

## V. SUMMARY OF THE OPERATIONS OF THE OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS, FISCAL YEAR 1989

### 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 1989, 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 1989  
(In thousands)

Total assets, September 30, 1988 .....	\$96,964,333
<b>Receipts:</b>	
<b>Contributions:</b>	
<b>Appropriations:</b>	
Employment taxes .....	\$245,512,357
Tax credits .....	2,091,666
Total appropriations .....	247,604,024
Payment from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service .....	304,789
Gross contributions .....	247,908,813
Less payment to the general fund of the Treasury for contributions subject to refund .....	792,347
Net contributions .....	247,116,466
<b>Income from taxation of benefit payments:</b>	
Withheld from benefit payments to non-resident aliens .....	72,592
All other, not subject to withholding .....	3,565,000
Total income from taxation of benefits .....	3,637,592
Reimbursement from general fund of the Treasury for costs of payments to uninsured persons who attained age 72 before 1968 .....	42,606
<b>Investment income and interest adjustments:</b>	
Interest on investments .....	10,649,717
Less interest on transfers between the trust fund and the general fund account for the Supplemental Security income program due to adjustment in allocation of administrative expenses .....	49
Less interest on interfund transfers due to adjustment in allocation of administrative expenses .....	209
Less interest on general fund advance tax transfers .....	989,468
Net investment income and interest adjustments .....	9,659,991
Gifts .....	246
<b>Total receipts</b> .....	<b>260,456,900</b>
<b>Disbursements:</b>	
<b>Benefit payments:</b>	
Gross benefit payments .....	205,395,083
Less collected overpayments .....	747,385
Less reimbursement for unnegotiated checks .....	47,424
Net benefit payments .....	204,600,274
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account" .....	2,845,311
<b>Administrative expenses:</b>	
Department of Health and Human Services .....	1,450,153
Department of the Treasury .....	207,834
Gross administrative expenses .....	1,657,987
Less reimbursements from general fund of the Treasury for costs of furnishing information on deferred vested pension benefits .....	1,025
Less receipts from sales of supplies, materials, etc. ....	218
Net administrative expenses .....	1,656,744
<b>Total disbursements</b> .....	<b>209,102,329</b>
<b>Net increase in assets</b> .....	<b>51,354,572</b>
<b>Total assets, September 30, 1989</b> .....	<b>148,318,904</b>

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

The total assets of the OASI Trust Fund amounted to \$96,964 million on September 30, 1988. During fiscal year 1989, total receipts amounted to \$260,457 million, and total disbursements were \$209,102 million. The assets of the OASI Trust Fund thus increased by \$51,355 million during the year, to a total of \$148,319 million on September 30, 1989.

Included in total receipts during fiscal year 1989 were \$247,604 million representing contributions appropriated to the fund (including transfers of \$2,092 million from the general fund of the Treasury to offset the tax credits allowed against contributions due on earnings of self-employed persons). Another \$305 million was received from the general fund of the Treasury representing partial payment for the contributions that would have been paid on estimated deemed wage credits for military service in 1989 if such credits had been considered to be covered wages. (The amount to be transferred under section 229(b) of the Social Security Act was originally determined to be about \$356 million. Only \$305 million was transferred in fiscal year 1989 because the transfer was limited to amounts available in the fiscal year 1989 appropriation. It is anticipated that the difference will be transferred in 1990.) As an offset to gross contributions, \$792 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 thus amounted to \$247,116 million, an increase of 9.1 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, (2) the increase in the OASI tax rate that became effective on January 1, 1988, and (3) the increases in the contribution and benefit base that became effective on January 1 of each year 1988 and 1989. (Table 1 in the preceding section shows the contribution and benefit bases that became effective for 1988 and 1989.)

Income from the taxation of benefits amounted to \$3,638 million, of which 98 percent represented amounts credited to the trust fund in advance, on an estimated basis, together with an adjustment to 1987 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 \$43 million was transferred to the OASI Trust Fund in fiscal year 1989, as required by section 228 of the Social Security Act. The reimbursement reflected the costs of payments made in fiscal year 1987.

Net receipts totaling \$9,660 million consisted of (1) interest earned on the investments of the trust fund; less (2) interest on transfers between the trust fund and the general fund account for the Supplemental

Security Income program due to adjustments in the 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.

The remaining \$245,692 of receipts consisted of gifts received under the provisions authorizing the deposit of money gifts or bequests in the trust funds.

Of the \$209,102 million in total disbursements, \$204,600 million was for net benefit payments, excluding collected overpayments of \$747 million and the reimbursement of \$47 million for unnegotiated benefit checks. The amount of net benefit payments in fiscal year 1989 represents an increase of 6.3 percent over the corresponding amount in fiscal year 1988. This increase was due primarily to (1) the automatic cost-of-living benefit increases of 4.2 percent and 4.0 percent which became effective for December 1987 and December 1988 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. The objective of the financial interchanges is to place the trust funds in the same financial position in which they would have been if railroad employment had always been covered under Social Security. Accordingly, the Railroad Retirement Board and the Secretary of Health and Human Services determined that a transfer of \$2,689,600,000 to the Social Security Equivalent Benefit Account (SSEBA) from the OASI Trust Fund would put the trust fund in such a financial position as of September 30, 1988. A total amount of \$2,845,311,000 was transferred to the SSEBA in June 1989, including interest to the date of transfer amounting to \$155,711,000.

