase in assets		20,745,364
Total assets, September 30, 1987		58,264,742

[1]Includes $102 million in transfers to the OASI Trust Fund from the general fund of the Treasury to correct estimated amounts transferred for calendar years 1984 and 1985.

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

The total assets of the OASI Trust Fund amounted to $37,519 million on September 30, 1986. During fiscal year 1987, total receipts amounted to $206,846 million, and total disbursements were $186,101 million. The assets of the OASI Trust Fund thus increased by $20,745 million during the year, to a total of $58,265 million on September 30, 1987.

Included in total receipts during fiscal year 1987 were $194,254 million representing contributions appropriated to the fund (including transfers of $1,653 million from the general fund of the Treasury to offset the tax credits allowed against contributions due on earnings of self-employed persons). Also included in total receipts were $5,325 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 directly into the trust fund. This amount is much less than the amount deposited into the trust fund under such agreements in the preceding fiscal year because virtually all of it was based on wages paid to State and local government employees before January 1, 1987. The collection of contributions on wages paid after that date became the responsibility of the Internal Revenue Service as a result of Public Law 99-509, and such contributions are now included in employment taxes appropriated to the trust funds. Another $348 million was received from the general fund of the Treasury representing payment for the contributions that would have been paid on estimated deemed wage credits for military service in 1987 if such credits had been considered to be covered wages. As an offset, $373 million was transferred from the trust fund to the general fund of the Treasury for the estimated amount of refunds to employees who worked for more than one employer during a year and paid contributions on wages in excess of the contribution and benefit base.

Net contributions (including the general fund payments for offsetting tax credits and deemed military-service wage credits) amounted to $199,554 million, an increase of 6.7 percent over the amount in the preceding fiscal year. This level of growth in contribution income resulted primarily from the effects of (1) increased covered employment and earnings, and (2) the increases in the contribution and benefit base that became effective on January 1 of each year 1986 and 1987. (Table 1 in the preceding section shows the contribution and benefit bases that became effective for 1986 and 1987.)

Income from the taxation of benefits amounted to $3,323 million, of which 98 percent represented amounts credited to the trust fund in advance, on an estimated basis, together with adjustments to prior years' transfers to account for actual experience. The remaining 2 percent of the total income from taxation of benefits represented amounts withheld from the benefits paid to non-resident aliens.

Special payments are made to uninsured persons who either attained age 72 before 1968, or who attained age 72 after 1967 and had 3 quarters of coverage for each year after 1966 and before the year of attainment of age 72. The costs associated with providing such payments to persons having fewer than 3 quarters of coverage are reimbursable from the general fund of the Treasury. Accordingly, a reimbursement of $69 million was transferred to the OASI Trust Fund in fiscal year 1987, as required by section 228 of the Social Security Act. The reimbursement reflected the costs of payments made in fiscal year 1985.

Receipts totaling $3,870 million consisted of (1) interest earned on the investments of the trust fund; (2) interest on transfers from the general fund account for the Supplemental Security Income program due to adjustment in allocation of administrative expenses; less (3) interest arising from the revised allocation of administrative expenses among the trust funds; less (4) reimbursement to the general fund for interest costs resulting from the advance transfer of contributions.

Pursuant to section 606(c)(1) of the Covenant to Establish a Commonwealth of the Northern Mariana Islands in Political Union with the United States of America, assets of the NMI Social Security Retirement Fund were transferred to the Federal Social Security trust funds in fiscal year 1987. The amount of these assets transferred to the OASI Trust Fund was $29 million.

The remaining $454,002 of receipts consisted of gifts received under the provisions authorizing the deposit of money gifts or bequests in the trust funds.

Of the $186,101 million in total disbursements, $182,003 million was for net benefit payments, excluding collected overpayments of $721 million and the reimbursement of $52 million for unnegotiated benefit checks. The amount of net benefit payments in fiscal year 1987 represents an increase of 4.4 percent over the corresponding amount in fiscal year 1986. This increase was due primarily to (1) the automatic cost-of-living benefit increases of 3.1 percent and 1.3 percent which became effective for December 1985 and December 1986, respectively, under the automatic-adjustment provisions in section 215(i) of the Social Security Act, (2) an increase in the total number of beneficiaries, and (3) an increase in the average benefit amount resulting from the rising level of earnings.

As described in the preceding section, certain provisions of the Railroad Retirement Act coordinate the Railroad Retirement and OASDI programs and govern the financial interchanges arising from the allocation of costs between the two programs. In accordance with those provisions, the Railroad Retirement Board and the Secretary of Health and Human Services determined that a transfer of $2,400 million to the Social Security Equivalent Benefit Account (SSEBA) from the OASI Trust Fund would place this trust fund in the same position as of September 30, 1986, in which it would have been if railroad employment had always been covered under Social Security. A total amount of $2,557 million was transferred to the SSEBA in June 1987, including interest to the date of transfer amounting to $157 million.

The remaining $1,541 million of disbursements from the OASI Trust Fund represented 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 for prior periods are effected by interfund transfers and transfers between the OASI Trust Fund and the general fund account for the Supplemental Security Income program, with appropriate interest adjustments.

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 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 (Public Law 93-406). The reimbursement in fiscal year 1987 amounted to $690,778.

Net administrative expenses charged to the OASI and DI Trust Funds in fiscal year 1987 totaled $2,278 million. (The operations of the DI Trust Fund are presented in detail in the next subsection.) This amount represented 1.0 percent of contribution income and 1.1 percent of expenditures for benefit payments. Corresponding percentages for each trust fund separately and for the OASDI program as a whole are shown in table 3 for each of the last 5 years.

TABLE 3.—NET ADMINISTRATIVE EXPENSES AS A PERCENTAGE OF CONTRIBUTION INCOME AND OF BENEFIT PAYMENTS, BY TRUST FUND, FISCAL YEARS 1983-87

Fiscal year	OASI Trust Fund		DI Trust Fund		Total	
	Contribution income	Benefit payments	Contribution income	Benefit payments	Contribution income	Benefit payments
1983	1.1	1.0	3.5	3.8	1.4	1.3
1984	1.0	1.0	3.6	3.3	1.3	1.3
1985	.9	1.0	3.6	3.2	1.1	1.2
1986	.9	.9	3.3	3.1	1.1	1.1
1987	.8	.8	3.8	3.6	1.0	1.1

In table 4, the actual amounts of contributions and benefit payments in fiscal year 1987 are compared to the corresponding estimated amounts which appeared in the 1986 and 1987 Annual Reports. The estimates shown are the ones based on the alternative II-B set of assumptions from each report. Actual OASI and DI contributions and benefit payments were reasonably close, relatively, to the estimates shown in both the 1986 and 1987 Annual Reports.

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 the figures in table 4, it should be noted that the "actual" amount of contributions in fiscal year 1987 reflects the aforementioned adjustments to contributions for prior fiscal years. The "estimated" contributions in fiscal year 1987 also include the adjustments for prior years, but on an estimated basis.

TABLE 4.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, FISCAL YEAR 1987

[Amounts in millions]

	OASI Trust Fund		DI Trust Fund	
	Net contributions	Benefit payments[1]	Net contributions	Benefit payments[1]
Actual amount	$199,554	$182,003	$19,324	$20,427
Estimated amount published in 1986 report	$198,197	$185,784	$19,049	$20,121
Actual as percentage of estimate	100.7	98.0	101.4	101.5
Estimated amount published in 1987 report	$199,299	$182,260	$19,097	$20,325
Actual as percentage of estimate	100.1	99.9	101.2	100.5

[1]Includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities.

