

II. ACTUARIAL ANALYSIS

A. SOCIAL SECURITY AMENDMENTS SINCE THE 1992 REPORT

Since the 1992 Annual Report was transmitted to the Congress on April 2, 1992, there have been no legislative changes enacted that would have a significant effect on the the financial status of the OASDI program.

B. DESCRIPTION OF THE TRUST FUNDS

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

The primary receipts of these two funds are amounts appropriated to each of them under permanent authority on the basis of contributions payable by workers, their employers, and individuals with self-employment income, in work covered by the OASDI program. All employees, and their employers, in covered employment are required to pay contributions with respect to their wages. Employees, and their employers, are also required to pay contributions with respect to cash tips if their monthly cash tips amount to at least \$20. All self-employed persons are required to pay contributions with respect to their covered net earnings from self-employment. In addition to making the required employer contributions on the wages of covered Federal employees, the Federal Government also pays amounts equivalent to the employer and employee contributions that would be paid on deemed wage credits attributable to military service performed after 1956 if such wage credits were covered wages.

In general, an individual's contributions, or taxes, are computed on wages or net earnings from self-employment, or both wages and net self-employment earnings combined, up to a specified maximum annual amount. The contributions are determined first on the wages and then on any net self-employment earnings, such that the total does not exceed the annual maximum amount. An employee who pays contributions on wages in excess of the annual maximum amount (because of employment with two or more employers) is eligible for a refund of the excess employee contributions.

The monthly benefit amount to which an individual (or his or her spouse and children) may become entitled under the OASDI program is based on the individual's taxable earnings during his or her lifetime. In computing benefits for almost all persons who first become

Actuarial Analysis

eligible to receive benefits in 1979 or later, the earnings in each year are indexed to take account of increases in average wage levels.

The contribution, or tax, rates applicable in each calendar year and the allocation of the rates between the OASI and DI Trust Funds are shown in table II.B.1.

TABLE II.B.1.—CONTRIBUTION AND BENEFIT BASE AND CONTRIBUTION RATES

Calendar years	Contribution and benefit base	Contribution rates (percent)					
		Employees and employers, each			Self-employed		
		OASDI	OASI	DI	OASDI	OASI	DI
1937-49	\$3,000	1.000	1.000	—	—	—	—
1950	3,000	1.500	1.500	—	—	—	—
1951-53	3,600	1.500	1.500	—	2.2500	2.2500	—
1954	3,600	2.000	2.000	—	3.0000	3.0000	—
1955-56	4,200	2.000	2.000	—	3.0000	3.0000	—
1957-58	4,200	2.250	2.000	0.250	3.3750	3.0000	0.3750
1959	4,800	2.500	2.250	.250	3.7500	3.3750	.3750
1960-61	4,800	3.000	2.750	.250	4.5000	4.1250	.3750
1962	4,800	3.125	2.875	.250	4.7000	4.3250	.3750
1963-65	4,800	3.625	3.375	.250	5.4000	5.0250	.3750
1966	6,600	3.850	3.500	.350	5.8000	5.2750	.5250
1967	6,600	3.900	3.550	.350	5.9000	5.3750	.5250
1968	7,800	3.800	3.325	.475	5.8000	5.0875	.7125
1969	7,800	4.200	3.725	.475	6.3000	5.5875	.7125
1970	7,800	4.200	3.650	.550	6.3000	5.4750	.8250
1971	7,800	4.600	4.050	.550	6.9000	6.0750	.8250
1972	9,000	4.600	4.050	.550	6.9000	6.0750	.8250
1973	10,800	4.850	4.300	.550	7.0000	6.2050	.7950
1974	13,200	4.950	4.375	.575	7.0000	6.1850	.8150
1975	14,100	4.950	4.375	.575	7.0000	6.1850	.8150
1976	15,300	4.950	4.375	.575	7.0000	6.1850	.8150
1977	16,500	4.950	4.375	.575	7.0000	6.1850	.8150
1978	17,700	5.050	4.275	.775	7.1000	6.0100	1.0900
1979	22,900	5.080	4.330	.750	7.0500	6.0100	1.0400
1980	25,900	5.080	4.520	.560	7.0500	6.2725	.7775
1981	29,700	5.350	4.700	.650	8.0000	7.0250	.9750
1982	32,400	5.400	4.575	.825	8.0500	6.8125	1.2375
1983	35,700	5.400	4.775	.625	8.0500	7.1125	.9375
1984 ¹	37,800	5.700	5.200	.500	11.4000	10.4000	1.0000
1985 ¹	39,600	5.700	5.200	.500	11.4000	10.4000	1.0000
1986 ¹	42,000	5.700	5.200	.500	11.4000	10.4000	1.0000
1987 ¹	43,800	5.700	5.200	.500	11.4000	10.4000	1.0000
1988 ¹	45,000	6.060	5.530	.530	12.1200	11.0600	1.0600
1989 ¹	48,000	6.060	5.530	.530	12.1200	11.0600	1.0600
1990	51,300	6.200	5.600	.600	12.4000	11.2000	1.2000
1991	53,400	6.200	5.600	.600	12.4000	11.2000	1.2000
1992	55,500	6.200	5.600	.600	12.4000	11.2000	1.2000
1993	57,600	6.200	5.600	.600	12.4000	11.2000	1.2000
Rates scheduled in present law:							
1994-99	(2)	6.200	5.600	.600	12.4000	11.2000	1.2000
2000 and later	(2)	6.200	5.490	.710	12.4000	10.9800	1.4200

¹In 1984 only, an immediate credit of 0.3 percent of taxable wages was allowed against the OASDI contributions paid by employees, resulting in an effective contribution rate of 5.4 percent. The appropriations of contributions to the trust funds, however, were based on the combined employee-employer rate of 11.4 percent, as if the credit for employees did not apply. Similar credits of 2.7 percent, 2.3 percent, and 2.0 percent were allowed against the combined OASDI and Hospital Insurance contributions on net earnings from self-employment in 1984, 1985, and 1986-89, respectively. Beginning in 1990, self-employed persons are allowed a deduction, for purposes of computing their net earnings, equal to half of the combined OASDI and HI contributions that would be payable without regard to the contribution and benefit base. The contribution rate is then applied to net earnings after this deduction, but subject to the base.

²Subject to automatic adjustment.

Description of the Trust Funds

For 1994 and later, the rates shown in table II.B.1 are those scheduled in present law. The maximum amount of earnings on which OASDI contributions are payable in a year, which is also the maximum amount of earnings creditable in that year for benefit-computation purposes, is called the contribution and benefit base. The contribution and benefit bases are also shown in table II.B.1. (The total contribution rates for the OASDI and Hospital Insurance (HI) programs combined, and for each program separately, are shown in appendix A, table III.A.1. The maximum annual amount taxable under the HI program, as well as the contribution and benefit bases for OASDI, are shown in table II.E.2.)