The remaining \$1,657 million of disbursements from the OASI Trust Fund represented net administrative expenses. The expenses of administering the OASDI and Medicare programs are allocated and charged directly to each of the various trust funds, through which those programs are financed, 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 1989 amounted to \$1,025,000.

Net administrative expenses charged to the OASI and DI Trust Funds in fiscal year 1989 totaled \$2,407 million. (The operations of the DI Trust Fund are presented in detail in the next subsection.) This amount represented 0.9 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 1985-89

Fiscal year	OASI Trust Fund		DI Trust Fund		Total	
	Contribution income	Benefit payments	Contribution income	Benefit payments	Contribution income	Benefit payments
1985 .....	0.9	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
1988 .....	.8	.9	3.7	3.8	1.0	1.2
1989 .....	.7	.8	3.2	3.3	.9	1.1

In table 4, the actual amounts of contributions and benefit payments in fiscal year 1989 are compared to the corresponding estimated amounts which appeared in the 1988 and 1989 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 the 1989 Annual Report. The estimates in the 1988 report, however, understated OASI and DI tax contributions.

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 1989 reflects the aforementioned adjustments to contributions for prior fiscal years. The "estimated" contributions in fiscal year 1989 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 1989  
(Amounts in millions)

	OASI Trust Fund		DI Trust Fund	
	Net contributions	Benefit payments <sup>1</sup>	Net contributions	Benefit payments <sup>1</sup>
Actual amount .....	\$247,116	\$204,600	\$23,694	\$22,550
Estimated amount published in 1988 report .....	\$239,520	\$204,437	\$22,958	\$22,571
Actual as percentage of estimate .....	103.2	100.1	103.2	99.9
Estimated amount published in 1989 report .....	\$248,947	\$204,427	\$23,864	\$22,542
Actual as percentage of estimate .....	99.3	100.1	99.3	100.0

<sup>1</sup>Includes payments, if any, for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities.

At the end of fiscal year 1989, about 39.0 million persons were receiving monthly benefits under the OASDI program. Of these persons, about 34.9 million and 4.1 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 1988 and 1989, 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 1988 AND 1989  
(Amounts in millions)

	Fiscal year 1988		Fiscal year 1989	
	Amount	Percentage of total	Amount	Percentage of total
Total OASDI benefit payments.....	\$213,938	100.0	\$227,164	100.0
OASI benefit payments.....	192,541	90.0	204,648	90.1
DI benefit payments.....	21,397	10.0	22,516	9.9
OASI benefit payments, total.....	192,541	100.0	204,648	100.0
Monthly benefits:				
Retired workers and auxiliaries.....	148,168	77.0	157,681	77.0
Retired workers.....	134,836	70.0	143,597	70.2
Wives and husbands.....	12,123	6.3	12,845	6.3
Children.....	1,209	.6	1,239	.6
Survivors of deceased workers.....	44,135	22.9	46,737	22.8
Aged widows and widowers.....	34,202	17.8	36,640	17.9
Disabled widows and widowers.....	444	.2	455	.2
Parents.....	43	( <sup>1</sup> )	41	( <sup>1</sup> )
Children.....	8,058	4.2	8,206	4.0
Widowed mothers and fathers caring for child beneficiaries.....	1,389	.7	1,394	.7
Uninsured persons generally aged 72 before 1968.....	30	( <sup>1</sup> )	23	( <sup>1</sup> )
Lump-sum death payments.....	207	.1	207	.1
DI benefit payments, total.....	21,397	100.0	22,516	100.0
Disabled workers.....	18,889	88.3	19,974	88.7
Wives and husbands.....	529	2.5	523	2.3
Children.....	1,979	9.2	2,019	9.0

<sup>1</sup> Less than 0.05 percent.

Note: Benefit payments shown above do not reflect the reimbursement for unnegotiated checks. Totals do not necessarily equal the sums of rounded components.

The assets of the OASI Trust Fund at the end of fiscal year 1989 totaled \$148,319 million, consisting of \$148,565 million in U.S. Government obligations and, as an offset, an extension of credit amounting to \$246 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 1988 and 1989.