At the end of fiscal year 1987, about 38.1 million persons were receiving monthly benefits under the OASDI program. Of these persons, about 34.1 million and 4.0 million were receiving monthly benefits from the OASI Trust Fund and the DI Trust Fund, respectively. The estimated distribution of benefit payments (before reflecting the reimbursement for unnegotiated checks) in fiscal years 1986 and 1987, by type of beneficiary, is shown in table 5 for each trust fund separately.

TABLE 5.—ESTIMATED DISTRIBUTION OF BENEFIT PAYMENTS FROM THE OASI AND DI TRUST FUNDS, BY TYPE OF BENEFICIARY OR PAYMENT, FISCAL YEARS 1986 AND 1987

[Amounts in millions]

	Fiscal year 1986		Fiscal year 1987	
	Amount	Percentage of total	Amount	Percentage of total
Total OASDI benefit payments	$193,890	100.0	$202,477	100.0
OASI benefit payments	174,364	89.9	182,055	89.9
DI benefit payments	19,526	10.1	20,422	10.1
OASI benefit payments, total	174,364	100.0	182,055	100.0
Monthly benefits:				
Retired workers and auxiliaries	133,943	76.8	140,050	76.9
Retired workers	121,798	69.9	127,374	70.0
Wives and husbands	10,988	6.3	11,495	6.3
Children	1,157	.7	1,181	.6
Survivors of deceased workers	40,168	23.0	41,763	22.9
Aged widows and widowers	30,410	17.4	32,030	17.6
Disabled widows and widowers	430	.2	434	.2
Parents	49	(1)	45	(1)
Children	7,815	4.5	7,852	4.3
Widowed mothers and fathers caring for child beneficiaries	1,465	.8	1,402	.8
Uninsured persons generally aged 72 before 1968	49	(1)	38	(1)
Lump-sum death payments	204	.1	204	.1
DI benefit payments, total	19,526	100.0	20,422	100.0
Disabled workers	17,110	87.6	17,957	87.9
Wives and husbands	547	2.8	538	2.6
Children	1,869	9.6	1,927	9.4

[1] Less than 0.05 percent.

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

The assets of the OASI Trust Fund at the end of fiscal year 1987 totaled $58,265 million, consisting of $58,356 million in U.S. Government obligations and, as an offset, an extension of credit amounting to $91 million against securities to be redeemed within the following few days. Table 6 shows the total assets of the fund and their distribution at the end of each fiscal year 1986 and 1987.

TABLE 6.—ASSETS OF THE OASI TRUST FUND, BY TYPE, AT END OF FISCAL YEAR, 1986 AND 1987

	September 30, 1986	September 30, 1987
Obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
7.250 percent, 1987	$1,424,689,000.00	—
7.750 percent, 1987	174,724,000.00	—
9.000 percent, 1988	—	$4,888,728,000.00
Bonds:		
8.375 percent, 1987	2,144,094,000.00	—
8.375 percent, 1988	313,296,000.00	—
8.375 percent, 1989	313,296,000.00	313,296,000.00
8.375 percent, 1990	313,296,000.00	313,296,000.00
8.375 percent, 1991	313,295,000.00	313,295,000.00
8.375 percent, 1992	313,295,000.00	313,295,000.00

TABLE 6.—ASSETS OF THE OASI TRUST FUND, BY TYPE, AT END OF FISCAL YEAR, 1986 AND 1987 (Cont.)

	September 30, 1986	September 30, 1987
Obligations sold only to the trust funds (special issues): (Cont.)		
Bonds: (Cont.)		
8.375 percent, 1993	$313,295,000.00	$313,295,000.00
8.375 percent, 1994	313,295,000.00	313,295,000.00
8.375 percent, 1995	313,295,000.00	313,295,000.00
8.375 percent, 1996	313,295,000.00	313,295,000.00
8.375 percent, 1997	313,295,000.00	313,295,000.00
8.375 percent, 1998	313,295,000.00	313,295,000.00
8.375 percent, 1999	313,295,000.00	313,295,000.00
8.375 percent, 2000	313,295,000.00	313,295,000.00
8.375 percent, 2001	2,370,396,000.00	2,370,396,000.00
8.625 percent, 1989	—	1,301,731,000.00
8.625 percent, 1990	—	1,301,731,000.00
8.625 percent, 1991	—	1,301,731,000.00
8.625 percent, 1992	—	1,301,731,000.00
8.625 percent, 1993	—	1,301,731,000.00
8.625 percent, 1994	—	1,301,731,000.00
8.625 percent, 1995	—	1,301,731,000.00
8.625 percent, 1996	—	1,301,731,000.00
8.625 percent, 1997	—	1,301,731,000.00
8.625 percent, 1998	—	1,301,731,000.00
8.625 percent, 1999	—	1,301,731,000.00
8.625 percent, 2000	—	1,301,731,000.00
8.625 percent, 2001	—	1,301,731,000.00
8.625 percent, 2002	—	3,672,127,000.00
10.375 percent, 1987	18,922,000.00	—
10.375 percent, 1988	2,057,101,000.00	2,057,101,000.00
10.375 percent, 1989	2,057,101,000.00	2,057,101,000.00
10.375 percent, 1990	2,057,101,000.00	2,057,101,000.00
10.375 percent, 1991	1,865,345,000.00	1,865,345,000.00
10.375 percent, 1992	565,186,000.00	565,186,000.00
10.375 percent, 1993	565,186,000.00	565,186,000.00
10.375 percent, 1994	565,186,000.00	565,186,000.00
10.375 percent, 1995	565,186,000.00	565,186,000.00
10.375 percent, 1996	565,186,000.00	565,186,000.00
10.375 percent, 1997	565,186,000.00	565,186,000.00
10.375 percent, 1998	565,186,000.00	565,186,000.00
10.375 percent, 1999	565,186,000.00	565,186,000.00
10.375 percent, 2000	2,057,101,000.00	2,057,101,000.00
10.75 percent, 1992	1,022,231,000.00	1,022,231,000.00
10.75 percent, 1993	1,022,231,000.00	1,022,231,000.00
10.75 percent, 1994	1,022,231,000.00	1,022,231,000.00
10.75 percent, 1995	1,022,231,000.00	1,022,231,000.00
10.75 percent, 1996	1,022,231,000.00	1,022,231,000.00
10.75 percent, 1997	1,022,230,000.00	1,022,230,000.00
10.75 percent, 1998	1,022,230,000.00	1,022,230,000.00
13.75 percent, 1991	191,756,000.00	191,756,000.00
13.75 percent, 1992	469,684,000.00	469,684,000.00
13.75 percent, 1993	469,684,000.00	469,684,000.00
13.75 percent, 1994	469,684,000.00	469,684,000.00
13.75 percent, 1995	469,684,000.00	469,684,000.00
13.75 percent, 1996	469,684,000.00	469,684,000.00
13.75 percent, 1997	469,685,000.00	469,685,000.00
13.75 percent, 1998	469,685,000.00	469,685,000.00
13.75 percent, 1999	1,491,915,000.00	1,491,915,000.00
Total investments	36,947,976,000.00	58,355,609,000.00
Undisbursed balances[1]	571,402,083.59	-90,867,407.08
Total assets	37,519,378,083.59	58,264,741,592.92

[1] Negative figure represented an extension of credit against securities to be redeemed within the following few days.

Note: Special issues are always purchased at par value. Therefore, book value and par value are the same for each special issue, and the common value is shown above.

All securities held by the OASI Trust Fund are special issues (i.e., securities sold only to the trust funds). These are of two types: short-term certificates of indebtedness and long-term bonds. The certificates of indebtedness are issued through the investment of receipts not required to meet current expenditures, and they mature on the next June 30 following the date of issue. Special-issue bonds, on the other hand, are normally acquired only when the certificates of indebtedness (and bonds, issued previously) mature on June 30. The amount of bonds acquired on June 30 is equal to the amount of special issues maturing, less amounts required to meet expenditures on that day.