All contributions are collected by the Internal Revenue Service and deposited in the general fund of the Treasury. The contributions are immediately and automatically appropriated to the trust funds on an estimated basis. The exact amount of contributions received is not known initially because the OASDI and HI contributions and individual income taxes are not separately identified in collection reports received by the Internal Revenue Service. Periodic adjustments are subsequently made to the extent that the estimates are found to differ from the amounts of contributions actually payable as determined from reported earnings. Adjustments are also made to account for any refunds to employees (with more than one employer) who paid contributions on wages in excess of the contribution and benefit base.

From May 1983 through November 1990, amounts representing the estimated total collections of OASDI contributions for each month were credited to the trust funds on the first day of the month. Payments from the trust funds were made periodically to the general fund as reimbursement for the interest costs attributable to these advance transfers. Since December 1990, advance tax transfers have not been made. The "Omnibus Budget Reconciliation Act of 1990" amended the law in effect since 1983 to provide that such advance transfers would be used only if the trust funds drop to such a low level that advance transfers are needed in order to pay benefits.

Beginning in 1984, a portion (not more than one-half for any individual) of OASDI benefits is subject to Federal income taxation under certain circumstances. The proceeds from this taxation of benefits are credited to the trust funds in advance, on an estimated basis, at the beginning of each calendar quarter, with no reimburse-

Actuarial Analysis

ment to the general fund for interest costs attributable to the advance transfers. Subsequent adjustments are made based on the actual amounts as shown on annual income tax records. The amounts appropriated from the general fund of the Treasury are allocated to the OASI and DI Trust Funds on the basis of the income taxes paid on the benefits from each fund. (A special provision applies to benefits paid to non-resident aliens. A flat-rate tax, usually 15 percent, is withheld from the benefits before they are paid and, therefore, remains in the trust funds.)

Another source of income to the trust funds is interest received on investments held by the trust funds. That portion of each trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration is invested, on a daily basis, primarily in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below). Investments may also be made in obligations guaranteed as to both principal and interest by the United States, or in certain Federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. These obligations may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price. Thus, all of the investments held by the trust funds are backed by the full faith and credit of the U.S. Government.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust funds. The Act provides that these obligations shall bear interest at a rate equal to the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest-bearing obligations of the United States then forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such calendar month. These special issues are redeemable at all times at par value and thus bear no risk with respect to changes in interest rates (i.e., principal price fluctuations).

Income is also affected by provisions of the Social Security Act for (1) transfers between the general fund of the Treasury and the OASI and DI Trust Funds for any adjustments to prior payments for the

cost arising from the granting of noncontributory wage credits for military service prior to 1957, according to periodic determinations made by the Secretary of Health and Human Services; (2) annual reimbursements from the general fund of the Treasury to the OASI Trust Fund for any costs arising from the special monthly cash payments to certain uninsured persons—i.e., those who attained age 72 before 1968 and who generally are not eligible for cash benefits under other provisions of the OASDI program; and (3) the receipt of unconditional money gifts or bequests made for the benefit of the trust funds or any activity financed through the funds.

The major expenditures of the OASI and DI Trust Funds are for (1) OASDI benefit payments, net of any reimbursements from the general fund of the Treasury for unnegotiated benefit checks, and (2) expenses incurred by the Department of Health and Human Services and by the Department of the Treasury in administering the OASDI program and the provisions of the Internal Revenue Code relating to the collection of contributions. Such administrative expenses include expenditures for construction, rental and lease, or purchase of office buildings and related facilities for the Social Security Administration. The Social Security Act does not permit expenditures from the OASI and DI Trust Funds for any purpose not related to the payment of benefits or administrative costs for the OASDI program.

The expenditures of the trust funds are also affected by (1) costs of vocational rehabilitation services furnished as an additional benefit to disabled persons receiving cash benefits because of their disabilities where such services contributed to their successful rehabilitation, and (2) the provisions of the Railroad Retirement Act which provide for a system of coordination and financial interchange between the Railroad Retirement program and the Social Security program. Under the latter provisions, transfers between the Railroad Retirement program's Social Security Equivalent Benefit Account and the trust funds are made on an annual basis in order to place each trust fund in the same position in which it would have been if railroad employment had always been covered under Social Security.

The net worth of facilities and other fixed capital assets is not carried in the statements of the operations of the trust funds presented in this report. This is because the value of fixed capital assets does not represent funds available for the payment of benefits or administrative expenditures, and therefore is not considered in assessing the

Actuarial Analysis

actuarial status of the trust funds.

C. SUMMARY OF THE OPERATIONS OF THE OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS, FISCAL YEAR 1992

1. 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 1992, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table II.C.1.

During fiscal year 1992, total receipts amounted to \$307,102 million, and total disbursements were \$256,239 million. The assets of the OASI Trust Fund thus increased by \$50,862 million during the year, to a total of \$306,280 million on September 30, 1992.

Included in total receipts during fiscal year 1992 were \$278,856 million representing payroll tax contributions appropriated to the fund. Another \$327 million was received from the general fund of the Treasury representing payment for the taxes that would have been paid on estimated deemed wage credits for military service in 1992 if such credits had been considered to be covered wages. (Included in this payment are adjustments for revised estimates of deemed wage credits in prior years.) As an offset to gross contributions, \$678 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 payroll tax contributions thus amounted to \$278,506 million, an increase of 2.8 percent over the amount in the preceding fiscal year. This level of growth in contribution income resulted primarily from the effects of increased earnings and the increases in the contribution and benefit base that became effective on January 1 of each year 1991 and 1992. (Table II.B.1 in the preceding section shows the tax rates and contribution and benefit bases in effect for these years.)

Income from the taxation of benefits amounted to \$6,019 million, of which nearly 99 percent represented amounts credited to the trust fund in advance, on an estimated basis, together with adjustments to 1990 transfers to account for actual experience. The remaining 1 percent of the total income from taxation of benefits represented

Actuarial Analysis

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 \$19 million was transferred to the OASI Trust Fund in fiscal year 1992, as required by section 228 of the Social Security Act. The reimbursement reflected the costs of payments made in fiscal year 1990.

The OASI Trust Fund was credited with net interest totaling \$22,557 million which consisted of (1) interest earned on the investments of the trust fund, plus (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.

The remaining \$111,791 of receipts consisted of gifts received under the provisions authorizing the deposit of money gifts or bequests in the trust funds.

Of the \$256,239 million in total disbursements, \$251,268 million was for net benefit payments, excluding collected overpayments of \$751 million and the reimbursement of \$57 million for unnegotiated benefit checks. The amount of net benefit payments in fiscal year 1992 represents an increase of 6.4 percent over the corresponding amount in fiscal year 1991. This increase was due primarily to (1) the automatic cost-of-living benefit increases of 5.4 percent and 3.7 percent which became effective for December 1990 and December 1991 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.