TABLE 6.—ASSETS OF THE OASI TRUST FUND, BY TYPE, AT END OF FISCAL YEAR, 1988 AND 1989

	September 30, 1988	September 30, 1989
Obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
8.375 percent, 1990.....	—	\$7,931,379,000.00
9.25 percent, 1989.....	\$12,305,822,000.00	—
Bonds:		
8.375 percent, 1990.....	313,296,000.00	—
8.375 percent, 1991-2000.....	3,132,950,000.00	3,132,950,000.00
8.375 percent, 2001.....	2,370,396,000.00	2,370,396,000.00
8.625 percent, 1990-2001.....	15,620,772,000.00	15,620,772,000.00
8.625 percent, 2002.....	3,672,127,000.00	3,672,127,000.00
8.75 percent, 1990-2000.....	—	38,324,352,000.00
8.75 percent, 2001-03.....	—	10,452,099,000.00
8.75 percent, 2004.....	—	9,396,468,000.00
9.25 percent, 1990.....	2,240,308,000.00	2,240,308,000.00
9.25 percent, 1991-2000.....	22,403,090,000.00	22,403,090,000.00
9.25 percent, 2001-02.....	4,480,616,000.00	4,480,616,000.00
9.25 percent, 2003.....	5,912,435,000.00	5,912,435,000.00
10.375 percent, 1989.....	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, 1992-99.....	4,521,488,000.00	4,521,488,000.00
10.375 percent, 2000.....	2,057,101,000.00	2,057,101,000.00
10.75 percent, 1992-96.....	5,111,155,000.00	5,111,155,000.00
10.75 percent, 1997-98.....	2,044,460,000.00	2,044,460,000.00
13.75 percent, 1991.....	191,756,000.00	191,756,000.00
13.75 percent, 1992-96.....	2,348,420,000.00	2,348,420,000.00
13.75 percent, 1997-98.....	939,370,000.00	939,370,000.00
13.75 percent, 1999.....	1,491,915,000.00	1,491,915,000.00
Total investments.....	97,137,024,000.00	148,565,103,000.00
Undisbursed balances <sup>1</sup> .....	-172,691,216.36	-246,198,668.48
<b>Total assets.....</b>	<b>96,964,332,783.64</b>	<b>148,318,904,331.52</b>

<sup>1</sup> Negative figures represented extensions 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. Where the maturity years are grouped for special issues, the amount maturing in each year is the amount shown divided by the number of years.

All securities currently 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 1989. All amounts shown in the table are at par value.

TABLE 7.—INVESTMENT TRANSACTIONS OF THE OASI AND DI TRUST FUNDS  
IN FISCAL YEAR 1989  
(In thousands)

	OASI Trust Fund	DI Trust Fund	Total
Invested assets, September 30, 1988 .....	\$97,137,024	\$7,345,361	\$104,482,385
Acquisitions:			
Certificates of indebtedness .....	256,944,459	24,206,779	281,151,238
Bonds .....	58,172,919	1,941,015	60,113,934
Total acquisitions .....	315,117,378	26,147,794	341,265,172
Dispositions:			
Certificates of indebtedness .....	261,318,902	24,359,420	285,678,322
Bonds .....	2,370,397	705,395	3,075,792
Total dispositions .....	263,689,299	25,064,815	288,754,114
Net increase in invested assets .....	51,428,079	1,082,979	52,511,058
Invested assets, September 30, 1989 .....	148,565,103	8,428,340	156,993,443

Note: All investments are shown at par value. No transactions in the marketable securities held by the DI Trust Fund occurred during fiscal year 1989.

The effective annual rate of interest earned by the assets of the OASI Trust Fund during the 12 months ending on June 30, 1989, was 9.8 percent, as compared to 9.9 percent earned during the 12 months ending on June 30, 1988. (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 1989 was 8.75 percent, payable semiannually. Special-issue bonds with a total par value of \$58,173 million were purchased in June 1989.

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, 1989, 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 1990-2004.

**B. DISABILITY INSURANCE TRUST FUND**

A statement of the income and disbursements of the Federal Disability Insurance Trust Fund during fiscal year 1989, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table 3.

TABLE 8.—STATEMENT OF OPERATIONS OF THE DI TRUST FUND DURING FISCAL YEAR 1989  
(In thousands)

Total assets, September 30, 1988.....		\$7,272,724
Receipts:		
Contributions:		
Appropriations:		
Employment taxes .....	\$23,543,566	
Tax credits .....	198,264	
Total appropriations.....	23,741,830	
Payment from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service in 1989 .....	29,719	
Gross contributions .....	23,771,549	
Less payment to the general fund of the Treasury for contributions subject to refund .....	77,113	
Net contributions.....		23,694,436
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens.....	3,673	
All other, not subject to withholding .....	131,000	
Total income from taxation of benefits .....		134,673
Investment income and interest adjustments:		
Interest on investments .....	745,082	
Interest on interfund transfers due to adjustment in allocation of administrative expenses.....	263	
Gross investment income and interest adjustment .....	745,346	
Less interest on general fund advance tax transfers .....	95,279	
Net investment income and interest adjustments.....		650,066
Total receipts.....		24,479,176
Disbursements:		
Benefit payments:		
Gross benefit payments.....	22,615,478	
Less collected overpayments .....	99,188	
Less reimbursement for unnegotiated checks .....	2,576	
Net benefit payments.....		22,513,714
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account" .....		88,228
Payment for costs of vocational rehabilitation services for disabled beneficiaries .....		35,981
Administrative expenses:		
Department of Health and Human Services.....	720,767	
Department of the Treasury .....	25,988	
Demonstration projects and experiments.....	4,000	
Total administrative expenses.....		750,755
Total disbursements .....		23,388,678
Net increase in assets.....		1,090,498
Total assets, September 30, 1989.....		8,363,222

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

The total assets of the DI Trust Fund amounted to \$7,273 million on September 30, 1988. During fiscal year 1989, total receipts amounted to \$24,479 million, and total disbursements were \$23,389 million. The assets of the trust fund thus increased by \$1,090 million during the year, to a total of \$8,363 million on September 30, 1989.