Table 7 shows the investment transactions of the OASI and DI Trust Funds, separate and combined, in fiscal year 1987. All amounts shown in the table are at par value.

TABLE 7.—INVESTMENT TRANSACTIONS OF THE OASI AND DI TRUST FUNDS IN FISCAL YEAR 1987
[In thousands]

	OASI Trust Fund	DI Trust Fund	Total
Invested assets, September 30, 1986	$36,947,976	$8,335,473	$45,283,449
Acquisitions:			
Certificates of indebtedness	196,192,362	18,715,991	214,908,353
Bonds	21,896,361	441,383	22,337,744
Total acquisitions	218,088,723	19,157,374	237,246,097
Dispositions:			
Certificates of indebtedness	192,903,047	18,715,991	211,619,038
Bonds	3,778,043	1,584,017	5,362,060
Total dispositions	196,681,090	20,300,008	216,981,098
Net increase in invested assets	21,407,633	-1,142,634	20,264,999
Invested assets, September 30, 1987	58,355,609	7,192,839	65,548,448

Note: All investments are shown at par value. No transactions in the marketable securities held by the DI Trust Fund occurred during fiscal year 1987.

The effective annual rate of interest earned by the assets of the OASI Trust Fund during the 12 months ending on June 30, 1987, was 10.8 percent, as compared to 11.2 percent earned during the 12 months ending on June 30, 1986. (This period is used, rather than the fiscal year, 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 1987 was 8.625 percent, payable semiannually. Special-issue bonds with a total par value of $21,896 million were purchased in June 1987.

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 usual practice in the past has been to spread the holdings of special issues, as of each June 30, so that the amounts maturing in each of the next 15 years are approximately equal. Accordingly, the amounts and maturity dates of the special-issue bonds purchased on June 30, 1987, were selected in such a way that the maturity dates of the total portfolio of special issues were spread evenly over the 15-year period 1988-2002.

B. DISABILITY INSURANCE TRUST FUND

A statement of the income and disbursements of the Federal Disability Insurance Trust Fund during fiscal year 1987, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table 8.

TABLE 8.—STATEMENT OF OPERATIONS OF THE DI TRUST FUND DURING FISCAL YEAR 1987
[In thousands]

Total assets, September 30, 1986		$8,348,059
Receipts:		
Contributions:		
Appropriations:		
Employment taxes	$18,529,533	
Tax credits	153,627	
Total appropriations	18,683,161	
Deposits arising from State agreements	648,515	
Payments from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service in 1987	20,526	
Gross contributions	19,352,202	
Less payment to the general fund of the Treasury for contributions subject to refund	28,570	
Net contributions		19,323,632
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens	3,431	
All other, not subject to withholding[1]	-19,000	
Total income from taxation of benefits		-15,569
Investment income and interest adjustments:		
Interest on investments	793,661	
Interest on interfund transfers due to adjustment in allocation of administrative expenses	1,657	
Gross investment income and interest adjustments	795,318	
Less interest on general fund advance tax transfers	59,816	
Net investment income and interest adjustments		735,502
Income from the merger of the Northern Mariana Islands Social Security Retirement Fund with the United States Social Security program		2,834
Gifts		137
Total receipts		20,046,536
Disbursements:		
Benefit payments:		
Gross benefit payments	20,515,603	
Less collected overpayments	93,546	
Less reimbursement for unnegotiated checks	8,463	
Net benefit payments		20,413,594
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account"		56,895
Payment for costs of vocational rehabilitation services for disabled beneficiaries		13,512
Administrative expenses:		
Department of Health and Human Services	719,401	
Department of the Treasury	18,599	
Gross administrative expenses	738,000	
Less receipts from sales of supplies, materials, etc.	138	
Net administrative expenses		737,862
Total disbursements		21,221,862
Net increase in assets		-1,175,327
Total assets, September 30, 1987		7,172,732

[1]Reflects $195 million in transfers from the DI Trust Fund to the general fund of the Treasury to correct estimated amounts transferred for calendar years 1984 and 1985.

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

The total assets of the DI Trust Fund amounted to $8,348 million on September 30, 1986. During fiscal year 1987, total receipts amounted to

$20,047 million, and total disbursements were $21,222 million. The assets of the trust fund thus decreased by $1,175 million during the year, to a total of $7,173 million on September 30, 1987.

Included in total receipts were $18,683 million representing contributions appropriated to the fund (including transfers of $154 million from the general fund of the Treasury to offset the tax credits allowed against contributions due on earnings of self-employed persons), $649 million representing amounts received by the Secretary of the Treasury in accordance with State coverage agreements and deposited directly into the fund, and $21 million in payments from the general fund of the Treasury representing the contributions that would have been paid on estimated deemed wage credits for military service in 1987 if such credits had been considered to be covered wages. The $649 million deposited into the fund under State coverage agreements is much less than the amount deposited in the preceding fiscal year for the same reasons that apply to such deposits in the OASI Trust Fund (as described in the preceding subsection). As an offset, $29 million was transferred from the trust fund to the general fund of the Treasury for the estimated amount of refunds to employees who worked for more than one employer during a year and paid contributions on wages in excess of the contribution and benefit base.

Net contributions amounted to $19,324 million, an increase of 6.5 percent from the amount in the preceding fiscal year. This increase is primarily attributable to the same factors, insofar as they apply to the DI program, that accounted for the change in contributions to the OASI Trust Fund (described in the preceding subsection). Income from the taxation of benefit payments amounted to -$16 million in fiscal year 1987, representing the net of $179 million of such income offset by $195 million transferred to the general fund of the Treasury to correct estimated amounts transferred for calendar years 1984 and 1985.

Interest totaling $736 million consisted of interest on the investments of the fund, plus net interest on amounts of interfund and general-fund transfers (see preceding subsection).

Income from the merger of the Northern Mariana Islands Social Security Retirement Fund and the DI Trust Fund amounted to $3 million. The remaining $137,217 in receipts consisted of gifts to the fund.

Of the $21,222 million in total disbursements, $20,414 million was for net benefit payments, excluding collected overpayments of $94 million and the reimbursement of $8 million for unnegotiated benefit checks. This represents an increase of 4.6 percent over the corresponding amount of benefit payments in fiscal year 1986. This increase reflects somewhat the same factors that resulted in the net increase in benefit payments from the OASI Trust Fund (as described in the preceding subsection).

Provisions governing the financial interchanges between the Railroad Retirement and OASDI programs are described in a preceding section. The determination made as of September 30, 1986, required that a transfer of $53,400,000 be made from the DI Trust Fund to the Social Security Equivalent Benefit Account. A total amount of $56,895,000 was transferred to the SSEBA in June 1987, including interest to the date of transfer amounting to $3,495,000.

The remaining disbursements amounted to $738 million for net administrative expenses and $14 million for the costs of vocational rehabilitation services furnished to disabled-worker beneficiaries and to those children of disabled workers who were receiving benefits on the basis of disabilities that began before age 22. Reimbursement from the trust funds for the costs of such services is made only in those cases where the services contributed to the successful rehabilitation of the beneficiaries.

The assets of the DI Trust Fund at the end of fiscal year 1987 totaled $7,173 million, consisting of $7,192 million in U.S. Government obligations and, as an offset, an extension of credit amounting to $19 million against securities to be redeemed within the following few days. Table 9 shows the total assets of the fund and their distribution at the end of each fiscal year 1986 and 1987.