**TABLE II.C.1.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND
DURING FISCAL YEAR 1992**

[In thousands]

Total assets, September 30, 1991		\$255,417,459
Receipts:		
Contributions:		
Employment taxes	\$278,856,290	
Payments from general fund of the Treasury representing employee-employer contributions on deemed wage cred- its for military service	327,402	
Gross contributions	279,183,692	
Less payment to the general fund of the Treasury for con- tributions subject to refund	677,600	
Net contributions		278,506,092
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens ...	78,401	
All other, not subject to withholding	5,941,000	
Total income from taxation of benefits		6,019,401
Reimbursement from general fund of the Treasury for costs of payments to uninsured persons who attained age 72 before 1968		18,868
Investment income and interest adjustments:		
Interest on investments	22,559,398	
Interest on transfers to the general fund account for the Supplemental Security Income program due to adjustment in allocation of administrative expenses	1,230	
Gross investment income and interest adjustments	22,560,628	
Less interest on interfund transfers due to adjustment in allocation of administrative expenses	3,416	
Net investment income and interest adjustments		22,557,212
Gifts		112
Total receipts		307,101,685
Disbursements:		
Benefit payments:		
Aggregate benefit payments	252,076,141	
Less collected overpayments	751,171	
Less reimbursement from general fund for unnegotiated checks	56,808	
Net benefit payments		251,268,163
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account"		3,148,381
Administrative expenses:		
Department of Health and Human Services	1,638,356	
Department of the Treasury	185,725	
Gross administrative expenses	1,824,081	
Less reimbursements from general fund of the Treasury for costs of furnishing information on deferred vested pension benefits	885	
Less receipts from sales of supplies, materials, etc.	354	
Net administrative expenses		1,822,842
Total disbursements		256,239,386
Net increase in assets		50,862,299
Total assets, September 30, 1992		306,279,759

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

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

Actuarial Analysis

allocation of costs between the two programs. Under those provisions, the Railroad Retirement Board and the Secretary of Health and Human Services determined that a transfer of \$3,148 million to the Social Security Equivalent Benefit Account from the OASI Trust Fund was required in June 1992.

The remaining \$1,823 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 1992 amounted to \$885,208.

The assets of the OASI Trust Fund at the end of fiscal year 1992 totaled \$306,280 million, consisting of \$306,524 million in U.S. Government obligations and, as an offset, an extension of credit amounting to \$244 million against securities to be redeemed within the following few days. Table II.C.2 shows the total assets of the fund and their distribution at the end of each fiscal year 1991 and 1992.

Fiscal Year 1992 Operations

TABLE II.C.2.—ASSETS OF THE OASI TRUST FUND, BY TYPE, INTEREST RATE, AND YEAR OF MATURITY, AT END OF FISCAL YEAR, 1991 AND 1992

	September 30, 1991	September 30, 1992
Obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
6.625 percent, 1993	—	\$15,355,491,000.00
6.750 percent, 1993	—	2,562,614,000.00
7.875 percent, 1992	\$18,955,442,000.00	—
Bonds:		
7.375 percent, 1994-2000	—	25,028,311,000.00
7.375 percent, 2001-06	—	21,452,844,000.00
7.375 percent, 2007	—	20,199,060,000.00
8.125 percent, 1993	3,611,348,000.00	—
8.125 percent, 1994	3,611,348,000.00	3,611,348,000.00
8.125 percent, 1995-2000	21,668,094,000.00	21,668,094,000.00
8.125 percent, 2001-05	18,056,740,000.00	18,056,740,000.00
8.125 percent, 2006	16,623,586,000.00	16,623,586,000.00
8.375 percent, 1993	313,295,000.00	—
8.375 percent, 1994-2000	2,193,065,000.00	2,193,065,000.00
8.375 percent, 2001	2,370,396,000.00	2,370,396,000.00
8.625 percent, 1993	1,301,731,000.00	—
8.625 percent, 1994-2001	10,413,848,000.00	10,413,848,000.00
8.625 percent, 2002	3,672,127,000.00	3,672,127,000.00
8.75 percent, 1993	7,099,803,000.00	1,521,662,000.00
8.75 percent, 1994	7,099,803,000.00	7,099,803,000.00
8.75 percent, 1995-2000	42,598,812,000.00	42,598,812,000.00
8.75 percent, 2001-03	21,299,409,000.00	21,299,409,000.00
8.75 percent, 2004-05	26,024,476,000.00	26,024,476,000.00
9.25 percent, 1992	1,814,353,000.00	—
9.25 percent, 1993-2000	17,922,472,000.00	17,922,472,000.00
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, 1992	565,186,000.00	—
10.375 percent, 1993-99	3,956,302,000.00	3,956,302,000.00
10.375 percent, 2000	2,057,101,000.00	2,057,101,000.00
10.750 percent, 1992	1,022,231,000.00	—
10.750 percent, 1993-96	4,088,924,000.00	4,088,924,000.00
10.750 percent, 1997-98	2,044,460,000.00	2,044,460,000.00
13.750 percent, 1992	469,684,000.00	—
13.750 percent, 1993-96	1,878,736,000.00	1,878,736,000.00
13.750 percent, 1997-98	939,370,000.00	939,370,000.00
13.750 percent, 1999	1,491,915,000.00	1,491,915,000.00
Total investments	255,557,108,000.00	306,524,017,000.00
Undisbursed balances ¹	-139,648,942.88	-244,258,486.83
Total assets	255,417,459,057.12	306,279,758,513.17

¹ 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, the amount maturing in each year is the amount shown divided by the number of years.

All securities held by the trust funds are backed by the full faith and credit of the United States Government. Those 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

Actuarial Analysis

acquired only when special issues of either type 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.

The effective annual rate of interest earned by the assets of the OASI Trust Fund during calendar year 1992 was 8.7 percent, as compared to 9.1 percent earned during calendar year 1991. The interest rate on special issues purchased by the trust fund in June 1992 was 7.375 percent, payable semiannually. Special-issue bonds with a total par value of \$70,256 million were purchased in June 1992.

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, 1992, 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 1993-2007.

2. Disability Insurance Trust Fund

A statement of the income and disbursements of the Federal Disability Insurance Trust Fund during fiscal year 1992, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table II.C.3.

During fiscal year 1992, total receipts amounted to \$31,168 million, and total disbursements were \$31,285 million. The assets of the trust fund thus decreased by \$116 million during the year, to a total of \$12,881 million on September 30, 1992.

Included in total receipts were \$29,909 million representing payroll tax contributions appropriated to the fund and \$35 million in payments from the general fund of the Treasury representing taxes that would have been paid on estimated deemed wage credits for military service in 1992 if such credits had been considered to be covered wages. As an offset, \$73 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 \$29,871 million, an increase of 3.2 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. Income from the taxation of benefit payments amounted to \$218 million in fiscal year 1992.

Net interest totaling \$1,080 million consisted of interest on the investments of the fund and interest on amounts of interfund transfers.