Included in total receipts were \$23,742 million representing contributions appropriated to the fund (including transfers of \$198 million from

the general fund of the Treasury to offset the tax credits allowed against contributions due on earnings of self-employed persons) and \$30 million in payments from the general fund of the Treasury representing a portion of the contributions that would have been paid on estimated deemed wage credits for military service in 1989 if such credits had been considered to be covered wages (an additional amount will be credited in fiscal year 1990 for this last purpose, for the same reason given in the preceding subsection). As an offset, \$77 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 \$23,694 million, an increase of 9.0 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 \$135 million in fiscal year 1989.

Net interest totaling \$650 million consisted of interest on the investments of the fund, less interest on amounts of interfund and general-fund transfers (see preceding subsection).

Of the \$23,389 million in total disbursements, \$22,514 million was for net benefit payments, excluding collected overpayments of \$99 million and the reimbursement of \$3 million for unnegotiated benefit checks. This represents an increase of 5.3 percent over the corresponding amount of benefit payments in fiscal year 1988. 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, 1988, required that a transfer of \$83,400,000 be made from the DI Trust Fund to the Social Security Equivalent Benefit Account. A total amount of \$88,228,000 was transferred to the SSEBA in June 1989, including interest to the date of transfer amounting to \$4,828,000.

The remaining disbursements amounted to \$751 million for net administrative expenses (including \$4,000,000 for demonstration projects and experiments to test the effect of alternative methods for assisting disabled beneficiaries' attempts to work), and \$36 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 1989 totaled \$8,363 million, consisting of \$8,428 million in U.S. Government obligations and, as an offset, an extension of credit amounting to \$65 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 1988 and 1989.

TABLE 9.—ASSETS OF THE DI TRUST FUND, BY TYPE, AT END OF FISCAL YEAR,  
1988 AND 1989

	September 30, 1988	September 30, 1989
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 .....	-714,629.84	-604,489.64
Total investments in public issues at book value .....	260,485,370.16	260,595,510.36
Obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
8.375 percent, 1990 .....	—	130,167,000.00
9.25 percent, 1989 .....	282,808,000.00	—
Bonds:		
8.375 percent, 1992 .....	160,260,000.00	160,260,000.00
8.375 percent, 1993 .....	201,767,000.00	201,767,000.00
8.375 percent, 1994-95 .....	219,226,000.00	219,226,000.00
8.375 percent, 1996-2000 .....	1,008,835,000.00	1,008,835,000.00
8.375 percent, 2001 .....	591,226,000.00	591,226,000.00
8.75 percent, 1991 .....	—	125,926,000.00
8.75 percent, 1992 .....	—	41,507,000.00
8.75 percent, 1993 .....	47,479,000.00	47,479,000.00
8.75 percent, 1994 .....	339,277,000.00	339,277,000.00
8.75 percent, 2002-03 .....	—	1,182,452,000.00
8.75 percent, 2004 .....	—	191,712,000.00
9.25 percent, 1990 .....	465,300,000.00	159,323,000.00
9.25 percent, 1991 .....	465,300,000.00	465,300,000.00
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,  
1988 AND 1989 (Cont.)

	September 30, 1988	September 30, 1989
Investments in public-debt obligations: (Cont.)		
Obligations sold only to the trust funds (special issues): (Cont.)		
Bonds: (Cont.)		
10.375 percent, 1992-93 .....	\$203,006,000.00	\$203,006,000.00
10.375 percent, 1996-98 .....	304,512,000.00	304,512,000.00
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, 1992 .....	287,956,000.00	287,956,000.00
10.75 percent, 1993 .....	98,140,000.00	98,140,000.00
10.75 percent, 1996-98 .....	863,865,000.00	863,865,000.00
13.75 percent, 1999 .....	236,555,000.00	236,555,000.00
Total obligations sold only to the trust funds (special issues) .....	7,084,161,000.00	8,167,140,000.00
Total investments in public-debt obligations (book value <sup>1</sup> ) .....	7,344,646,370.16	8,427,735,510.36
Undisbursed balances <sup>2</sup> .....	-71,922,200.23	-64,513,206.54
Total assets (book value <sup>1</sup> ) .....	7,272,724,169.93	8,363,222,303.82

<sup>1</sup>Par value, plus unamortized premium or less discount outstanding.

<sup>2</sup>Negative figures represented extensions 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. Where the maturity years are grouped for special issues, the amount maturing in each year is the amount shown divided by the number of years.

The effective annual rate of interest earned by the assets of the DI Trust Fund during the 12 months ending on June 30, 1989, was 9.7 percent, as compared to 9.5 percent earned during the 12 months ending on June 30, 1988. The interest rate on public-debt obligations issued for purchase by the trust fund in June 1989 was 8.75 percent, payable semiannually. Special-issue bonds with a total par value of \$1,941 million were purchased in June 1989.

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.

## VI. 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, 1989, is presented in the preceding section of this report. Estimates of the operations and status of the trust funds during fiscal years 1990-94 are presented in this section. Similar estimates for calendar years 1990-94 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 long-range 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 wage credits 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, expenditures, 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 actuarial status of the trust funds has generally 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.

As in the 1988 and 1989 reports, the actuarial balance in this report is calculated on the basis of 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 long-range actuarial balance measures the extent by which the program is overfinanced, if the balance is positive, or underfinanced, if the balance is negative. Exact actuarial balance, i.e., an actuarial balance of zero, indicates that the present value of the income over the entire 75-year period combined with the trust-fund balance at the start of the period is equal to the present value of all projected costs over the period.

