## B. DISABILITY INSURANCE TRUST FUND

A statement of the income and disbursements of the Federal Disability Insurance Trust Fund during fiscal year 1985 and of the assets of the fund at the beginning and end of the fiscal year is presented in table 7.

TABLE 7.—STATEMENT OF OPERATIONS OF THE DI TRUST FUND DURING FISCAL YEAR 1985 [in thousands]

Total assets, September 30, 1984	_	\$4,642,58
Receipts: Contributions:	_	
Appropriations:		
Employment taxes		
Tax credits	\$15,031,258 273,191	
	2/3,191	
Total appropriations  Deposits a raising from State agreements  Payments from general fund of the Treasury representing employee- employer contributions on deemed wage credits for military service in 1985	15,304,449 1,586,988	
	31,000	
Gross contributions  Less payment to the general fund of the Treasury for contributions subject to refund	16,922,437 46,643	
Net contributions.		40.000.00
income from taxation of benefit payments:		16,875,794
Withheld from benefit navments to non-resident aliens	3,801	
All other, not subject to withholding	214,000	
Total income from taxation of benefits		
INVESTMENT INCOME and interest adjustments		217,801
Interest on investments	579,681	
trative expenses	836	
Interest on reimbursement from general fund for unnegotiated checks Interest on loan to OASI Trust Fund	14,800 364,586	
Gross investment income and interest adjustments Less interest on general fund advance tax transfers	959,903 69,414	
Net investment income and interest adjustments		890,488
otal receipts!	_	
Disbursements:		17,984,084
Benefit payments:		
Gross benefit payments	18,745,475	
Less collected overnavments	91,016	
Less reimbursement for unnegotiated checks	8,800	
Net benefit payments		18,645,659
Transfer to the Railroad Retirement "Social Security Equivalent Benefit		10,040,009
Payment for costs of vocational rehabilitation services for disabled		42,684
Denencianes		2,618
Administrative expenses:		• •
Department of Health and Human Services	588,087	
Construction of facilities for Social Security Administration	14,063 938	
Gross administrative expenses	603,088	
Less receipts from sales of supplies, materials, etc	28	
Net administrative expenses		603,060
otal disbursements	_	19,294,020
artial repayment, from OASI Trust Fund, of interfund loans		2,540,000
et increase in assets <sup>1</sup>		1,230,063
otal assets <sup>a</sup> , September 30, 1985	=	5,872,650
Includes gifts in the amount of \$300.		3,072,030

<sup>\*</sup>Includes gifts in the amount of \$300.

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

<sup>&</sup>lt;sup>a</sup>Equals total receipts, less total expenditures, plus interfund loan repayment.

Assets exclude amounts, totaling \$2,541,252,899.48, lent to the OASI Trust Fund.

The total assets of the DI Trust Fund amounted to \$4,643 million on September 30, 1984. During fiscal year 1985, total receipts amounted to \$17,984 million, and total disbursements were \$19,294 million. In addition, \$2,540 million was transferred from the OASI Trust Fund to the DI Trust Fund as a partial repayment of interfund loans. The assets of the trust fund thus increased by \$1,230 million during the year, to a total of \$5,873 million on September 30, 1985.

Included in total receipts were \$15,304 million representing contributions appropriated to the fund (including transfers of \$273 million from the general fund of the Treasury to offset the tax credits allowed against contributions due on earnings of employees and self-employed persons), \$1,587 million representing amounts received by the Secretary of the Treasury in accordance with State coverage agreements and deposited in the fund, and \$31 million in payments from the general fund of the Treasury representing the contributions that would have been paid on estimated deemed wage credits for military service in 1985 if such credits had been considered to be covered wages. As an offset, \$47 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 \$16,876 million, an increase of 2.9 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). An important factor accounting for the lower increase in contribution income to the DI Trust Fund, relative to the OASI Trust Fund, is the decrease in the DI contribution rate that became effective January 1, 1984. (As mentioned in the preceding subsection, the OASI contribution rate increased on that date.)

Income from the taxation of benefit payments amounted to \$218 million. The remaining \$890 million of receipts consisted of interest on the investments of the fund, plus net interest on amounts of interfund and general-fund transfers (see preceding subsection).