Of the \$31,285 million in total disbursements, \$30,350 million was for net benefit payments, excluding collected overpayments of \$132 million and a reimbursement of \$12 million for unnegotiated benefit checks. This represents an increase of 12.9 percent over the corresponding amount of benefit payments in fiscal year 1991. This increase is due primarily to the same factors that resulted in the net increase in benefit payments from the OASI Trust Fund. In the case of DI, however, the number of persons qualifying for disabled worker benefits continued to increase at a rapid rate in fiscal year 1992. See section II.F.1. for a detailed discussion of this rapid growth.

Actuarial Analysis

**TABLE II.C.3.—STATEMENT OF OPERATIONS OF THE DI TRUST FUND
DURING FISCAL YEAR 1992**

[In thousands]

Total assets, September 30, 1991		<u>\$12,997,362</u>
Receipts:		
Contributions:		
Employment taxes	\$29,909,007	
Payments from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service	<u>35,062</u>	
Gross contributions	29,944,069	
Less payment to the general fund of the Treasury for contributions subject to refund	<u>73,400</u>	
Net contributions		29,870,669
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens	3,833	
All other, not subject to withholding	<u>214,000</u>	
Total income from taxation of benefits		217,833
Investment income and interest adjustments:		
Interest on investments	1,079,135	
Interest on interfund transfers due to adjustment in allocation of administrative expenses	<u>818</u>	
Total investment income and interest adjustments		1,079,953
Gifts		<u>2</u>
Total receipts		<u>31,168,457</u>
Disbursements:		
Benefit payments:		
Gross benefit payments	30,493,730	
Less collected overpayments	131,842	
Less net reimbursement from general fund for unnegotiated checks	<u>12,093</u>	
Net benefit payments		30,349,795
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account"		57,990
Payment for costs of vocational rehabilitation services for disabled beneficiaries		32,241
Administrative expenses:		
Department of Health and Human Services	817,637	
Department of the Treasury	25,576	
Demonstration projects and experiments	<u>1,612</u>	
Gross administrative expenses	844,826	
Less receipts from sales of supplies, materials, etc.	<u>144</u>	
Net administrative expenses		844,682
Total disbursements		<u>31,284,708</u>
Net increase in assets		<u>-116,251</u>
Total assets, September 30, 1992		<u>12,881,111</u>

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

Provisions governing the financial interchanges between the Railroad Retirement and OASDI programs are described in the preceding section. Under those provisions, \$58 million was transferred to the Social Security Equivalent Benefit Account from the DI Trust Fund in June 1992.

The remaining disbursements amounted to \$845 million for net ad-

Fiscal Year 1992 Operations

ministrative expenses (including \$2 million for demonstration projects and experiments to test the effect of alternative methods for assisting disabled beneficiaries' attempts to work), and \$32 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 1992 totaled \$12,881 million, consisting of \$12,918 million in U.S. Government obligations and, as an offset, an extension of credit amounting to \$36 million against securities to be redeemed within the following few days. Table II.C.4 shows the total assets of the fund and their distribution at the end of each fiscal year 1991 and 1992.

The effective annual rate of interest earned by the assets of the DI Trust Fund during calendar year 1992 was 8.9 percent, as compared to 9.2 percent earned during calendar 1991. The interest rate on public-debt obligations issued for purchase by the trust fund in June 1992 was 7.375 percent, payable semiannually. Special-issue bonds with a total par value of \$3,067 million were purchased in June 1992.

The investment policies and practices described for the OASI Trust Fund apply as well to the investment of the assets of the DI Trust Fund.

Actuarial Analysis

TABLE II.C.4.—ASSETS OF THE DI TRUST FUND, BY TYPE, INTEREST RATE, AND YEAR OF MATURITY, AT END OF FISCAL YEAR, 1991 AND 1992

	September 30, 1991	September 30, 1992
Investments in public-debt obligations:		
Public issues:		
Treasury bonds:		
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	—
7.5 percent, 1988-93	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	250,700,000.00	143,400,000.00
Unamortized premium or discount, net	-430,321.84	-371,924.42
Total investments in public issues at book value	250,269,678.16	143,028,075.58
Obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
6.625 percent, 1993	—	1,500,689,000.00
7.875 percent, 1992	1,730,216,000.00	—
Bonds:		
7.375 percent, 1996-98	—	142,800,000.00
7.375 percent, 1999-2006	—	380,808,000.00
7.375 percent, 2007	—	916,460,000.00
8.125 percent, 1995	150,161,000.00	—
8.125 percent, 1996-98	450,483,000.00	450,483,000.00
8.125 percent, 1999-2000	300,320,000.00	300,320,000.00
8.125 percent, 2001-05	750,805,000.00	750,805,000.00
8.125 percent, 2006	868,859,000.00	868,859,000.00
8.375 percent, 1994	88,711,000.00	—
8.375 percent, 1995	109,613,000.00	—
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, 1994	466,750,000.00	—
8.75 percent, 1995	127,473,000.00	—
8.75 percent, 1996-2000	637,365,000.00	637,365,000.00
8.75 percent, 2001	127,472,000.00	127,472,000.00
8.75 percent, 2002-05	2,874,792,000.00	2,874,792,000.00
9.75 percent, 1994	142,336,000.00	—
9.75 percent, 1995	481,613,000.00	276,263,000.00
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 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)	12,854,325,000.00	12,774,472,000.00
Total investments in public-debt obligations (book value ¹)	13,104,594,678.16	12,917,500,075.58
Undisbursed balances ²	-107,232,892.31	-36,389,147.24
Total assets (book value¹)	12,997,361,785.85	12,881,110,928.34

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

²Negative 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.

3. Old-Age, Survivors, and Disability Insurance Trust Funds, Combined

A statement of the operations of the income and disbursements of the OASI and DI Trust Funds, on a combined basis, is presented in table II.C.5. The entries in this table represent the sums of the corresponding values from tables II.C.1 and II.C.3. For a discussion of the nature of these income and expenditure transactions, reference should be made to the preceding two subsections covering OASI and DI separately.

TABLE II.C.5.—STATEMENT OF OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING FISCAL YEAR 1992

[In thousands]

Total assets, September 30, 1991		<u>\$268,414,821</u>
Receipts:		
Contributions:		
Employment taxes	\$308,765,297	
Payments from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service	362,464	
Gross contributions	<u>309,127,761</u>	
Less payment to the general fund of the Treasury for contributions subject to refund	751,000	
Net contributions		308,376,761
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens ...	82,234	
All other, not subject to withholding	<u>6,155,000</u>	
Total income from taxation of benefits		6,237,234
Reimbursement from general fund of the Treasury for costs of payments to uninsured persons who attained age 72 before 1968		18,868
Investment income and interest adjustments:		
Interest on investments	23,638,534	
Interest on transfers to the general fund account for the Supplemental Security Income program due to adjustment in allocation of administrative expenses	1,230	
Gross investment income and interest adjustments	<u>23,639,763</u>	
Less interest on interfund transfers due to adjustment in allocation of administrative expenses	2,598	
Net investment income and interest adjustments		23,637,165
Gifts		<u>114</u>
Total receipts		<u>338,270,143</u>