TABLE 9.—ASSETS OF THE DI TRUST FUND, BY TYPE, AT END OF FISCAL YEAR, 1986 AND 1987

	September 30, 1986	September 30, 1987
Investments in public-debt obligations:		
Public issues:		
Treasury bonds:		
3.5 percent, 1990	$10,500,000.00	$10,500,000.00
3.5 percent, 1998	5,000,000.00	5,000,000.00
4.125 percent, 1989-94	68,400,000.00	68,400,000.00
4.25 percent, 1987-92	80,800,000.00	80,800,000.00
7.5 percent, 1988-93	26,500,000.00	26,500,000.00
7.625 percent, 2002-07	10,000,000.00	10,000,000.00
8 percent, 1996-2001	26,000,000.00	26,000,000.00
8.25 percent, 2000-05	3,750,000.00	3,750,000.00
11.75 percent, 2010	30,250,000.00	30,250,000.00
Total investments in public issues at par value, as shown above	261,200,000.00	261,200,000.00
Unamortized premium or discount, net	-934,910.24	-824,770.04
Total investments in public issues at book value	260,265,089.76	260,375,229.96
Obligations sold only to the trust funds (special issues):		
Bonds:		
8.375 percent, 1988	315,070,000.00	—
8.375 percent, 1989	223,049,000.00	—
8.375 percent, 1990	201,768,000.00	38,694,000.00
8.375 percent, 1991	201,767,000.00	201,767,000.00
8.375 percent, 1992	201,767,000.00	201,767,000.00
8.375 percent, 1993	201,767,000.00	201,767,000.00
8.375 percent, 1994	109,613,000.00	109,613,000.00
8.375 percent, 1995	109,613,000.00	109,613,000.00
8.375 percent, 1996	201,767,000.00	201,767,000.00
8.375 percent, 1997	201,767,000.00	201,767,000.00
8.375 percent, 1998	201,767,000.00	201,767,000.00
8.375 percent, 1999	201,767,000.00	201,767,000.00
8.375 percent, 2000	201,767,000.00	201,767,000.00
8.375 percent, 2001	591,226,000.00	591,226,000.00
8.75 percent, 1993	47,479,000.00	47,479,000.00
8.75 percent, 1994	339,277,000.00	339,277,000.00
9.75 percent, 1993	142,337,000.00	142,337,000.00
9.75 percent, 1994	142,336,000.00	142,336,000.00
9.75 percent, 1995	481,613,000.00	481,613,000.00

TABLE 9.—ASSETS OF THE DI TRUST FUND, BY TYPE, AT END OF FISCAL YEAR, 1986 AND 1987 (Cont.)

	September 30, 1986	September 30, 1987
Investments in public-debt obligations: (Cont.)		
Obligations sold only to the trust funds (special issues): (Cont.)		
Bonds: (Cont.)		
10.375 percent, 1988	$73,263,000.00	—
10.375 percent, 1989	368,178,000.00	—
10.375 percent, 1990	177,111,000.00	$177,111,000.00
10.375 percent, 1991	101,503,000.00	101,503,000.00
10.375 percent, 1992	101,503,000.00	101,503,000.00
10.375 percent, 1993	101,503,000.00	101,503,000.00
10.375 percent, 1996	101,504,000.00	101,504,000.00
10.375 percent, 1997	101,504,000.00	101,504,000.00
10.375 percent, 1998	101,504,000.00	101,504,000.00
10.375 percent, 1999	152,904,000.00	152,904,000.00
10.375 percent, 2000	389,459,000.00	389,459,000.00
10.75 percent, 1990	212,348,000.00	212,348,000.00
10.75 percent, 1991	287,956,000.00	287,956,000.00
10.75 percent, 1992	287,956,000.00	287,956,000.00
10.75 percent, 1993	98,140,000.00	98,140,000.00
10.75 percent, 1996	287,955,000.00	287,955,000.00
10.75 percent, 1997	287,955,000.00	287,955,000.00
10.75 percent, 1998	287,955,000.00	287,955,000.00
13.75 percent, 1999	236,555,000.00	236,555,000.00
Total obligations sold only to the trust funds (special issues)	8,074,273,000.00	6,931,639,000.00
Total investments in public-debt obligations (book value[1])	8,334,538,089.76	7,192,014,229.96
Undisbursed balances[2]	13,520,558.71	-19,282,218.00
Total assets (book value[1])	8,348,058,648.47	7,172,732,011.96

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

[2] Negative figure represented an extension of credit against securities to be redeemed within the following few days.

Note: Special issues are always purchased at par value. Therefore, book value and par value are the same for each special issue, and the common value is shown above.

The effective annual rate of interest earned by the assets of the DI Trust Fund during the 12 months ending on June 30, 1987, was 9.9 percent, as compared to 10.2 percent earned during the 12 months ending on June 30, 1986. The interest rate on public-debt obligations issued for purchase by the trust fund in June 1987 was 8.625 percent, payable semiannually. Special-issue bonds with a total par value of $441 million were purchased in June 1987.

The investment policies and practices described in the preceding subsection concerning the OASI Trust Fund apply as well to the investment of the assets of the DI Trust Fund.

V. ACTUARIAL ESTIMATES

Section 201(c)(2) of the Social Security Act requires the Board of Trustees to 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, 1987, is presented in the preceding section of this report. Estimates of the operations and status of the trust funds during fiscal years 1988-92 are presented in this section. Similar estimates for calendar years 1988-92 are also presented.

In the short range, the adequacy of the trust fund level is often measured by the "contingency fund ratio," which is defined to be the assets at the beginning of the year, including advance tax transfers for January, expressed as a percentage of the outgo during the year. (For the years 1983-86, the assets at the beginning of the year also included amounts owed or excluded amounts lent, to another trust fund.) Thus, this ratio represents the proportion of the year's outgo which is available at the beginning of the year. During periods when outgo temporarily exceeds income, as might happen during an economic recession, trust fund assets are used to meet the shortfall. In the event of recurring shortfalls for an extended period, the trust funds can allow sufficient time for the development and enactment of legislation to restore financial balance to the program.

Section 201(c) of the Act also requires that the annual report include "a statement of the actuarial status of the Trust Funds." Such statements have customarily been made for the medium-range valuation period (25 years) and the long-range valuation period (75 years), each period commencing with the calendar year of issuance of the report. The statement of the long-range actuarial status has customarily included the actuarial status during the second and third 25-year subperiods of the long-range projection period. Statements of the current actuarial status are presented in this section. The methods used to estimate the short-range operations of the trust funds and the actuarial status are described in Appendix A.

Basic to the discussion of the actuarial status are the concepts of "income rate" and "cost rate," each of which is expressed as a percentage of taxable payroll. The OASDI taxable payroll consists of the total earnings which are subject to OASDI taxes, adjusted to include, after 1982, deemed wages based on military service, and to reflect the lower effective tax rates (as compared to the combined employee-employer rate) which apply to multiple-employer "excess wages," and which did apply, before 1984, to net earnings from self-employment and, before 1988, to tips. Because the taxable payroll reflects these adjustments, the income rate can be defined to be the sum of the OASDI combined employee-employer contribution rate (or the payroll-tax rate) scheduled in the law and the rate of income from taxation of benefits (which is in turn expressed as a percentage of taxable payroll). As such, it excludes reimbursements from the general fund of the Treasury for the costs associated with special monthly payments to certain uninsured persons who attained age 72 before 1968 and who have fewer than 3 quarters of coverage, transfers under the interfund borrowing provisions, and net investment income. The cost rate is the ratio of the cost (or outgo or disbursements) of the program to the taxable payroll. In this context, the outgo is defined to include benefit payments, special monthly payments to certain uninsured persons who have 3 or more quarters of coverage (and whose payments are therefore not reimbursable from the general fund of the Treasury), administrative expenses, net transfers from the trust funds to the Railroad Retirement program under the financial-interchange provisions, and payments for vocational rehabilitation services for disabled beneficiaries; it excludes special monthly payments to certain uninsured persons whose payments are reimbursable from the general fund of the Treasury (as described above), and transfers under the interfund borrowing provisions. For any year, the income rate minus the cost rate is referred to as the "balance" for the year.