The size of the actuarial balance represents the amount of change which, if made to each of the combined employee-employer contribution rates scheduled under present law for the next 75 years, would bring the program into exact actuarial balance. Of course, any set of changes in contribution rates, or in benefit costs, that has an equivalent effect on the actuarial balance would also bring the program into exact actuarial balance.

In the past, the Annual Report has stated whether or not the actuarial balances for the OASI and DI funds were within 5 percent of the cost rate over the full 75-year period. A long-range deficit (or surplus) of more than 5 percent of the cost rate was deemed sufficiently large to

indicate inadequate (or excess) financing over the next 75 years. When the balance was between 95 and 105 percent of the cost rate, the system was said to be in close actuarial balance, and when it was outside of that range the system was said to be out of close actuarial balance.

It is important to note, however, that the actuarial balance, by itself, is not sufficient to reveal problems that could occur during the full 75-year projection period. The concept of actuarial balance, although useful, does not fully reflect all of the information that may be necessary to arrive at an accurate evaluation of the financial status of the trust funds over a long period of years. This is particularly true now because a substantial reserve is projected to accumulate in the early part of the projection period to be followed by a decumulation during the latter part of the period. Accordingly, this year's report also focuses attention on: (1) the pattern and ultimate levels of projected annual cost and income rates, (2) the annual differences between the cost and income rates, i.e., the annual balances, (3) the size of future fund accumulations, in terms of dollars, and relative to projected annual expenditures, and (4) the year for which trust fund exhaustion is projected. Estimates of these indicators are highlighted in this section and the appendices.

Because the program is entering a period of large fund accumulation, the Board, for the last 2 years, has recommended that the subject of the proper level of fund accumulation be made a specific part of the agenda for the 1991 Social Security Advisory Council. The Advisory Council, which was appointed in 1989, is reviewing this issue. In addition, the Council has commissioned a Technical Panel of Experts, consisting of actuaries and economists, to review the cost estimates for the program, including an evaluation of the underlying assumptions and methods and the measures used to assess the program's 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 prediction 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-wage differential <sup>1</sup> (percent)	Average annual interest rate <sup>4</sup> (percent)	Average annual unemployment rate <sup>5</sup> (percent)	Average annual percentage increase in labor force <sup>6</sup>
	Real GNP <sup>2</sup>	Average annual wage in covered employment	Consumer Price Index <sup>3</sup>				
Past experience:							
1960-64.....	3.9	3.4	1.3	2.1	3.7	5.7	1.3
1965-69.....	4.4	5.4	3.4	2.0	5.2	3.8	2.1
1970-74.....	2.4	6.3	6.1	.1	6.7	5.4	2.3
1975.....	-1.3	6.7	9.2	-2.5	7.4	8.5	1.9
1976.....	4.9	8.7	5.7	3.0	7.1	7.7	2.4
1977.....	4.7	7.3	6.5	.8	7.1	7.1	2.9
1978.....	5.3	9.7	7.6	2.1	8.2	6.1	3.2
1979.....	2.5	9.8	11.4	-1.6	9.1	5.8	2.6
1980.....	-2	9.0	13.5	-4.5	11.0	7.1	1.9
1981.....	1.9	9.7	10.2	-6	13.3	7.6	1.6
1982.....	-2.5	6.5	6.0	.5	12.8	9.7	1.4
1983.....	3.6	5.0	3.0	2.0	11.0	9.6	1.2
1984.....	6.4	7.2	3.4	3.8	12.4	7.5	1.8
1985.....	3.0	4.3	3.5	.8	10.8	7.2	1.7
1986.....	3.4	4.3	1.6	2.8	8.0	7.0	2.0
1987.....	3.7	5.0	3.6	1.4	8.4	6.2	1.7
1988.....	4.4	5.1	4.0	1.1	8.8	5.5	1.4
1989.....	2.9	6.3	4.8	1.5	8.7	5.3	1.8