Actuarial Analysis

TABLE II.C.5.—STATEMENT OF OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING FISCAL YEAR 1992 (Cont'd)

[In thousands]

Disbursements:		
Benefit payments:		
Aggregate benefit payments	\$282,569,872	
Less collected overpayments	883,013	
Less reimbursement from general fund for unnegotiated checks	68,900	
Net benefit payments		\$281,617,959
Transfer to the Railroad Retirement "Social Security Equivalent Benefit Account"		3,206,371
Payment for costs of vocational rehabilitation services for disabled beneficiaries		32,241
Administrative expenses:		
Department of Health and Human Services	2,455,993	
Department of the Treasury	211,301	
Disability demonstration projects and experiments	1,612	
Gross administrative expenses	2,668,907	
Less reimbursements from general fund of the Treasury for costs of furnishing information on deferred vested pension benefits	885	
Less receipts from sales of supplies, materials, etc.	498	
Net administrative expenses		2,667,524
Total disbursements		<u>287,524,094</u>
Net increase in assets		<u>50,746,049</u>
Total assets, September 30, 1992		<u>319,160,869</u>

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

Table II.C.6 compares past estimates of contributions and benefit payments for fiscal year 1992, as shown in the 1988-92 Annual Reports, with the corresponding actual amounts in 1992. The estimates shown are the ones based on the alternative II-B set of assumptions from the 1988-90 reports and the alternative II assumptions for the 1991-92 reports.

A number of factors can contribute to differences between estimates and subsequent actual amounts, including actual values for key economic, demographic, and other variables that differ from assumed levels. In addition, amendments to the Social Security Act can cause actual taxes or benefits to vary from earlier estimates. The comparisons in table II.C.6 indicate that actual OASI and DI tax contributions in fiscal year 1992 were lower, generally, than prior estimates (due primarily to the recession that began late in 1990). Estimates of OASI benefit payments were generally close to actual payments in 1992. The actual amount of DI benefit payments in 1992, however, was significantly above prior estimates, due to faster-than-expected growth in the number of disabled workers, part of which was the result of a one-time acceleration of disability benefit

Fiscal Year 1992 Operations

awards caused by special administrative actions that were taken to process probable disability awards on an expedited basis.

TABLE II.C.6.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, FISCAL YEAR 1992

[Amounts in millions]

	Net contributions ¹		Benefit payments ²	
	Amount	Variance from actual (percent)	Amount	Variance from actual (percent)
OASI Trust Fund:				
Estimate in 1988 report	\$290,463	4.3	\$247,936	-1.3
Estimate in 1989 report	298,604	7.2	250,276	-4
Estimate in 1990 report	296,345	6.4	250,413	-3
Estimate in 1991 report	286,979	3.0	252,699	.6
Estimate in 1992 report	274,826	-1.3	251,104	-1
Actual amount	278,506	—	251,268	—
DI Trust Fund:				
Estimate in 1988 report	31,113	4.2	26,738	-12.0
Estimate in 1989 report	31,986	7.1	27,147	-10.6
Estimate in 1990 report	31,746	6.3	27,583	-9.2
Estimate in 1991 report	30,622	2.5	28,789	-5.2
Estimate in 1992 report	29,473	-1.3	29,694	-2.3
Actual amount	29,871	—	30,382	—
OASI and DI Trust Funds, combined:				
Estimate in 1988 report	321,576	4.3	274,674	-2.5
Estimate in 1989 report	330,590	7.2	277,423	-1.5
Estimate in 1990 report	328,091	6.4	277,996	-1.3
Estimate in 1991 report	317,601	3.0	281,488	-1
Estimate in 1992 report	304,299	-1.3	280,798	-3
Actual amount	308,377	—	281,650	—

¹"Actual" contributions for 1992 reflect adjustments for prior fiscal years (see preceding section for description of these adjustments). "Estimated" contributions also include such adjustments, but on an estimated basis.

²Includes payments, if any, for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities.

At the end of fiscal year 1992, about 41.3 million persons were receiving monthly benefits under the OASDI program. Of these persons, about 36.5 million and 4.8 million were receiving monthly benefits from the OASI Trust Fund and the DI Trust Fund, respectively. The number of persons receiving benefits from the OASI and DI Trust Funds grew by 1.5 percent and 8.2 percent, respectively, during the fiscal year. The estimated distribution of benefit payments in fiscal years 1991 and 1992, by type of beneficiary, is shown in table II.C.7 for each trust fund separately.

Actuarial Analysis

TABLE II.C.7.—ESTIMATED DISTRIBUTION OF BENEFIT PAYMENTS FROM THE OASI AND DI TRUST FUNDS, BY TYPE OF BENEFICIARY OR PAYMENT, FISCAL YEARS 1991 AND 1992

[Amounts in millions]

	Fiscal year 1991		Fiscal year 1992	
	Amount	Percentage of total	Amount	Percentage of total
Total OASDI benefit payments	\$263,073	100.0	\$281,618	100.0
OASI benefit payments	236,195	89.8	251,268	89.2
DI benefit payments	26,878	10.2	30,350	10.8
OASI benefit payments, total	236,195	100.0	251,268	100.0
Monthly benefits:				
Retired workers and auxiliaries	182,270	77.2	193,854	77.2
Retired workers	166,147	70.3	176,782	70.4
Wives and husbands	14,740	6.2	15,602	6.2
Children	1,383	.6	1,470	.6
Survivors of deceased workers	53,710	22.7	57,199	22.8
Aged widows and widowers	42,749	18.1	45,669	18.2
Disabled widows and widowers ..	540	.2	657	.3
Parents	38	(1)	37	(1)
Children	8,906	3.8	9,320	3.7
Widowed mothers and fathers car- ing for child beneficiaries	1,476	.6	1,515	.6
Uninsured persons generally aged 72 before 1968	13	(1)	9	(1)
Lump-sum death payments	202	.1	206	.1
DI benefit payments, total	26,878	100.0	30,350	100.0
Disabled workers	24,021	89.4	27,186	89.6
Wives and husbands	544	2.0	569	1.9
Children	2,314	8.6	2,594	8.5

¹ Less than 0.05 percent.

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

Net administrative expenses charged to the OASI and DI Trust Funds in fiscal year 1992 totaled \$2,668 million. This amount represented 0.9 percent of contribution income and 0.9 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 II.C.8 for each of the last 5 years.