The long-range financial status of the trust funds has often been summarized by the calculation of the actuarial balance. This is defined as the difference between the income rate and the cost rate over the long-range period—i.e., the next 75 years. If the actuarial balance is estimated to be negative, the program is said to have an actuarial deficit. Such deficit, when estimated, serves as a warning that, unless the projections turn out to be too pessimistic, changes in the program's financing or benefit provisions will be needed in the future.

A more accurate basis for calculating the actuarial balance is being introduced in this report. This new basis (known as "level-financing"), although different from the one that has been used since 1973 (known as "average-cost"), is similar to the basis used in reports prior to 1973. So as to fully document in this report the effect of the change in the calculation basis, the summarization of the projections into the actuarial balances are presented under the new ("level-financing") calculations and also the previous ("average-cost") calculations.

In the early 1970s the estimated actuarial balances were similar under either of the two calculations, but the balances began to diverge gradually as the assumptions underlying the projections were modified and as sizable fund balances were projected to accumulate. The Board has opted to shift its attention to the new "level-financing" calculations in order to fully recognize the interest earnings on the funds that are projected to accumulate and also to provide a higher level of consistency among the measures of financial soundness applied to the program.

The "average-cost" calculations consist of both the simple arithmetic averages of the annual cost rates and income rates and the difference between these two averages to obtain the actuarial balance. The "level-financing" calculations on the other hand, are based on the present value of future income, outgo, and taxable payroll. The present value is calculated by discounting the future annual amounts at the assumed rate of interest. The income and cost rates over the projection period are then obtained by dividing the present value of the taxable payroll into the present values of income and outgo, respectively. The difference between the income rate and cost rate over the long-range projection period, after an adjustment to take into account the fund balance at the valuation date, is computed to obtain the long-range actuarial balance.

The "average-cost" methodology, used in last year's report, gives the same weight to projected values for a distant year in the future as to values projected for the coming year.

Proper weighting should reflect two items which in many past projections approximately offset each other: the growth of taxable payroll and the real interest rate. Because people value a dollar receivable fifty years in the future less than a dollar available today, future receipts are discounted by an interest rate that would make them equivalent to a dollar received today. However, because the actuarial balance is calculated in terms of a percentage of payroll, the expectation that future payrolls will be substantially larger than current ones is not explicitly taken into account in the average-cost measure. Thus, implicitly the average-cost methodology discounts future receipts and payments by the growth rate of payroll. In more recent reports, the projected rate of growth in taxable payroll has fallen relative to the assumed real interest rate; for example, under alternative II-B, the projected growth rate in taxable payroll is 1.5 percent per year, as compared with an assumed real interest rate of 2.0 percent per year. As a result, it has become important to revert to the "level-financing" methodology.

Because the trust fund's positive balances occur substantially sooner than the deficits, the "level-financing" methodology gives them a larger weight, and hence its use implies an improvement in the actuarial balance over the 75-year period of this report.

Related to the concept of actuarial balance is that of "close actuarial balance." The program is said to be in close actuarial balance for the long-range period if the income rate over the 75-year projection period is between 95 percent and 105 percent of the cost rate over that period. This definition can be applied under either the "average-cost" or the "level-financing" calculations. However, it should be noted that a single measure over a long period, such as the actuarial balance, may not reveal problems which could occur during that period. Thus, other measures should also be considered.

Unlike the "average-cost" calculations, the new "level-financing" calculations result in estimated actuarial balances that are sensitive to changes in the assumed rate of interest whenever the projected annual balances vary significantly through time, as is the case with the projections presented in this report. As shown in Appendix B, a change of one percentage point in the assumed rate of interest would change the estimated long-range actuarial balance by about 0.5 percent of taxable payroll based on alternative II-B assumptions.

The Board is also of the opinion that decisions about the future of the OASDI program should not be based solely on the estimated long-range actuarial balance. This particular concept, although useful in the decision-making process, does not fully capture all of the information that may be necessary for arriving at appropriate decisions. Attention should also be given to: (1) the pattern and ultimate levels of projected annual cost rates and income rates (particularly to the differences between these two, which have been previously defined as annual balances), (2) the size of future fund accumulations (particularly to the year and amount of maximum projected fund ratio and the year and amount of maximum funds in dollars), and (3) the year of projected fund exhaustion. Estimates of these indicators are presented later in this section or in Appendix G.

Under some measures, the system may be out of close actuarial balance because of projected deficits in the very long run, while benefits are payable for many years into the future, and immediate action is not required.

Because the program is entering a period of large fund accumulation, the Board believes that the subject of the proper level of fund accumulation should be made a specific part of the agenda for the next Social Security Advisory Council. The Board particularly requests that a Panel of Financing Experts (consisting of actuaries, economists, and demographers) be appointed by the Advisory Council, and that the panel be instructed to provide advice regarding the measures that should be used to judge the program's short-range and long-range financial soundness.

A. ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

The future income and outgo of the OASDI program depend on many economic and demographic factors, including gross national product, labor force, unemployment, average earnings, productivity, inflation, fertility, mortality, net immigration, marriage, divorce, retirement patterns, and disability incidence and termination. The income will depend on how these factors affect the size and composition of the working population and the general level of earnings. Similarly, the outgo will depend on how these factors affect the size and composition of the beneficiary population and the general level of benefits.

Because precise forecasting of these various factors is impossible, estimates are shown in this report on the basis of four sets of assumptions, designated as alternatives I, II-A, II-B, and III. The two intermediate sets—alternatives II-A and II-B—share the same demographic assumptions but differ in their economic assumptions. More robust economic growth is assumed for alternative II-A than for alternative II-B. This presentation illustrates the effect on the financial status of the program of higher real earnings growth, higher employment, and lower inflation, for a given set of demographic assumptions. In terms of the net effect on the status of the program, alternative II-A is more optimistic than is alternative II-B. Of all four sets, alternative I is the most optimistic, and alternative III is the most pessimistic.

Although these sets of economic and demographic assumptions have been developed using the best available information, the resulting estimates should be interpreted with care. In particular, they are not intended to be exact predictions of the future status of the OASDI program, but rather, they are intended to be indicators of the trend and range of future income and outgo, under a variety of plausible economic and demographic conditions.

Economic assumptions

The principal economic assumptions for the four alternatives are summarized in table 10.

TABLE 10.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2065

Calendar year	Average annual percentage increase in— Real GNP[1]	Average wages in covered employment	Consumer Price Index[2]	Real-wage differential[3] (percent)	Average annual interest rate[4] (percent)	Average annual unemployment rate[5] (percent)
Past experience:						
1960-64	3.9	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	2.4	6.3	6.1	.2	6.7	5.4
1975	-1.3	6.7	9.1	-2.5	7.4	8.5
1976	4.9	8.5	5.7	2.8	7.1	7.7
1977	4.7	7.2	6.5	.7	7.1	7.1
1978	5.3	9.7	7.6	2.1	8.2	6.1
1979	2.5	9.2	11.4	-2.2	9.1	5.8
1980	-.2	9.1	13.5	-4.4	11.0	7.1
1981	1.9	9.3	10.3	-1.0	13.3	7.6
1982	-2.5	6.5	6.0	.6	12.8	9.7
1983	3.6	•4.9	3.0	•1.8	11.0	9.6
1984	6.8	•5.7	3.4	•2.3	12.4	7.5
1985	3.0	•4.3	3.5	•.7	10.8	7.2
1986	2.9	•4.4	1.6	•2.8	8.0	7.0

TABLE 10.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2065 (Cont.)