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

Calendar year	Average annual percentage increase in—			Real-wage differential <sup>3</sup> (percent)	Average annual interest rate <sup>4</sup> (percent)	Average annual unemployment rate <sup>5</sup> (percent)	Average annual percentage increase in labor force <sup>6</sup>
	Real GNP <sup>1</sup>	Average annual wage in covered employment	Consumer Price Index <sup>2</sup>				
<b>Alternative I:</b>							
1990	2.8	5.7	3.4	2.2	8.1	5.5	1.0
1991	3.7	5.6	3.1	2.5	7.5	5.4	1.3
1992	3.6	5.3	2.8	2.5	6.6	5.3	1.1
1993	3.4	5.0	2.5	2.4	6.0	5.1	1.0
1994	3.3	4.7	2.3	2.4	5.5	5.1	1.0
1995	3.3	4.4	2.1	2.4	5.0	5.0	1.0
1996	3.2	4.3	2.0	2.3	4.6	5.0	1.0
1997	3.2	4.3	2.0	2.3	4.6	4.9	1.0
1998	3.2	4.2	2.0	2.2	4.7	4.9	.9
1999	3.2	4.3	2.0	2.3	4.9	4.8	.9
2000	2.9	4.3	2.0	2.2	5.0	5.0	.9
2010 & later.	*2.6	4.2	2.0	2.2	5.0	5.0	*.4
<b>Alternative II-A:</b>							
1990	2.3	5.6	4.0	1.7	8.2	5.5	1.0
1991	3.1	5.9	4.0	1.8	8.0	5.5	1.2
1992	2.8	5.6	3.9	1.7	7.4	5.4	1.0
1993	2.7	5.4	3.6	1.8	7.1	5.4	.9
1994	2.7	5.2	3.3	1.9	6.6	5.3	.9
1995	2.7	4.9	3.1	1.9	6.0	5.3	.9
1996	2.7	4.9	3.0	1.8	5.6	5.3	.9
1997	2.7	5.0	3.0	2.0	5.5	5.3	.9
1998	2.6	4.8	3.0	1.8	5.5	5.3	.8
1999	2.6	4.9	3.0	1.9	5.5	5.3	.8
2000	2.3	4.8	3.0	1.7	5.5	5.5	.7
2010 & later.	*2.1	4.7	3.0	1.7	5.5	5.5	*.3
<b>Alternative II-B:</b>							
1990	1.9	5.6	4.4	1.2	8.3	5.5	1.0
1991	2.4	5.5	4.5	1.0	8.2	5.6	1.1
1992	2.4	5.5	4.5	1.0	7.9	5.6	1.0
1993	2.1	5.4	4.3	1.1	7.6	5.6	.9
1994	2.2	5.5	4.2	1.4	7.3	5.7	.9
1995	2.3	5.4	4.0	1.4	6.9	5.7	.9
1996	2.3	5.4	4.0	1.4	6.5	5.7	.9
1997	2.3	5.5	4.0	1.5	6.4	5.8	.9
1998	2.3	5.4	4.0	1.4	6.3	5.8	.8
1999	2.3	5.4	4.0	1.4	6.1	5.8	.8
2000	1.8	5.4	4.0	1.3	6.0	6.0	.6
2010 & later.	*1.8	5.3	4.0	1.3	6.0	6.0	*.3
<b>Alternative III:</b>							
1990	-1.3	3.5	4.8	-1.3	8.4	6.0	.9
1991	.4	4.5	5.0	-.5	8.5	7.0	.7
1992	2.3	6.6	6.7	-.1	8.9	6.7	.9
1993	-.7	5.8	6.5	-.8	9.3	6.6	.9
1994	-.7	4.5	5.0	-.5	9.0	7.7	.6
1995	3.2	6.8	5.3	1.6	8.3	7.2	.7
1996	2.1	5.8	5.0	.8	7.6	6.9	.9
1997	1.8	5.8	5.0	.8	7.3	6.9	.8
1998	1.7	5.8	5.0	.8	7.0	6.8	.7
1999	1.7	5.8	5.0	.8	6.8	6.8	.7
2000	1.3	5.9	5.0	.8	6.5	7.0	.3
2010 & later.	*1.3	5.8	5.0	.8	6.5	7.0	*.2

<sup>1</sup>The real GNP (gross national product) is the value of total output of goods and services, expressed in 1982 dollars.

<sup>2</sup>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).

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

<sup>4</sup>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.

<sup>5</sup>Through 1999, the rates shown are unadjusted civilian unemployment rates. After 1999, the rates are total rates (including military personnel), adjusted by age and sex based on the estimated total labor force on July 1, 1989.

<sup>6</sup>Labor force is the total for the U.S. (including military personnel) and reflects the average of the monthly numbers of persons in the labor force for each year.

\*Preliminary.

<sup>8</sup>This value is for 2010. The annual percentage increase in labor force and 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 in real GNP for 2065 are 2.7, 1.8, 1.5, and 0.5 percent for alternatives I, II-A, II-B, and III, respectively. The changes in total labor force for 2065 are 0.5, 0.0, 0.0, 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 relatively 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 sustained real economic growth, which began in the fourth quarter of 1982, is assumed to continue through the end of the decade under alternatives I, II-A, and II-B. Real growth 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 period of real economic growth is assumed to have ended in the first quarter of 1990; a recession is assumed to occur during the 4 quarters of 1990. After 9 quarters of recovery, a second recession is assumed to begin in the second quarter of 1993, lasting through the first quarter of 1994.

For each of the alternatives I, II-A, and II-B, the unemployment rate is assumed to move gradually toward its ultimate average level. For alternative III, the unemployment rate is assumed to reach its ultimate average level after the recovery that is assumed to follow the second recession. Unemployment rates through 1999 are in the most commonly cited form, the civilian rate, which describes the differences between aggregate civilian labor force and aggregate civilian employment. For years after 1999, however, total rates are presented. These include the military (which reduces the rate by about 0.1 percent relative to the civilian rate) and are age-sex adjusted to the 1989 labor force. Such total rates better represent the total population covered by the OASDI program and adjust for the changing age-sex distribution of the labor force, which can obscure the comparison of unemployment rates over different time periods. 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 labor 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 rises slightly from the level experienced for 1989, 5.3 percent, to the assumed ultimate average rate of 5.5 percent in 1990. Thereafter, the total unemployment rate (age-sex adjusted to the 1989 labor force) remains at 5.5 percent while the non-age-sex-adjusted rate declines slightly, reflecting the changing age-sex distribution of the

labor force. The annual rate of increase in the average wage in covered employment is assumed to decline from the assumed 6.3-percent increase in 1989 to its ultimate rate of 4.7 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 decline steadily from 4.8 percent in 1989 to an ultimate rate of 3.0 percent in 1996. 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 the average wage in covered employment and in the CPI) is assumed to remain between 1.7 and 2.0 percentage points after 1989, reaching its ultimate value of 1.7 percentage points by 2010. The annual interest rate is assumed to reach its ultimate value of 5.5 percent by 2000. The annual rate of growth in total labor force is projected to drop substantially from the level of 1.2 to 2.0 percent for the past decade to less than 1.0 percent after 1992, reflecting the slowing rate of increase in the working-age population.