Of the \$19,294 million in total disbursements, \$18,646 million was for net benefit payments, excluding collected overpayments of \$91 million and the reimbursement of \$9 million for unnegotiated benefit checks. This represents an increase of 5.2 percent over the corresponding amount of benefit payments in fiscal year 1984. 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 program and the DI Trust Fund are similar to those described in the preceding subsection relating to the OASI Trust Fund. The determination made as of September 30, 1984, required that a transfer of \$39,800,000 be made from the DI Trust Fund to the Social Security Equivalent Benefit Account. A total amount of \$42,684,000 was transferred to the SSEBA in June 1985, including interest to the date of transfer amounting to \$2,884,000.

The remaining disbursements amounted to \$603 million for net administrative expenses and \$3 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.

At the end of fiscal year 1985, about 3.9 million persons were receiving monthly benefits from the DI Trust Fund. The distribution of benefit payments in fiscal years 1984 and 1985, by type of beneficiary, is shown in table 8.

TABLE 8.—ESTIMATED DISTRIBUTION OF BENEFIT PAYMENTS FROM THE DI TRUST FUND, BY TYPE OF BENEFICIARY, FISCAL YEARS 1984 AND 1985 [Amounts in millions]

	Fiscal year 1984		Fiscal year 1985	
	Amount	Percentage of total	Amount	Percentage of total
Total	\$17,735	100.0	\$18,654	100.0
Disabled workers	15,461 537 1,737	87.2 3.0 9.8	16,322 543 1,789	. 87.5 2.9 9.6

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

The assets of the DI Trust Fund at the end of fiscal year 1985 totaled \$5,873 million, consisting of \$5,703 million in U.S. Government obligations and an undisbursed balance of \$170 million. Table 9 shows the total assets of the fund and their distribution at the end of each fiscal year 1984 and 1985.

TABLE 9.--ASSETS OF THE DI TRUST FUND, BY TYPE, AT END OF FISCAL YEAR, 1984 AND 1985

1984 AND 198	15	·
	September 30, 1984	September 30, 198
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	68,400,000.0
4.25 percent, 1975-85	20,795,000.00	
4.25 percent, 1987-92	80,800,000.00	80,800,000.0
7.5 percent, 1988-93	26,500,000.00	26,500,000.0
7.625 percent, 2002-07	10,000,000.00	10,000,000.0
8 percent, 1996-2001	26,000,000.00	26,000,000.0
8.25 percent, 2000-05	3,750,000.00	3,750,000.0
11.75 percent, 2010	30,250,000.00	30,250,000.0
Total investments in public issues at par value,		
as shown above	281,995,000.00	261,200,000.0
Unamortized premium or discount, net	-1,156,051.22	-1,045,050.4
Total investments in public issues at book value.	280,838,948.78	260,154,949.5
Total investments in public issues at book value.	200,000,040.10	200,104,040.0
Obligations sold only to the trust funds (special		
issues):		
Certificates of indebtedness:		
10.375 percent, 1986		665,468,000.0
12.75 percent, 1985	394,612,000.00	-
Bonds:		
8.75 percent, 1993	47,479,000.00	47,479,000.0
8.75 percent, 1994	339,277,000.00	339,277,000.0
9.75 percent, 1993	142,337,000.00	142,337,000.0
9.75 percent, 1994	142,336,000.00	142,336,000.0
9.75 percent, 1995	481,613,000.00	481,613,000.0
10.375 percent, 1989	· · · · · · · · · · · · · · · · · · ·	308,802,000.0
10.375 percent, 1990	_	177,111,000.0
10.375 percent, 1991		101,503,000.0
10.375 percent, 1992		101,503,000.0
10.375 percent, 1993		101,503,000.0
10.375 percent, 1996		101,504,000.0
10.375 percent, 1997		101,504,000.0
10.375 percent, 1998	_	101,504,000.0
10.375 percent, 1999		152,904,000.0
10.375 percent, 2000	_	389,459,000.0
10.75 percent, 1987	187,593,000.00	
10.75 percent, 1988	287,956,000.00	
10.75 percent, 1989	287,956,000.00	_
10.75 percent, 1990	287,956,000.00	212,348,000.0
10.75 percent, 1991	287,956,000.00	287,956,000.0
10.75 percent, 1992	287,956,000.00	287,956,000.0
10.75 percent, 1993	98,140,000.00	98,140,000.0
10.75 percent, 1996	287,955,000.00	287,955,000.0
10.75 percent, 1997	287,955,000.00	287,955,000.00
10.75 percent, 1998 13.75 percent, 1999	287,955,000.00 236,555,000.00	287,955,000.00 236,555,000.00
<u> </u>		200,000,000.0
Total obligations sold only to the trust funds (special issues)	4,373,587,000.00	5,442,627,000.00
Total investments in public debt obligations /hast:		
Total investments in public-debt obligations (book	4 654 425 049 79	5 702 781 040 56
value¹)	4,654,425,948.78	5,702,781,949.56
ndisbursed balances²	-11,839,211.06	169,868,150.98
otal assets (book value <sup>1</sup> )	4,642,586,737.72	5,872,650,100.54
Par value plus unamortized premium or less discount outstanding	7,072,000,737.72	J,012,030,100.32