Calendar year	Average annual percentage increase in— Real GNP[1]	Average wages in covered employment	Consumer Price Index[2]	Real-wage differential[3] (percent)	Average annual interest rate[4] (percent)	Average annual unemployment rate[5] (percent)
Alternative I:						
1987	2.9	3.0	3.6	-0.6	8.4	6.2
1988	3.5	5.4	3.3	2.1	8.3	5.8
1989	3.6	5.7	3.2	2.4	8.4	5.8
1990	3.9	5.6	3.0	2.5	7.8	5.5
1991	3.7	5.1	2.7	2.5	7.1	5.3
1992	3.5	4.6	2.2	2.4	6.4	5.1
1993	3.5	4.4	2.0	2.4	5.6	4.9
1994	3.3	4.4	2.0	2.4	4.9	4.8
1995	3.0	4.3	2.0	2.3	4.8	4.8
1996	3.0	4.3	2.0	2.3	4.9	4.8
1997	3.0	4.3	2.0	2.3	5.0	4.8
2000	3.2	4.5	2.0	2.4	5.0	5.0
2010 & later	[7]2.8	4.4	2.0	2.4	5.0	5.0
Alternative II-A:						
1987	2.9	3.0	3.6	-.6	8.4	6.2
1988	2.9	5.1	3.6	1.5	8.4	5.9
1989	3.1	5.7	3.9	1.8	8.8	6.0
1990	3.5	5.6	3.6	2.0	8.4	5.7
1991	3.4	5.2	3.2	2.0	7.8	5.5
1992	3.1	5.0	3.0	2.0	7.0	5.4
1993	2.8	4.9	3.0	1.9	6.4	5.3
1994	2.8	4.9	3.0	1.9	5.9	5.3
1995	2.7	4.9	3.0	1.9	5.7	5.3
1996	2.7	4.9	3.0	1.9	5.6	5.3
1997	2.7	4.9	3.0	1.9	5.6	5.3
2000	2.6	5.0	3.0	1.9	5.5	5.5
2010 & later	[7]2.3	4.9	3.0	1.9	5.5	5.5
Alternative II-B:						
1987	2.9	3.0	3.6	-.6	8.4	6.2
1988	2.5	4.8	3.9	.9	8.4	6.0
1989	2.8	5.6	4.5	1.1	9.1	6.2
1990	2.9	5.4	4.3	1.1	8.9	6.1
1991	2.8	5.4	4.2	1.3	8.6	6.0
1992	2.7	5.7	4.0	1.7	7.8	5.9
1993	2.6	5.6	4.0	1.6	7.4	5.8
1994	2.4	5.6	4.0	1.6	6.9	5.8
1995	2.3	5.5	4.0	1.5	6.6	5.8
1996	2.3	5.5	4.0	1.5	6.4	5.8
1997	2.3	5.5	4.0	1.5	6.2	5.7
2000	2.2	5.5	4.0	1.4	6.0	6.0
2010 & later	[7]1.9	5.4	4.0	1.4	6.0	6.0
Alternative III:						
1987	2.8	3.0	3.6	-.6	8.4	6.2
1988	-.1	3.4	4.4	-1.0	8.6	6.5
1989	.9	5.8	5.9	-.1	9.7	7.5
1990	2.4	6.6	6.4	.1	10.3	7.2
1991	1.2	5.9	6.3	-.4	10.5	7.1
1992	-.6	4.6	5.0	-.3	9.7	8.2
1993	3.2	6.9	5.3	1.6	8.9	7.6
1994	2.4	6.0	5.0	1.0	8.0	7.2
1995	2.1	6.0	5.0	1.0	7.6	7.0
1996	1.9	6.0	5.0	1.0	7.2	6.8
1997	1.9	6.0	5.0	1.0	6.8	6.7
2000	1.6	6.0	5.0	.9	6.5	7.0
2010 & later	[7]1.3	5.9	5.0	.9	6.5	7.0

[1]The real GNP (gross national product) is the total output of goods and services, expressed in 1982 dollars.

[2]The Consumer Price Index is the average of the 12 monthly values of the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

[3]The real-wage differential is the difference between the percentage increases, before rounding, in (1) average annual wages in covered employment, and (2) the average annual Consumer Price Index.

[4]The average annual interest rate is the average of the nominal interest rates, which, in practice, are compounded semiannually, for special public-debt obligations issuable to the trust funds in each of the 12 months of the year.

[5]Through 1997, the rates shown are crude civilian unemployment rates. After 1997, the rates are total rates (including military personnel), adjusted by age and sex based on the estimated total labor force on July 1, 1987.

[6]Preliminary.

[7]This value is for 2010. The annual percentage increase in real GNP is assumed to continue to change after 2010 for each alternative to reflect the dependence of labor force growth on the size and age-sex distribution of the population. The increases for 2065 are 2.9, 2.0, 1.6, and 0.6 percent for alternatives I, II-A, II-B, and III, respectively.

Alternatives I, II-A, II-B, and III present a range of generally consistent sets of economic assumptions which have been designed to encompass most of the possibilities that might be encountered. Alternative I presents the most optimistic outlook, with robust economic growth and low inflation. The intermediate sets of assumptions—alternatives II-A and II-B—bracket the current consensus view of moderate growth and inflation for the first few years; thereafter, alternative II-A continues to reflect more robust economic growth than does alternative II-B. Alternative III is a pessimistic forecast in which the economy experiences two recessions during the next 10 years. The total declines in real GNP for the projected recessions in alternative III are slightly less than those of recent recessions; however, the intervening recoveries are assumed to be substantially weaker than those experienced in the recent past. This scenario presents an assessment of the combined effects on the OASDI program of business cycles and generally weak economic growth.

The period of economic growth, which began in the first quarter of 1983, is assumed to continue through the end of the decade under alternatives I, II-A, and II-B. Real GNP is assumed to be stronger for alternative I than for alternative II-A. Similarly, growth for alternative II-A is stronger than that for alternative II-B.

For alternative III, the recovery is assumed to have faded during the first quarter of 1988; a recession is assumed to occur during the balance of 1988. After 9 quarters of recovery, a second recession is assumed to begin in the second quarter of 1991, lasting through the first quarter of 1992.

For each of the alternatives I, II-A, and II-B, the unemployment rate is assumed to decline gradually toward its ultimate level. For alternative III, the unemployment rate is assumed to reach its ultimate level after the recovery that is assumed to follow the second recession. After the early 1990s, the projected rates of growth in real GNP, for all four alternatives, are determined by the assumed rates of growth in employment, average hours worked, and productivity.

Assumed values for the other economic variables are consistent with the assumed rates of real GNP growth. For alternative II-A, the average annual unemployment rate declines from 6.2 percent in 1987 to its ultimate level of 5.5 percent (age-sex adjusted to the 1987 labor force) by the year 2000. The annual rate of increase in average wages in covered employment is assumed to rise from the assumed 3.0-percent increase in 1987 to a 5.7-percent increase in 1989, and thereafter to decline gradually to its ultimate rate of 4.9 percent by 2010. The annual rate of increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is assumed to rise from 3.6 percent in 1987 to 3.9 percent in 1989, and then to decline to an ultimate rate of 3.0 percent in 1992. The CPI-W (hereinafter denoted as "CPI") is used to determine automatic cost-of-living benefit increases under the OASDI program. The real-wage differential (i.e., the difference between the annual rates of increase in average wages in covered employment and in the CPI) is assumed to remain between 1.5 and 2.0 percentage points after 1987, reaching its ultimate value of 1.9 percentage points by 2010. The annual interest rate is assumed to reach its ultimate value of 5.5 percent by 1998.