For alternative II-B, the average annual unemployment rate rises from 5.3 percent in 1989 to 5.8 percent for 1997 on a non-age-sex-adjusted basis. Because of the changing age structure of the population, however, the age-sex-adjusted average annual unemployment rate (adjusted to the 1989 labor-force distribution) rises slightly faster, reaching its ultimate level of 6.0 percent by 2000. The annual rate of increase in the average wage in covered employment is assumed to decline generally from the assumed 6.3-percent increase in 1989 to its ultimate rate of 5.3 percent by 2010. The annual rate of increase in the CPI is assumed to decline from 4.8 percent in 1989 to an ultimate rate of 4.0 percent by 1995. The real-wage differential is assumed to remain between 1.0 and 1.5 percentage points after 1989, reaching its ultimate value of 1.3 percentage points by 2010. The annual interest rate is assumed to decline to its ultimate value of 6.0 percent by 2000. The projected growth rate in the total labor force is essentially the same as for alternative II-A.

#### *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 2014, after a very gradual decrease from the estimated 1989 level of 1.93 children per woman. The age-sex-adjusted death rate is assumed to decrease gradually during the entire projection period, with a reduction of 35 percent from the 1989 level by 2065. The resulting life expectancies at birth in 2065 are 77.3 years for men and 83.8 years for women, compared to 71.6 and 78.6 years, respectively, in 1989. Life expectancies at age 65 in 2065 are projected to be 18.2 years for men and 22.3 years for women, compared to 14.9 and 18.8 years, respectively, in 1989. The projected death rates reflect the effects of assumed cases of Acquired Immunodeficiency Syndrome (AIDS), using projections through 1992 prepared by the Centers for Disease Control (CDC) as a starting point. 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 rise to an ultimate level of 2.2 children per woman for 2014. 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 1989 level being 18 percent by 2065. The resulting life expectancies at birth in 2065 are 74.8 years for men and 80.8 years for women, while at age 65 they are 16.0 and 19.9 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 to an ultimate level of 1.6 by 2014. 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 1989 level being 51 percent by 2065. The resulting life expectancies at birth in 2065 are 80.8 years for men and 87.9 years for women, while at age 65 they are 21.3 and 25.6 years, respectively. Total net immigration is assumed to be 450,000 persons per year, 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 <sup>1</sup>	Age-sex-adjusted death rate <sup>2</sup> (per 100,000)	Life expectancy <sup>3</sup>			
			At birth		At age 65	
			Male	Female	Male	Female
<b>Past experience:</b>						
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	830.0	71.1	78.2	14.4	18.6
1986.....	1.84	822.8	71.2	78.3	14.5	18.7
1987.....	1.87	813.9	71.3	78.4	14.6	18.7
1988 <sup>4</sup> .....	1.91	809.5	71.5	78.4	14.9	18.7
1989 <sup>4</sup> .....	1.93	802.5	71.6	78.6	14.9	18.8
<b>Alternative I:</b>						
1990.....	1.94	797.0	71.8	78.6	15.0	18.8
1995.....	2.00	777.6	72.4	78.9	15.0	18.8
2000.....	2.06	765.9	72.8	79.0	15.0	18.8
2005.....	2.11	755.8	73.0	79.2	15.1	18.8
2010.....	2.16	745.7	73.2	79.3	15.1	18.9
2015.....	2.20	736.2	73.4	79.5	15.2	19.0
2020.....	2.20	727.0	73.5	79.6	15.3	19.0
2025.....	2.20	718.0	73.7	79.8	15.4	19.1
2030.....	2.20	709.3	73.9	79.9	15.5	19.2
2035.....	2.20	700.8	74.0	80.0	15.6	19.3
2040.....	2.20	692.6	74.1	80.2	15.6	19.4
2045.....	2.20	684.5	74.3	80.3	15.7	19.5
2050.....	2.20	676.7	74.4	80.4	15.8	19.6
2055.....	2.20	669.1	74.6	80.6	15.9	19.7
2060.....	2.20	661.6	74.7	80.7	16.0	19.8
2065.....	2.20	654.4	74.8	80.8	16.0	19.9