Fiscal Year 1992 Operations

TABLE II.C.8.—NET ADMINISTRATIVE EXPENSES AS A PERCENTAGE OF CONTRIBUTION INCOME AND OF BENEFIT PAYMENTS, BY TRUST FUND, FISCAL YEARS 1988-92

Fiscal year	OASI Trust Fund		DI Trust Fund		OASI and DI Trust Funds, combined	
	Contribution income	Benefit payments	Contribution income	Benefit payments	Contribution income	Benefit payments
1988.....	0.8	0.9	3.7	3.8	1.0	1.2
1989.....	.7	.8	3.2	3.3	.9	1.1
1990.....	.6	.7	2.6	3.0	.8	.9
1991.....	.6	.7	2.7	2.9	.8	1.0
1992.....	.7	.7	2.8	2.8	.9	.9

Tables II.C.2 and II.C.4, presented in the two preceding subsections, showed the assets of the OASI and DI Trust Funds at the end of fiscal years 1991 and 1992. The changes in the invested assets of the funds between those two dates are a result of the acquisition and disposition of securities during fiscal year 1992. Table II.C.9 presents these investment transactions for each trust fund separately and combined. All amounts shown in the table are at par value.

TABLE II.C.9.—INVESTMENT TRANSACTIONS OF THE OASI AND DI TRUST FUNDS IN FISCAL YEAR 1992

[In thousands]

	OASI Trust Fund	DI Trust Fund	OASI and DI Trust Funds, combined
Invested assets, September 30, 1991	\$255,557,108	\$13,105,025	\$268,662,133
Acquisitions:			
Special issues:			
Certificates of indebtedness	296,747,936	30,774,783	327,522,719
Bonds	70,255,688	3,066,935	73,322,623
Public issues:			
Treasury bonds	—	—	—
Total acquisitions	367,003,624	33,841,718	400,845,342
Dispositions:			
Special issues:			
Certificates of indebtedness	297,785,273	31,004,310	328,789,583
Bonds	18,251,442	2,917,261	21,168,703
Public issues:			
Treasury bonds	—	107,300	107,300
Total dispositions	316,036,715	34,028,871	350,065,586
Net increase in invested assets	50,966,909	-187,153	50,779,756
Invested assets, September 30, 1992	306,524,017	12,917,872	319,441,889

Note: All investments are shown at par value.

D. PRINCIPAL ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

The future income and outgo of the combined OASDI program depend on many economic and demographic factors, including gross domestic 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 level and distribution 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 three sets of assumptions, designated as alternatives I, II, and III. The intermediate set, alternative II, represents the Board's best estimate of the future course of the population and the economy. In terms of the net effect on the status of the OASDI program, alternative I is the more optimistic, and alternative III is the more pessimistic of the plausible economic and demographic conditions.

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 & Demographic Assumptions

1. Economic Assumptions

The principal economic assumptions for the three alternatives are summarized in table II.D.1.

**TABLE II.D.1.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE,
CALENDAR YEARS 1960-2070**

Calendar year	Average annual percentage change in—						Average annual percentage increase in labor force ⁶
	Real GDP ¹	Average annual wage in covered employment	Consumer Price Index ²	Real-wage differential ³ (percent)	Average annual interest rate ⁴ (percent)	Average annual unemployment rate ⁵ (percent)	
Historical data:							
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	.2	6.7	5.4	2.3
1975	-8	6.7	9.1	-2.4	7.4	8.5	1.9
1976	4.9	8.7	5.7	3.0	7.1	7.7	2.4
1977	4.5	7.3	6.5	.8	7.1	7.1	2.9
1978	4.8	9.7	7.7	2.0	8.2	6.1	3.2
1979	2.5	9.8	11.4	-1.6	9.1	5.8	2.6
1980	-5	9.0	13.4	-4.4	11.0	7.1	1.9
1981	1.8	9.8	10.3	-5	13.3	7.6	1.6
1982	-2.2	6.5	6.0	.5	12.8	9.7	1.4
1983	3.9	5.1	3.0	2.1	11.0	9.6	1.2
1984	6.2	7.3	3.5	3.8	12.4	7.5	1.8
1985	3.2	4.3	3.5	.8	10.8	7.2	1.7
1986	2.9	5.1	1.6	3.5	8.0	7.0	2.0
1987	3.1	4.7	3.6	1.1	8.4	6.2	1.7
1988	3.9	4.7	4.0	.7	8.8	5.5	1.4
1989	2.5	7 4.3	4.8	-5	8.7	5.3	1.8
19908	7 4.8	5.2	-4	8.6	5.5	.7
1991	-1.2	7 3.0	4.0	-1.0	8.0	6.7	.4
Alternative I:							
1992	2.1	4.0	2.9	1.0	7.1	7.4	1.2
1993	3.8	4.2	2.8	1.5	6.3	6.8	.8
1994	3.9	4.8	2.8	2.0	5.8	6.2	1.6
1995	3.8	5.2	3.0	2.2	5.9	5.7	1.3
1996	3.5	4.9	3.0	1.9	6.0	5.4	1.2
1997	3.3	4.9	3.0	1.9	6.0	5.2	1.2
1998	3.1	4.8	3.0	1.8	6.0	5.0	1.2
1999	2.9	4.8	3.0	1.8	6.0	5.0	1.2
2000	2.9	4.9	3.0	1.9	6.0	4.9	1.1
2001	2.9	4.9	3.0	1.9	6.1	4.9	1.1
2002	2.9	5.0	3.0	2.0	6.1	4.9	1.0
2010	2.5	4.8	3.0	1.8	6.0	5.0	.7
2020&later	2.1	4.7	3.0	1.7	6.0	5.0	2.4
Alternative II:							
1992	2.1	4.0	2.9	1.1	7.1	7.4	1.2
1993	3.1	3.7	3.0	.7	6.3	6.9	.7
1994	3.3	4.5	3.1	1.4	5.9	6.4	1.4
1995	2.9	4.6	3.2	1.4	5.9	6.1	1.1
1996	2.6	4.4	3.3	1.0	6.0	6.0	1.0
1997	2.4	4.5	3.5	1.0	6.0	5.9	1.0
1998	2.2	4.6	3.7	1.0	6.1	5.9	1.0
1999	2.2	5.0	3.9	1.1	6.3	6.0	1.0
2000	2.2	5.1	4.0	1.1	6.4	6.0	.9
2001	2.3	5.2	4.0	1.2	6.5	5.9	.9
2002	2.3	5.3	4.0	1.3	6.4	5.9	.9
2010	1.9	5.1	4.0	1.1	6.3	6.0	.6
2020&later	2.1	5.1	4.0	1.1	6.3	6.0	2.1

TABLE II.D.1.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2070 (Cont.)

Calendar year	Average annual percentage change in—						Average annual percentage increase in labor force ⁶
	Real GDP ¹	Average annual wage 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 III:							
1992.....	2.0	4.0	2.9	1.1	7.1	7.4	1.2
1993.....	2.6	3.8	3.7	.0	6.4	7.0	.7
1994.....	.5	4.0	4.0	.1	6.3	7.0	1.3
1995.....	1.0	5.1	5.4	-.3	7.0	7.4	.7
1996.....	2.8	7.1	6.4	.7	7.7	6.9	.9
1997.....	-1.2	3.8	4.9	-1.2	7.9	7.4	.9
1998.....	1.0	4.9	5.0	.0	7.7	8.1	.6
1999.....	3.1	5.7	5.0	.7	7.0	7.5	.9
2000.....	2.6	5.5	5.0	.5	6.9	7.1	1.0
2001.....	2.0	5.6	5.0	.6	6.8	6.9	.9
2002.....	1.7	5.7	5.0	.7	6.7	6.9	.7
2010.....	1.4	5.6	5.0	.6	6.5	7.0	.5
2020&later...	8.8	5.6	5.0	.6	6.5	7.0	8-.1

¹The real GDP (gross domestic product) is the value of total output of goods and services, expressed in 1987 dollars.