For alternative II-B, the average annual unemployment rate declines generally to its ultimate level of 6.0 percent by 2000. The annual rate of increase in average wages in covered employment is assumed to rise from the assumed 3.0-percent increase in 1987 to 5.7 percent in 1992, and then to decline generally to its ultimate rate of 5.4 percent by 2010. The annual rate of increase in the CPI is assumed to rise from 3.6 percent in 1987 to 4.5 percent in 1989, and then to decline to an ultimate rate of 4.0 percent in 1992. The real-wage differential is assumed to remain between 0.9 and 1.7 percentage points after 1987, reaching its ultimate value of 1.4 percentage points by 2010. The annual interest rate is assumed to decline to its ultimate value of 6.0 percent by 1998.

Demographic assumptions

The principal demographic assumptions for the four alternatives are shown in table 11.

The demographic assumptions for alternatives II-A and II-B are identical. The assumed ultimate total fertility rate of 1.9 children per woman is attained in 2012, after a gradual increase from the 1987 level of 1.87 children per woman. The age-sex-adjusted death rate is assumed to decrease gradually during the entire projection period, with a reduction of 36 percent from the 1986 level by 2060. The resulting life expectancies at birth in 2060 are 77.3 years for men and 83.9 years for women, compared to 71.3 and 78.4 years, respectively, in 1986. Life expectancies at age 65 in 2060 are projected to be 17.8 years for men and 22.4 years for women, compared to 14.8 and 18.7 years, respectively, in 1986. The projected death rates reflect the effects of Acquired Immunodeficiency Syndrome (AIDS), based on projections through 1991 prepared by the Centers for Disease Control. Pending further analysis and study of the developing nature of this syndrome, no new infections of the Human Immunodeficiency Virus (HIV—the precursor to AIDS) are assumed to occur after 1991. Total net immigration is assumed to be 600,000 persons per year. The assumed level of net annual immigration is the combination of 400,000 net legal immigrants per year and 200,000 net other-than-legal immigrants per year.

For alternative I, the total fertility rate is assumed to reach an ultimate level of 2.2 children per woman in 2012. The age-sex-adjusted death rate is assumed to decrease more slowly than for alternatives II-A and II-B, with the reduction from the 1986 level being 20 percent by 2060. The resulting life expectancies at birth in 2060 are 74.7 years for men and 81.0 years for women, while at age 65 they are 16.1 and 20.3 years, respectively. Total net immigration is assumed to be 750,000 persons per year. The assumed level of net annual immigration is the combination of 450,000 net legal immigrants per year and 300,000 net other-than-legal immigrants per year.

For alternative III, the total fertility rate is assumed to decrease from the estimated 1985 level to an ultimate level of 1.6 in 2012. The age-sex-adjusted death rate is assumed to decrease more rapidly than for alternatives II-A and II-B, with the reduction from the 1986 level being 56 percent by 2060. The resulting life expectancies at birth in 2060 are 81.7 years for men and 88.1 years for women, while at age 65 they are 20.8 and 25.5 years, respectively. Total net immigration is assumed to be

450,000 persons per year. The assumed level of net annual immigration is the combination of 350,000 net legal immigrants per year and 100,000 net other-than-legal immigrants per year.

TABLE 11.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1940-2065

Calendar year	Total fertility rate[1]	Age-sex-adjusted death rate[2] (per 100,000)	Life expectancy[3]: At birth, Male	Life expectancy[3]: At birth, Female	Life expectancy[3]: At age 65, Male	Life expectancy[3]: At age 65, Female
Past experience:						
1940	2.23	1,532.8	61.4	65.7	11.9	13.4
1945	2.42	1,366.4	62.9	68.4	12.6	14.4
1950	3.03	1,225.3	65.6	71.1	12.8	15.1
1955	3.50	1,134.2	66.7	72.8	13.1	15.6
1960	3.61	1,128.6	66.7	73.2	12.9	15.9
1965	2.88	1,103.6	66.8	73.8	12.9	16.3
1970	2.43	1,041.8	67.1	74.9	13.1	17.1
1975	1.77	934.0	68.7	76.6	13.7	18.0
1976	1.74	923.2	69.1	76.8	13.7	18.1
1977	1.80	898.0	69.4	77.2	13.9	18.3
1978	1.76	892.4	69.6	77.3	13.9	18.3
1979	1.82	864.2	70.0	77.7	14.2	18.6
1980	1.85	878.0	69.9	77.5	14.0	18.4
1981	1.83	853.4	70.4	77.9	14.2	18.6
1982	1.83	827.8	70.8	78.2	14.5	18.8
1983	1.81	835.0	70.9	78.1	14.3	18.6
1984	1.80	828.2	71.1	78.2	14.4	18.7
1985	1.84	829.6	71.1	78.3	14.4	18.6
1986	1.83	814.1	71.3	78.4	14.8	18.7
1987[4]	1.87	804.6	71.5	78.5	14.9	18.8
Alternative I:						
1988	1.88	803.1	71.5	78.6	14.9	18.8
1990	1.91	799.5	71.5	78.7	14.9	18.8
1995	1.98	802.0	70.9	78.8	15.0	18.9
2000	2.04	795.2	70.9	78.9	15.0	18.9
2005	2.11	756.6	72.4	79.3	15.1	19.0
2010	2.17	735.0	73.1	79.6	15.2	19.1
2015	2.20	723.7	73.4	79.7	15.3	19.3
2020	2.20	714.4	73.5	79.9	15.4	19.4
2025	2.20	705.5	73.7	80.0	15.5	19.5
2030	2.20	696.8	73.8	80.2	15.6	19.6
2035	2.20	688.4	74.0	80.3	15.7	19.7
2040	2.20	680.2	74.1	80.4	15.8	19.8
2045	2.20	672.2	74.3	80.6	15.9	19.9
2050	2.20	664.5	74.4	80.7	16.0	20.0
2055	2.20	656.9	74.5	80.8	16.0	20.1
2060	2.20	649.5	74.7	81.0	16.1	20.3
2065	2.20	642.3	74.8	81.1	16.2	20.4
Alternative II-A and II-B:						
1988	1.87	802.9	71.6	78.7	14.9	18.9
1990	1.87	790.2	71.8	79.0	15.1	19.1
1995	1.88	783.6	71.8	79.6	15.4	19.5
2000	1.89	763.9	72.2	80.2	15.7	19.8
2005	1.89	689.6	73.9	80.7	15.9	20.0
2010	1.90	650.9	74.7	81.1	16.1	20.2
2015	1.90	632.7	75.1	81.4	16.2	20.4
2020	1.90	618.2	75.3	81.7	16.4	20.6
2025	1.90	604.5	75.6	82.0	16.6	20.9
2030	1.90	591.3	75.8	82.3	16.7	21.1
2035	1.90	578.5	76.1	82.5	16.9	21.3
2040	1.90	566.0	76.3	82.8	17.1	21.5
2045	1.90	554.0	76.6	83.1	17.2	21.7
2050	1.90	542.3	76.8	83.3	17.4	21.9
2055	1.90	531.0	77.0	83.6	17.6	22.2
2060	1.90	519.9	77.3	83.9	17.8	22.4
2065	1.90	509.3	77.5	84.1	17.9	22.6

TABLE 11.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1940-2065 (Cont.)