<sup>&#</sup>x27;Par value, plus unamortized premium or less discount outstanding.

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.

<sup>\*</sup>Negative figure represented an extension of credit against securities to be redeemed within the following few days.

The amount of securities acquired during fiscal year 1985 exceeded the amount redeemed by \$1,048 million. New securities with a total par value of \$22,873 million were acquired during the fiscal year through the investment of receipts and the reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the fiscal year was \$21,825 million. Included in these amounts are \$19,986 million in certificates of indebtedness that were acquired, and \$19,716 million in certificates of indebtedness that were redeemed.

As described in the previous subsection, a delay in increasing the Federal debt limit in 1985 resulted in the redemption of bonds, in order to pay benefits on time, and a delay in the investment of tax receipts. The effects on the DI Trust Fund in September 1985 were a redemption of \$860 million in 10.375-percent bonds and a delay in investing \$205 million in tax receipts until after September. As in the case of the OASI Trust Fund, the adverse consequences of these effects have since been corrected.<sup>1</sup>

The effective annual rate of interest earned by the assets of the DI Trust Fund during the 12 months ending on June 30, 1985, was 10.9 percent. The interest rate on public-debt obligations issued for purchase by the trust fund in June 1985 was 10.375 percent, payable semiannually.

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.

Only \$226 million of the \$860 million in bonds redeemed was restored by subsequent legislation; \$634 million would have been redeemed under normal procedures by the time that the bonds were restored, even in the absence of debt-limit problems.

#### V. ACTUARIAL ESTIMATES

Section 201(c)(2) of the Social Security Act requires the Board of Trustees to report annually to the Congress on the operations and status of the OASI and DI Trust Funds during the preceding fiscal year and on the expected operations and status of those trust funds during the ensuing 5 fiscal years. Such information for the fiscal year that ended September 30, 1985, is presented in the preceding section of this report. Estimates of the operations and status of the trust funds during fiscal years 1986-90 are presented in this section. Similar estimates for calendar years 1986-90 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 and amounts owed to other trust funds, expressed as a percentage of the outgo during the year. 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 period (25 years) and the long-range period (75 years), each period commencing with the calendar year of issuance of the report. The statement of the long-range actuarial status has customarily included the actuarial status during the second and third 25-year subperiods of the long-range projection period. Statements of the current actuarial status are presented in this section. The methods used to estimate the short-range operations of the trust funds and the actuarial status are described in Appendix A.

Basic to the discussion of the actuarial status are the concepts of "income rate" and "cost rate," each of which is expressed as a percentage of taxable payroll. The OASDI taxable payroll consists of the total earnings which are subject to OASDI taxes, adjusted to include, after 1982, deemed wages based on military service, and to reflect the lower effective tax rates (as compared to the combined employeeemployer rate) which apply to tips and to multiple-employer "excess wages," and which did apply, before 1984, to net earnings from selfemployment. Because the taxable payroll reflects these adjustments, the income rate can be defined to be the sum of the OASDI combined employee-employer contribution rate (or the payroll-tax rate) scheduled in the law and the rate of income from taxation of benefits (which is in turn expressed as a percentage of taxable payroll). As such, it excludes reimbursements from the general fund of the Treasury for the costs associated with special monthly payments to certain uninsured persons who attained age 72 before 1968 and who have fewer than 3 quarters of coverage, transfers under the interfund borrowing provisions, and net investment income. The cost rate is the ratio of the cost (or outgo or disbursements) of the program to the taxable payroll. In this context, the