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

Calendar year	Total fertility rate <sup>1</sup>	Age-sex-adjusted death rate <sup>2</sup> (per 100,000)	Life expectancy <sup>3</sup>			
			At birth		At age 65	
			Male	Female	Male	Female
<b>Alternatives II-A and II-B:</b>						
1990.....	1.93	804.0	71.6	78.7	15.0	18.9
1995.....	1.93	766.0	72.0	79.3	15.3	19.2
2000.....	1.92	734.2	72.6	79.9	15.6	19.5
2005.....	1.91	701.8	73.5	80.4	15.8	19.7
2010.....	1.91	678.6	74.1	80.7	16.0	19.9
2015.....	1.90	660.4	74.4	81.0	16.2	20.1
2020.....	1.90	643.4	74.7	81.3	16.4	20.4
2025.....	1.90	627.3	75.0	81.6	16.6	20.6
2030.....	1.90	611.7	75.3	81.9	16.8	20.8
2035.....	1.90	596.8	75.6	82.2	17.0	21.0
2040.....	1.90	582.5	75.9	82.5	17.2	21.2
2045.....	1.90	568.9	76.2	82.8	17.4	21.5
2050.....	1.90	555.7	76.5	83.0	17.6	21.7
2055.....	1.90	543.1	76.7	83.3	17.8	21.9
2060.....	1.90	531.0	77.0	83.6	18.0	22.1
2065.....	1.90	519.3	77.3	83.8	18.2	22.3
<b>Alternative III:</b>						
1990.....	1.92	812.6	71.7	78.8	15.1	18.9
1995.....	1.85	769.7	72.0	79.8	15.7	19.6
2000.....	1.78	749.1	71.8	80.4	16.1	20.2
2005.....	1.72	693.3	73.0	81.2	16.5	20.6
2010.....	1.65	632.0	74.9	82.0	16.9	21.0
2015.....	1.60	594.9	75.9	82.7	17.3	21.4
2020.....	1.60	568.0	76.5	83.2	17.7	21.8
2025.....	1.60	544.4	76.9	83.8	18.1	22.3
2030.....	1.60	522.1	77.4	84.3	18.5	22.7
2035.....	1.60	500.8	77.9	84.8	18.9	23.1
2040.....	1.60	480.4	78.3	85.3	19.3	23.5
2045.....	1.60	460.9	78.8	85.8	19.7	23.9
2050.....	1.60	442.3	79.3	86.4	20.1	24.3
2055.....	1.60	424.7	79.8	86.9	20.5	24.8
2060.....	1.60	407.9	80.3	87.4	20.9	25.2
2065.....	1.60	392.0	80.8	87.9	21.3	25.6

<sup>1</sup>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 birthrates 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 2014.

<sup>2</sup>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.

<sup>3</sup>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.

<sup>4</sup>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 ultimate values presented in tables 10 and 11 represent only minor changes from the values used for the 1989 Annual Report. However, the ultimate percentage of covered earnings that is taxable is projected to be significantly lower for this year's report, reflecting analysis based on recent data. This and other changes are discussed later in this section.

### 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 4.7 percent, effective for December 1989, was announced in October 1989, as described in Appendix C. The automatic cost-of-living benefit increase for any year is normally based on the change in the CPI from the third quarter of the previous year through the third quarter of the current year.<sup>1</sup>

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. The base for 1990 was initially determined under the automatic-adjustment provision. It was subsequently revised, however, before taking effect, to comply with the "Omnibus Budget Reconciliation Act of 1989" (as noted in a preceding section). The revised contribution and benefit base for 1990 was established at \$51,300.

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 \$8,880 in 1989 to \$9,360 in 1990—was announced in October 1989. Similarly, an automatic increase was announced in the exempt amount for beneficiaries under age 65—from \$6,480 in 1989 to \$6,840 in 1990. Appendix C describes the aforementioned adjustments, as well as the determinations of the following amounts:

1. The amount of earnings a worker must have in 1990 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 1990; and

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<sup>1</sup> 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 was 15.0 percent with respect to benefit increases for December of each year 1984-88, and is 20.0 percent for all subsequent years. 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. Under all but alternative I, 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 at a slower pace than prices.

3. The average of total wages reported for calendar year 1988, to be used for indexing earnings of workers who first become eligible for benefits, or who die before such eligibility, in 1990 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 1995 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 1995. (The actual benefit increase for 1989 and the actual contribution and benefit bases for 1989 and 1990 are also shown as a basis for comparison.)

TABLE 12.—COST-OF-LIVING BENEFIT INCREASES AND CONTRIBUTION AND BENEFIT BASES, BY ALTERNATIVE, CALENDAR YEARS 1989-95

Calendar year	Cost-of-living benefit increase <sup>1</sup> (percent)				Contribution and benefit base <sup>2</sup> based on alternative—			
	based on alternative—							
	I	II-A	II-B	III	I	II-A	II-B	III
1989.....	4.7	4.7	4.7	4.7	\$48,000	\$48,000	\$48,000	\$48,000
1990.....	3.4	4.0	4.5	5.0	51,300	51,300	51,300	51,300
1991.....	3.0	4.1	4.5	5.0	54,600	54,300	54,300	54,000
1992.....	2.6	3.8	4.4	6.9	57,600	57,300	57,300	55,800
1993.....	2.4	3.6	4.3	6.3	60,900	60,600	60,300	58,200
1994.....	2.2	3.3	4.2	5.0	64,200	63,900	63,600	61,800
1995.....	2.1	3.0	4.0	5.2	67,200	67,200	66,900	65,400

<sup>1</sup> Effective with benefits for December of the year shown.

<sup>2</sup> Effective on January 1 of the year shown.