Calendar year	Total fertility rate[1]	Age-sex-adjusted death rate[2] (per 100,000)	Life expectancy[3] At birth Male	Life expectancy[3] At birth Female	Life expectancy[3] At age 65 Male	Life expectancy[3] At age 65 Female
Alternative III:						
1988	1.86	802.7	71.7	78.8	15.0	19.0
1990	1.83	781.7	72.2	79.4	15.3	19.3
1995	1.77	770.7	72.7	80.5	15.9	20.0
2000	1.72	743.3	73.3	81.3	16.3	20.6
2005	1.67	631.2	75.3	82.1	16.7	21.0
2010	1.62	569.6	76.4	82.8	17.1	21.4
2015	1.60	538.5	77.1	83.4	17.5	21.8
2020	1.60	513.6	77.6	83.9	17.8	22.2
2025	1.60	490.6	78.1	84.5	18.2	22.7
2030	1.60	468.8	78.6	85.0	18.6	23.1
2035	1.60	448.1	79.1	85.5	19.0	23.5
2040	1.60	428.5	79.6	86.0	19.3	23.9
2045	1.60	409.8	80.1	86.6	19.7	24.3
2050	1.60	392.1	80.7	87.1	20.1	24.7
2055	1.60	375.2	81.2	87.6	20.5	25.1
2060	1.60	359.2	81.7	88.1	20.8	25.5
2065	1.60	344.0	82.1	88.6	21.2	26.0

[1]The total fertility rate for any year is the average number of children who would be born to a woman in her lifetime if she were to experience the birth rates by age observed in, or assumed for, the selected year, and if she were to survive the entire child-bearing period. The ultimate total fertility rate is assumed to be reached in 2012.

[2]The age-sex-adjusted death rate is the crude rate that would occur in the enumerated total population as of April 1, 1980, if that population were to experience the death rates by age and sex observed in, or assumed for, the selected year.

[3]The life expectancy for any year is the average number of years of life remaining for a person if that person were to experience the death rates by age observed in, or assumed for, the selected year.

[4]Estimated.

The values assumed after the early years for both the economic and the demographic factors are intended to represent the average experience and are not intended to be exact predictions of year-by-year values. Actual future values will likely exhibit fluctuations or cyclical patterns, as in the past.

In addition to the assumptions discussed above, many other factors are necessary to prepare the estimates presented in this report. Appendix A includes a discussion of some of those factors.

The economic and demographic assumptions described in this section differ in some significant respects from the assumptions used in the 1987 Annual Report. In particular, the ultimate total fertility rate assumed for the intermediate assumptions—alternatives II-A and II-B—was reduced from 2.0 children per woman in the 1987 report to 1.9 children per woman in this report. The ultimate annual level of net immigration assumed for the intermediate assumptions was increased from 400,000 to 600,000. The ultimate annual real-wage differential for alternative II-B was reduced from 1.5 percent in the 1987 report to 1.4 percent in this report. In each of these cases, conforming changes were also made in the other alternative sets of assumptions. Finally, as already mentioned in this section, the projections in this report reflect the effects of AIDS, based on estimates through 1991, prepared by the Centers for Disease Control.

Each year, the staffs of the Board of Trustees examine the economic and demographic assumptions used in the previous annual report to determine what changes, if any, should be made in the assumptions. In keeping with this long-established practice, it is the Board's intention to review all of the economic and demographic assumptions for possible changes to be made in the 1989 Annual Report. In particular, the assumption relating to the ultimate rate of growth in real wages will be reviewed. In addition, the assumptions relating to the long-range ultimate fertility rates and net immigration levels will be reviewed in the light of the next set of long-range population projections to be released by the Bureau of the Census. Also, more information about the future effects of AIDS, resulting from further analysis and study, will be incorporated in the Board's next annual report.

B. AUTOMATIC ADJUSTMENTS

Under the automatic-adjustment provisions of the law, benefits generally are increased once a year to reflect increases in the cost of living. These automatic increases may be modified under certain circumstances, as explained below. For persons becoming eligible for benefits in 1979 and later, the increases generally begin with the year in which the worker reaches age 62, or becomes disabled or dies, if earlier. An automatic cost-of-living benefit increase of 4.2 percent, effective for December 1987, was announced in October 1987, as described in Appendix C.

The automatic cost-of-living benefit increase for any year is based on the change in the CPI from the third quarter of the previous year through the third quarter of the current year. If the combined assets of the OASI and DI Trust Funds, as a percentage of annual expenditures, are below a specified level, the automatic benefit increase is limited to the lesser of the increases in wages or prices. This specified level is 15.0 percent with respect to benefit increases for December of each year 1984-88, and 20.0 percent thereafter. This "stabilizer" provision has not affected any benefit increases since its enactment in 1983, and it would not affect any specific future increases shown in this report under any of the four sets of assumptions. Based on alternatives II-B and III, however, the combined trust funds eventually fall below the 20.0 percent threshold shortly before exhaustion in the next century. Thus, at that time, the stabilizer provision could affect a benefit increase if average wages are then increasing more than prices.

The law provides for an automatic increase in the contribution and benefit base, based on the increase in average wages, for the year following a year in which an automatic benefit increase becomes effective. For 1988, the contribution and benefit base was automatically increased to $45,000.

The exempt amounts under the retirement earnings test are also increased automatically by the increase in average wages, following an automatic benefit increase. An automatic increase in the exempt amount for beneficiaries at ages 65 through 69—from $8,160 in 1987 to $8,400 in 1988—was announced in October 1987. Similarly, an automatic increase was announced in the exempt amount for beneficiaries under age 65—from $6,000 in 1987 to $6,120 in 1988. Appendix C describes the aforementioned automatic adjustments, as well as the determinations of the following amounts:

1. The amount of earnings a worker must have in 1988 to be credited with a quarter of coverage;
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 retirement or disability benefits, or who die before becoming eligible for such benefits, in 1988; and

The average of total wages reported for calendar year 1986, to be used for indexing earnings of workers who first become eligible for benefits, or who die before such eligibility, in 1988 or later.

An historical summary of the Social Security program amounts determined under the automatic-adjustment provisions, and the average-wage series used for indexing earnings, are shown in Appendix D. Estimates of the corresponding amounts through 1993 are also shown in Appendix D.

The four alternative sets of economic assumptions described previously result in the cost-of-living benefit increases and contribution and benefit bases shown in table 12 for each year through 1993. (The actual benefit increase for 1987 and the actual contribution and benefit bases for 1987 and 1988 are also shown as a basis for comparison.)

TABLE 12.—COST-OF-LIVING BENEFIT INCREASES AND CONTRIBUTION AND BENEFIT BASES, BY ALTERNATIVE, CALENDAR YEARS 1987-93

Calendar year	Cost-of-living benefit increase[1] (percent) based on alternative—				Contribution and benefit base[2] based on alternative—			
	I	II-A	II-B	III	I	II-A	II-B	III
1987	4.2	4.2	4.2	4.2	$43,800	$43,800	$43,800	$43,800
1988	3.1	3.4	3.8	4.6	45,000	45,000	45,000	45,000
1989	3.2	4.0	4.5	5.9	46,800	46,500	46,500	46,200
1990	3.0	3.6	4.3	6.5	48,900	48,600	48,600	47,700
1991	2.6	3.1	4.2	6.2	51,600	51,300	51,300	50,400
1992	2.1	3.0	4.0	5.0	54,300	54,000	54,000	53,700
1993	2.0	3.0	4.0	5.1	57,000	56,700	57,000	56,700

[1] Effective with benefits for December of the year shown.

[2] Effective on January 1 of the year shown.