²The Consumer Price Index is the annual average value for the calendar year of the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

³The 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.

⁴The 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.

⁵Through 2002, the rates shown are unadjusted civilian unemployment rates. After 2002, the rates are total rates (including military personnel), adjusted by age and sex based on the estimated total labor force on July 1, 1991.

⁶Labor 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.

⁷Preliminary.

⁸This value is for 2020. The annual percentage increase in labor force and real GDP is assumed to continue to change after 2020 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 GDP for 2070 are 2.3, 1.3, and 0.3 percent for alternatives I, II, and III, respectively. The changes in total labor force for 2070 are 0.6, 0.0, and -0.5 percent for alternatives I, II, and III, respectively.

Alternatives I, II, 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. The intermediate set of assumptions—alternative II—represents the Trustees’ consensus expectation of continued moderate to relatively strong economic growth through 1995 and a return to moderate growth thereafter. Alternative I presents a more optimistic outlook, with a return to more robust economic growth beginning with the fourth quarter of 1992.

Alternative III is a relatively pessimistic forecast in which the economy experiences more modest growth during 1993 and then enters

Economic & Demographic Assumptions

a recession in the second quarter of 1994, which lasts through the remainder of that year. After a period of recovery lasting through the end of 1996, a second recession is assumed to occur beginning with the first quarter of 1997 and spanning 4 quarters. The total declines in real GDP for the two projected recessions in alternative III are slightly less than those of recent recessions; however, the ensuing 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. Economic cycles are not included in assumptions beyond the first 5 to 10 years of the projection period because inclusion of such cycles has little effect on the long-range estimates of financial status.

The period of sustained real economic growth, which began in 1982, ended with the recession that started with the third quarter of 1990. After a total decline in real GDP of 2.2 percent through the first quarter of 1991, and a three-quarter period of slow, but positive, growth following the recession, the return to steady economic growth which began in 1992 is assumed to continue through the end of the decade for alternatives I and II. Real growth is assumed to be stronger for alternative I than for alternative II. For alternative III, moderate growth and an increasing rate of price inflation are assumed through the first quarter of 1994. The first projected recession begins in the second quarter of 1994, lasts 3 quarters, and results in a total decline in real GDP of 1.7 percent. After 8 quarters of recovery, a second recession, with a total decline in real GDP of 3.0 percent, is assumed to begin in the first quarter of 1997, lasting through the end of that year. A three-year period of moderate economic recovery and stable rates of inflation is assumed through the year 2000. Thereafter, steady, but relatively slow, growth is assumed for alternative III.

After the year 2002, the projected rates of growth in real GDP, for all three alternatives, are determined by the assumed rates of growth in employment, average hours worked, and labor productivity.

Assumed values for the unemployment rates reflect the pattern of real GDP growth for each alternative. For alternatives I and II, the unemployment rate is assumed to move gradually toward its ultimate average level after 1992. For alternative III, the unemployment rate

Actuarial Analysis

is assumed to reach its ultimate average level after the recovery that is assumed to follow the second recession.

Unemployment rates through 2002 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 2002, 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 1991 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.

For the intermediate alternative II projection, each of the other economic parameters is selected reflecting what the Trustees believe to be the most likely future course of the economy at the time of preparation of this report, consistent with the assumed pattern of real GDP growth. The average annual unemployment rate increased from 6.7 percent in 1991 to 7.4 percent in 1992, as a result of the recession and the ensuing period of slow growth. After 1992 the unemployment rate is assumed to decline gradually, based on alternative II, reaching 5.9 percent in 2002, which is equivalent to the assumed ultimate total unemployment rate (age-sex adjusted to the 1991 labor force) of 6.0 percent. Thereafter, the adjusted total unemployment rate remains at about 6.0 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 estimated 4.8-percent increase for 1990 to 3.0 percent for 1991, reflecting the economic recession. After 1991, the average wage grows at about 4 percent for 2 years, by about 4.5 percent for another 5 years, and then by 5.0 to 5.3 percent per year through 2002. After 2002, the average covered wage growth rate remains at the ultimate assumed rate of 5.1 percent. The annual rate of increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) declined from 4.0 percent in 1991 to 2.9 percent in 1992. Thereafter, it is assumed to increase steadily to the ultimate rate of 4.0 percent by the year 2000. 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 change in the average wage in covered employment and in the CPI) is assumed to be 1.0 percent in 1992, following differentials of -0.4 percent and -1.0 percent in 1990 and 1991, respectively. After 1992, the real-wage differential is projected to be generally between 1.0 and 1.4 percent through the year 2002, thereafter remaining at the ultimate assumed differential of 1.1 percent.

The average annual interest rate is assumed to decline from 7.1 percent in 1992, reaching its ultimate value of 6.3 percent by 2003. The annual rate of growth in total labor force increased from 0.4 percent in 1991 to 1.2 percent in 1992. After 1992 the labor force is projected to increase at about 1.0 percent per year, on the average, through 2002 reflecting the slower growth in the working-age population than was experienced through the 1980s and early 1990s.

For alternatives I and III, respectively, values for each of the economic parameters are selected which, in general, result in a more optimistic and a more pessimistic future financial status of the program.

2. Demographic Assumptions

The principal demographic assumptions for the three alternatives are shown in table II.D.2.

For the intermediate alternative II projection, the assumed ultimate total fertility rate of 1.9 children per woman is attained in 2017 after a gradual decline from the estimated 1991 level of 2.06 children per woman. The age-sex-adjusted death rate is assumed to decrease gradually during the entire projection period, with a total reduction of 35 percent from the 1992 level by 2067. Life expectancies at birth in 2070 are 77.5 years for men and 84.0 years for women, compared to 71.8 and 79.0 years, respectively, in 1991. Life expectancies at age 65 in 2070 are projected to be 18.3 years for men and 22.4 years for women, compared to 15.0 and 19.1 years, respectively, in 1991. 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 and Prevention (CDC) as a starting point. Total net immigration is assumed to rise over the next several years reaching an ultimate level of 850,000 persons per year by the year 2000. The ultimate assumed level of net annual

Actuarial Analysis

immigration is the combination of 650,000 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 by 2017. The age-sex-adjusted death rate is assumed to decrease more slowly than for alternative II, with the total reduction from the 1992 level being 16 percent by 2067. Life expectancies at birth in 2070 are 74.8 years for men and 80.9 years for women, while at age 65 they are 15.9 and 19.7 years, respectively. Total net immigration is ultimately assumed to be 1,100,000 persons per year. The assumed level of net annual immigration is the combination of 750,000 net legal immigrants per year and 350,000 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 2017. The age-sex-adjusted death rate is assumed to decrease more rapidly than for alternative II, with the total reduction from the 1992 level being 53 percent by 2067. Life expectancies at birth in 2070 are 80.9 years for men and 88.0 years for women, while at age 65 they are 21.4 and 25.6 years, respectively. Total net immigration is ultimately assumed to be 700,000 persons per year, the combination of 600,000 net legal immigrants per year and 100,000 net other-than-legal immigrants per year.