outgo is defined to include benefit payments, special monthly payments to certain uninsured persons who have 3 or more quarters of coverage (and whose payments are therefore not reimbursable from the general fund of the Treasury), administrative expenses, net transfers from the trust funds to the Railroad Retirement program under the financial-interchange provisions, and payments for vocational rehabilitation services for disabled beneficiaries; it excludes special monthly payments to certain uninsured persons whose payments are reimbursable from the general fund of the Treasury (as described above), and transfers under the interfund borrowing provisions. For any year, the income rate minus the cost rate is referred to as the "balance" for the year.

The actuarial status of the trust funds is often summarized by the actuarial balance, which is the difference between the appropriate estimated average income rate and the estimated average cost rate (or, equivalently, the average of the appropriate annual balances). If the actuarial balance is positive, the program is said to have an actuarial surplus, and if negative, an actuarial deficit. Such a deficit, if it exists, is a warning that, unless the projected trends turn out to be too pessimistic, changes in the program's financing or benefit provisions will be needed in the future.

The concept of actuarial balance must be used with caution. The use of a single measure to describe the status of the program over a period of many years may mask adverse patterns within that period or problems which emerge soon thereafter. The addition or deletion of a few years to the time period could change a surplus into a deficit, or vice versa. In addition, while early deficits followed by later surpluses could result in a positive actuarial balance, the trust fund could be depleted before the annual surpluses occur. Conversely, while early surpluses followed by later deficits could result in a positive actuarial balance, the trust fund that would accumulate in the early years could eventually be depleted at some point beyond the end of the projection period, leaving the program unable to pay benefits at that time. Thus, it is also important to note the year-by-year patterns of income and outgo.

Related to the concept of actuarial balance is that of "close actuarial balance." The program is said to be in close actuarial balance for the long-range period if the estimated average income rate is between 95 percent and 105 percent of the estimated average cost rate.

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

## A. ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

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

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

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

#### Economic assumptions

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

TABLE 10.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2060

Calendar year	Average and	nual percentage incr	ease in			Average
	Average wages in coverec endar year Real GNP <sup>1</sup> employmen		Consumer Price Index²	Real-wage differential <sup>a</sup> (percent)	Average annual in- terest rate <sup>4</sup> (percent)	annua unemploy ment rate (percent
Past experience:				* ******		
1960-64	4.0	3.4	1.3	2.1	3.7	5.7
1965-69	4.4	5.4	3.4	2.0	5.2	3.8
1970-74	2.8	6.3	6.1		6.7	5.4
1975	-1.2	6.7	9.1	-2.5	7.4	8.9
1976	5.4	8.5	5.7	2.8	7.1	7.
1977	5.5	7.2	6.5	7	7.1	7.
1978	5.0	9.6	7.6	2.0	8.2	6.
1979	2.8	9.2	11.4	-2.2	9.1	5.0
1980	3	•9.1	13.5	•-4.4	11.0	7.
1981	2.5	•9.3	10.3	<b>•</b> −1.0	13.3	7.
1982	-2.1	•6.5	6.0	•.5	12.8	9.
1983	3.7	44.9	3.0	41.9	11.0	9.
1984	6.8	•5.1	3.4	41.7	12.4	7.

TABLE 10.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2060 (Cont.)

	Average and	nual percentage incr	ease in—		Average	Average annual	
Calendar year	Real GNP1	Average wages in covered employment	Consumer Price Index <sup>2</sup>	Real-wage differential <sup>a</sup> (percent)	annual in- terest rate <sup>4</sup> (percent)	unemploy- ment rates (percent)	
Alternative I:							
1985	2.6	4.2	3.5	0.7	10.8	7.2	
1986	4.2	4.9	2.4	2.5	8.1	6.6	
1987	4.2	5.5	3.2	2.3	7.5	6.4	
1988	3.9	5.3	3.2	2.1	7.1	6.1	
1989	4.0	5.5	2.8	2.7	6.9	5.8	
1990	4.0	5.1	2.5	2.6	6.3	5.4	
1991	3.6	4.7	2.1	2.6	5.6	5.1	
1000	3.1	4.5	2.0	2.5	5.0	5.0	
1992	3.1	4.3	2.0	2.3	4.8	4.9	
1993			2.0	2.4	4.9	4.9	
1994	3.1	4.4		2.3	5.0	4.9	
1995	3.1	4.3	2.0				
2000	3.7	4.6	2.0	2.6	5.0	5.0	
2010 & later	73.0	4.5	2.0	2.5	5.0	5.0	
Alternative II-A:				_			
1985	2.5	4.0	3.5	.5	10.8	7.2	
1986	3.7	4.9	2.9	2.0	8.1	6.7	
1987	3.6	5.7	3.9	1.8	7.8	6.6	
1988	3.4	5.3	3.7	1.6	7.6	6.3	
1989	3.5	5.5	3.3	2.2	7.4	6.0	
1990	3.5	5.2	3.0	2.1	6.8	5.7	
	3.1	5.1	3.0	2.1	6.2	5.5	
1991	2.8	5.1	3.0	2.1	5.8	5.5	
1992					5.6	5.4	
1993	2.7	4.8	3.0	1.8			
1994	2.7	4.8	3.0	1.8	5.6	5.4	
1995	2.7	4.9	3.0	1.9	5.6	5.4	
2000	2.9	5.1	3.0	2.1	5.5	5.5	
2010 & later	72.4	5.0	3.0	2.0	5.5	5.5	
Alternative II-B:							
1985	2.5	3.9	3.5	.3	10.8	7.2	
1986	2.9	4.7	3.2	1.5	8.2	6.9	
1987	2.8	5.7	4.4	1.3	8.0	7.0	
1988	2.6	5.4	4.4	1.0	8.0	7.1	
1989	3.1	6.8	4.9	1.9	8.3	6.8	
1990	3.0	6.3	4.6	1.6	8.1	6.5	
	2.9	5.8	4.1	1.6	7.6	6.3	
1991			4.0	1.7	7.0	6.1	
1992	2.7	5.7					
1993	2.5	5.5	4.0	1.5	6.6	5.9	
1994	2.4	5.5	4.0	1.5	6.4	5.9	
1995	2.3	5.4	4.0	1.4	6.2	5.8	
2000	2.4	5.6	4.0	1.6	6.0	6.0	
2010 & later	72.0	5.5	4.0	1.5	6.0	6.0	
Alternative III:							
1985	2.4	3.7	3.5	.2	10.8	7.2	
1986	2.5	4.9	4.2	.7	8.2	7.0	
1987	.8	6.0	5.8	.2	8.6	7.4	
1988	.ĭ	4.0	5.1	-1.1	8.8	8.5	
1989	3.5	7.8	5.3	2.5	8.9	7.8	
				-1.6	8.6	8.7	
1990	8	4.2	5.7		8.2	8.2	
1991	3.4	7.2	4.7	2.5			
1992	2.2	5.9	5.0	.9 .7	7.9	7.7	
1993	2.2	5.7	5.0	.7	7.4	7.4	
1994	2.2	5.9	5.0	.9	7.1	7.1	
1995	2.1	5.9	5.0	.9	6.8	6.8	
2000	1.7	6.1	5.0	1.1	6.5	7.0	
2010 & later	71.4	6.0	5.0	1.0	6.5	7.0	

<sup>&#</sup>x27;The real GNP (gross national product) is the total output of goods and services, expressed in 1972 dollars.

This value is for 2010. The annual percentage increase in real GNP is assumed to continue to change after 2010 for each alternative to reflect the dependence of labor force growth on the size and age-sex distribution of the population. The increases for 2060 are 3.2, 2.3, 1.9, and 0.7 percent for alternatives I, II-A, II-B, and III, respectively.

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

<sup>\*</sup>The average annual interest rate is the average of the nominal interest rates, compounded semiannually, for special public-debt obligations issuable to the trust funds in each of the 12 months of the year.

<sup>\*</sup>Through 1995, the rates shown are crude civilian unemployment rates. After 1995, the rates are total rates (including military personnel), adjusted by age and sex based on the estimated total labor force on July 1, 1985.

Preliminary.