The ultimate fertility rates used in this report are the same as those used in the 1992 Annual Report. Assumed improvements in mortality rates over the next 75 years are very similar to those used in the 1992 report. The Bureau of the Census revised its long-range assumptions on fertility and mortality rates before the assumptions for this report were adopted. The Bureau revised its assumed fertility rate from 1.8 children per woman to 2.1 children per woman, which is significantly higher than the intermediate assumption used in this report. Revised rates of improvement in mortality rates, made by the Bureau of the Census, are also significantly higher than the rates of improvement assumed in this report under the intermediate assumptions. After considering these changes, it was decided to retain the 1992 Annual Report's ultimate assumptions of fertility and improvement in mortality for this year's report. Nevertheless, these assumptions will continue to be reviewed in preparation for the future annual reports, beginning with next year's report.

Economic & Demographic Assumptions

TABLE II.D.2.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1940-2070

Calendar year	Total fertility rate ¹	Age-sex-adjusted death rate ² (per 100,000)	Life expectancy ³			
			At birth		At age 65	
			Male	Female	Male	Female
Historical data:						
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	1.79	898.0	69.4	77.2	13.9	18.3
1978	1.76	892.4	69.6	77.2	13.9	18.3
1979	1.82	864.2	70.0	77.7	14.2	18.6
1980	1.85	878.1	69.9	77.5	14.0	18.4
1981	1.83	853.8	70.4	77.8	14.2	18.6
1982	1.83	828.5	70.8	78.2	14.5	18.8
1983	1.81	836.1	70.9	78.1	14.3	18.6
1984	1.80	829.6	71.1	78.2	14.4	18.7
1985	1.84	831.8	71.1	78.2	14.4	18.6
1986	1.84	824.8	71.1	78.3	14.5	18.7
1987	1.87	816.1	71.3	78.4	14.6	18.7
1988	1.93	824.5	71.2	78.3	14.6	18.7
1989	2.01	804.1	71.5	78.6	14.8	18.9
1990 ⁴	2.08	806.9	71.1	78.8	14.9	18.9
1991 ⁴	2.06	783.4	71.8	79.0	15.0	19.1

TABLE II.D.2.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1940-2070 (Cont.)

Calendar year	Total fertility rate ¹	Age-sex-adjusted death rate ² (per 100,000)	Life expectancy ³			
			At birth		At age 65	
			Male	Female	Male	Female
Alternative I:						
1995	2.09	781.9	72.2	78.9	14.9	18.9
2000	2.12	773.5	72.5	79.0	15.0	18.8
2005	2.15	766.9	72.8	79.1	15.0	18.7
2010	2.17	758.0	73.0	79.3	15.0	18.7
2015	2.19	748.4	73.2	79.4	15.1	18.8
2020	2.20	739.1	73.3	79.6	15.2	18.9
2025	2.20	730.0	73.5	79.7	15.3	19.0
2030	2.20	721.3	73.7	79.9	15.3	19.1
2035	2.20	712.8	73.8	80.0	15.4	19.2
2040	2.20	704.6	74.0	80.1	15.5	19.2
2045	2.20	696.6	74.1	80.3	15.6	19.3
2050	2.20	688.9	74.2	80.4	15.6	19.4
2055	2.20	681.3	74.4	80.5	15.7	19.5
2060	2.20	674.0	74.5	80.6	15.8	19.6
2065	2.20	666.9	74.7	80.7	15.9	19.7
2070	2.20	660.0	74.8	80.9	15.9	19.7
Alternative II:						
1995	2.05	771.5	72.0	79.2	15.1	19.1
2000	2.02	740.2	72.6	79.7	15.4	19.4
2005	1.98	709.6	73.5	80.2	15.6	19.5
2010	1.95	686.2	74.0	80.5	15.8	19.7
2015	1.91	666.6	74.3	80.8	16.0	19.9
2020	1.90	648.2	74.7	81.2	16.3	20.2
2025	1.90	630.7	75.0	81.5	16.5	20.4
2030	1.90	614.1	75.3	81.8	16.7	20.6
2035	1.90	598.2	75.6	82.1	16.9	20.9
2040	1.90	583.1	75.9	82.4	17.1	21.1
2045	1.90	568.6	76.2	82.6	17.3	21.3
2050	1.90	554.8	76.5	82.9	17.5	21.5
2055	1.90	541.6	76.7	83.2	17.7	21.7
2060	1.90	529.0	77.0	83.5	17.9	22.0
2065	1.90	517.0	77.3	83.7	18.1	22.2
2070	1.90	505.4	77.5	84.0	18.3	22.4
Alternative III:						
1995	1.99	756.3	72.0	79.5	15.4	19.4
2000	1.91	720.6	72.3	80.2	15.8	19.9
2005	1.81	673.1	73.4	81.0	16.2	20.3
2010	1.72	622.8	74.9	81.7	16.6	20.7
2015	1.63	587.4	75.7	82.4	17.0	21.1
2020	1.60	559.2	76.2	82.9	17.4	21.5
2025	1.60	534.3	76.6	83.4	17.8	22.0
2030	1.60	510.9	77.1	84.0	18.2	22.4
2035	1.60	488.8	77.5	84.5	18.6	22.8
2040	1.60	467.6	78.0	85.0	19.0	23.2
2045	1.60	447.5	78.5	85.5	19.4	23.6
2050	1.60	428.3	79.0	86.0	19.8	24.0
2055	1.60	410.1	79.5	86.5	20.2	24.4
2060	1.60	392.9	79.9	87.0	20.6	24.8
2065	1.60	376.6	80.4	87.5	21.0	25.2
2070	1.60	361.1	80.9	88.0	21.4	25.6

¹The 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 2017.

²The 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.

³The 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.

⁴Estimated.

Economic & Demographic Assumptions

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. Section II.H includes a discussion of many of those factors.

The ultimate values presented in tables II.D.1 and II.D.2 reflect little change from the ultimate values used for the 1992 Annual Report. Different levels, as opposed to rates of change, in several factors reflect, primarily, different starting levels based on additional data collected since the last report. The ultimate annual rate of net legal immigration is increased by 100,000 over the level used in last year's report, based on a reassessment of the impact of recent legislation by the Immigration and Naturalization Service. The effect on the financing of the OASDI program of this and other changes is discussed in section II.F.2.