Alternatives I, II-A, II-B, and III present a range of generally consistent sets of economic assumptions which have been designed to encompass most of the possibilities that might be encountered. Alternative I presents the most optimistic outlook, with robust economic growth and low inflation. The intermediate sets of assumptions—alternatives II-A and II-B—bracket the current consensus view of moderate growth and inflation for the first few years; thereafter, alternative II-A continues to reflect more robust economic growth than does alternative II-B. Alternative III is a pessimistic forecast in which the economy experiences two recessions during the next 10 years. The depths of 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 of business cycles and generally weak economic growth on the OASDI program.

For alternatives I, II-A, and II-B, the economic recovery that started in the first quarter of 1983 is assumed to continue through the second quarter of 1987. The strength of the recovery, as measured by growth in real GNP, is assumed to be stronger for alternative I than for alternative II-A. Similarly, growth for alternative II-A is stronger than that for alternative II-B. For alternative III, the recovery is assumed to fade during the first quarter of 1987; a recession is assumed to occur during the remainder of the year and the first quarter of 1988.

After 1986, and continuing through the end of the decade, steady growth in real GNP is assumed to continue, for alternatives I and II-A. For alternative II-B, the economy is assumed to experience a growth recession during the second half of 1987, with a recovery and steady growth thereafter. For alternative III, after 5 quarters of recovery, a second recession is assumed to begin in the third quarter of 1989, lasting through the second quarter of 1990. For alternatives I, II-A, and II-B, the unemployment rate is assumed to decline gradually toward its ultimate level. For alternative III, the unemployment rate is assumed to reach its ultimate level after the recovery which is assumed to follow the second recession. After the early 1990s, the projected rates of growth in real GNP, for all four alternatives, are determined by the assumed rates of growth in employment, average hours worked, and productivity.

Assumed values for the other economic variables are consistent with the assumed rates of real GNP growth. For alternative II-A, the average annual unemployment rate declines from 7.2 percent in 1985 to its ultimate level of 5.5 percent (age-sex adjusted to the 1985 labor force) by 2000. The annual rate of increase in average wages in covered employment is assumed to rise from the assumed 4.0-percent increase in 1985 to a 5.7-percent increase in 1987, and thereafter to decline gradually to its ultimate rate of 5.0 percent by 2010. The annual rate of increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is assumed to rise from 2.9 percent in 1986 to 3.9 percent in 1987, and then to decline to an ultimate rate of 3.0 percent in 1990. The CPI-W (hereinafter denoted as "CPI") is used to determine automatic cost-of-living benefit increases under the OASDI program. The real-wage differential (i.e., the difference between the annual rates of increase

in average wages in covered employment and in the CPI) is assumed to remain between 1.6 and 2.2 percentage points after 1985, reaching its ultimate value of 2.0 percentage points by 2010. The annual interest rate is assumed to reach its ultimate value of 5.5 percent by 1996.

For alternative II-B, the average annual unemployment rate declines generally to its ultimate level of 6.0 percent by 2000. The annual rate of increase in average wages in covered employment is assumed to rise from the assumed 3.9-percent increase in 1985 to 6.8 percent in 1989, and then to decline generally to its ultimate rate of 5.5 percent by 2010. The annual rate of increase in the CPI is assumed to rise from 3.2 percent in 1986 to 4.9 percent in 1989, and then to decline to an ultimate rate of 4.0 percent in 1992. The real-wage differential is assumed to remain between 1.0 and 1.9 percentage points after 1985, reaching its ultimate value of 1.5 percentage points by 2010. The annual interest rate is assumed to decline to its ultimate value of 6.0 percent by 1996.

# 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 2.0 children per woman is attained in 2010, after a gradual increase from the 1984 level of 1.83 children per woman. The age-sex-adjusted death rate is assumed to decrease gradually during the entire projection period, with a reduction of 39 percent from the 1984 level by 2060. The resulting life expectancies at birth in 2060 are 77.1 years for men and 84.6 years for women, compared to 71.0 and 78.2 years, respectively, in 1984. Life expectancies at age 65 in 2060 are projected to be 17.8 years for men and 23.2 years for women, compared to 14.4 and 18.6 years, respectively, in 1984. Net immigration is assumed to be 500,000 per year.

For alternative I, the total fertility rate is assumed to reach an ultimate level of 2.3 children per woman in 2010. 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 1984 level being 23 percent by 2060. The resulting life expectancies at birth in 2060 are 74.4 years for men and 81.4 years for women, while at age 65 they are 16.0 and 20.9 years, respectively. Net immigration is assumed to be 700,000 per year.

For alternative III, the total fertility rate is assumed to decrease from the estimated 1984 level to an ultimate level of 1.6 in 2010. 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 1984 level being 60 percent by 2060. The resulting life expectancies at birth in 2060 are 82.1 years for men and 89.5 years for women, while at age 65 they are 21.4 and 27.0 years, respectively. Net immigration is assumed to be 300,000 per year.

TABLE 11.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1940-2060

		Age-sex-adjusted —				
	Total	death rate <sup>2</sup>	At birth		At age 65	
Calendar year	fertility rate	(per 100,000)	Male	Female	Male	Female
Past experience:						
1940	2.23	1,403.5	61.4	65.7	11.9	13.4
1945	2.42	1,248.1	62.9	68.4	12.6	14.4
1950	3.03	1.116.4	65.6	71.1	12.8	15.1
1955	3.50	1.030.3	66.7	72.8	13.1	15.6
1960	3.61	1.024.8	66.7	73.2	12.9	15.9
1965	2.88	1,001.6	66.8	73.8	12.9	16.3
1970	2.43	948.6	67.1	74.9	13.1	17.1
1975	1.77	848.8	68.7	76.6	13.7	18.0
1976	1.74	838.0	69.1	76.8	13.7	18.1
1977	1.80	815.5	69.4	77.2	13.9	18.3
1978	1.76	809.7	69.6	77.3	13.9	18.3
1979	1.82	784.2	70.0	77.7	14.2	18.6
1980	1.85	795.4	69.9	77.5	14.0	18.4
1981	1.83	773.1	70.4	77.9	14.2	18.6
1982	1.83	750.0	70.8	78.2	14.5	18.8
1983	1.81	754.2	70.9	78.2	14.3	18.7
1984	1.83	752.0	71.0	78.2	14.4	18.6
1985	1.86	739.7	71.3	78.4	14.4	18.8
Alternative I:	1.00	700.7	7 1.0	70.4	14.4	10.0
1986	1.88	734.7	71.4	78.5	14.5	18.8
1000	1.95	715.2				
1990			71.8	78.9	14.6	19.0
1995	2.04	694.0	72.2	79.2	14.7	19.2
2000	2.13	677.0	72.5	79.6	14.8	19.4
2010	2.30	656.0	72.9	79.9	15.0	19.6
2020	2.30	638.9	73.2	80.2	15.2	19.9
2030	2.30	622.7	73.5	80.6	15.4	20.1
2040	2.30	607.4	73.8	80.9	15.6	20.4
2050	2.30	592.9	74.1	81.2	15.8	20.6
2060	2.30	579.1	74.4	81.4	16.0	20.9
Alternatives II-A and II-B:	2.00	575.1	, 4.4	01.4	10.0	20.5
1986	1.86	727.4	71.5	78.6	14.5	18.9
	1.89	682.1	72.4			
1990				79.5	14.9	19.4
1995	1.92	635.5	73.3	80.4	15.3	19.9
2000	1.95	604.2	73.9	81.0	15.6	20.3
2010	2.00	572.7	74.6	81.6	16.0	20.8
2020	2.00	547.0	75.1	82.2	16.3	21.3
2030	2.00	522.8	75.6	82.8	16.7	21.8
2040	2.00	500.2	76.1	83.4	17.1	22.2
2050	2.00	478.9	76.6	84.0	17.4	22.7
2060	2.00	458.9	77.1	84.6	17.8	23.2
Iternative III:	2.00	400.0	,,	04.0	17.0	20.2
1986	1.84	720.1	71.6	78.8	14.6	19.0
1990	1.79	650.9	73.0	80.1	15.2	19.8
1995	1.74	584.4	74.3	81.4	15.9	20.7
2000	1.69	541.0	75.3	82.3	16.4	21.3
2010	1.60	486.6	76.5	83.6	17.2	22.3
2020	1.60	440.4	77.6	84.9	18.0	23.2
2030	1.60	399.3	78.8	86.1	18.9	24.2
2040	1.60	362.5	79.9	87.2	19.7	25.1
2050	1.60	329.7	81.0	88.4	20.6	26.0

<sup>&</sup>lt;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 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 2010.

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.

<sup>&</sup>lt;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, 1970, if that population were to experience the death rates by age and sex observed in, or assumed for, the selected year.

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.

#### 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 3.1 percent, effective for December 1985, was announced in October 1985, as described in Appendix C.

The automatic cost-of-living benefit increase for any year is based on the change in the CPI from the third quarter of the previous year through the third quarter of the current year. If the increase in the CPI is less than 3.0 percent, no automatic benefit increase is effective for that year, but the change in the CPI is accumulated and reflected in the benefit increase for the next year. If the combined assets of the OASI and DI Trust Funds, as a percentage of annual expenditures, are below a specified level, the automatic benefit increase is limited to the lesser of the increases in wages or prices. This specified level is 15.0 percent with respect to benefit increases for December of each year, 1984-88, and 20.0 percent thereafter. This "stabilizer" provision has not affected any benefit increases since its enactment into law in 1983, and it would not affect any future increases shown in this report under any of the four sets of assumptions.

The law provides for an automatic increase in the contribution and benefit base, based on the increase in average wages, for the year following a year in which an automatic benefit increase becomes effective. For 1986, the contribution and benefit base was automatically increased to \$42,000.

The exempt amounts under the retirement earnings test are also increased automatically by the increase in average wages, following an automatic benefit increase. An automatic increase in the exempt amount for beneficiaries at ages 65 through 69—from \$7,320 in 1985 to \$7,800 in 1986—was announced in October 1985. Similarly, an automatic increase was announced in the exempt amount for beneficiaries under age 65—from \$5,400 in 1985 to \$5,760 in 1986. Appendix C describes the aforementioned automatic adjustments, as well as the determinations of the following amounts:

- 1. The amount of earnings a worker must have in 1986 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 1986; and

3. The average of total wages reported for calendar year 1984, to be used for indexing earnings of workers who first become eligible for benefits, or who die before such eligibility, in 1986 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 1991 are also shown in Appendix D.

The four alternative sets of economic assumptions described previously result in the general benefit increases and contribution and benefit bases shown in table 12 for each year through 1991. (The actual benefit increase for 1985 and the actual contribution and benefit bases for 1985 and 1986 are also shown as a basis for comparison.)

TABLE 12.—GENERAL BENEFIT INCREASES AND CONTRIBUTION AND BENEFIT BASES, BY ALTERNATIVE, CALENDAR YEARS 1985-91

Calendar year	General b		rease <sup>1</sup> (pe		Contribution and benefit base <sup>2</sup> based on alternation			
	ī	II-A	II-B	(11	I	II-A	II-B	111
1985	3.1	3.1	3.1	3.1	\$39,600	\$39,600	\$39,600	\$39,600
1986	(3)	3.0	3.4	4.5	42,000	42,000	42,000	42,000
1987	5 <u>`</u> 9	4.1	4.5	6.0	42,000	43,800	43,500	43,500
1988	3.1	3.6	4.3	4.9	45,600	45,900	45,300	45,600
1989	(3)	3.2	5.1	5.5	48,000	48,300	47,700	48,300
1990	5.3	3.0	4.5	5.7	48.000	50,700	50,100	50,400
1991	(*)	3.0	4.1	4.6	53,100	53,400	53,400	54,300

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

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

<sup>3</sup>An automatic benefit increase is determined by the percentage increase in the CPI from the third quarter of the year in which a benefit increase last became effective through the third quarter of the current year, provided that such increase is at least 3.0 percent. Based on the alternative I assumptions, benefit increases would not occur for December of 1986, 1989, or 1991 because the assumed applicable increase in the CPI for each year is less than 3.0 percent. The benefit increases for December of 1987, 1990, and 1992 would be based on 2-year increases in the CPI. The absence of automatic benefit increases for December of 1986, 1989, and 1991 would prevent corresponding automatic increases in the contribution and benefit bases, and in the exempt amounts under the retirement earnings test, for 1987, 1990, and 1992, respectively.

The assumption underlying the figures in table 12 were developed before the CPI for February 1986 was released. The actual automatic benefit increase for December 1986 will depend largely on subsequent increases in the CPI from February 1986 through September 1986.