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1990 ANNUAL REPORT OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS

COMMUNICATION

FROM

THE BOARD OF TRUSTEES, THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS

TRANSMITTING

THE 1990 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS, PURSUANT TO 42 U.S.C. 201(c)(2)

APRIL 19, 1990.—Referred to the Committee on Ways and Means and ordered to be printed

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LETTER OF TRANSMITTAL

BOARD OF TRUSTEES OF THE
FEDERAL OLD-AGE AND SURVIVORS INSURANCE
AND DISABILITY INSURANCE TRUST FUNDS,
Washington, D.C., April 18, 1990

HONORABLE THOMAS S. FOLEY
Speaker of the House of Representatives
Washington, D.C.

HONORABLE DAN QUAYLE
President of the Senate
Washington, D.C.

GENTLEMEN: We have the honor of transmitting to you the 1990 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund (the 50th such report), in compliance with section 201(c)(2) of the Social Security Act.

Respectfully,

Nicholas F. Brady

NICHOLAS F. BRADY, *Secretary of the Treasury, and Managing Trustee of the Trust Funds.*

Elizabeth Dole

ELIZABETH DOLE, *Secretary of Labor, and Trustee.*

Louis W. Sullivan M.D.

LOUIS W. SULLIVAN, M.D., *Secretary of Health and Human Services, and Trustee.*

PUBLIC TRUSTEE, *Vacant.*

PUBLIC TRUSTEE, *Vacant.*

Gwendolyn S. King

GWENDOLYN S. KING *Commissioner of Social Security, and Secretary, Board of Trustees.*

1990 ANNUAL REPORT OF
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THE 1990 ANNUAL REPORT OF THE BOARD,
PURSUANT TO
SECTION 201(c)(2) OF THE SOCIAL SECURITY ACT,
AS AMENDED

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1990 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS

SUMMARY

Highlights

During calendar year 1989, the combined assets of the Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) Trust Funds increased by $53.2 billion, reflecting, in part, the continuing growth in the economy. This growth in assets consisted of increases of $52.2 billion in the OASI Trust Fund and $1.0 billion in the DI Trust Fund. Both of these increases were significantly larger than the corresponding increases in the previous calendar year, which amounted to $40.7 billion and $0.2 billion, for the OASI and DI Trust Funds, respectively.

The trust funds are expected to continue growing for many years into the future. Based on intermediate assumptions, the combined trust funds are estimated to reach a level of about 4 to 6 times annual outgo in the next 20 to 30 years. Even if future experience is very adverse, the combined funds are estimated to increase to nearly 2 times annual outgo during the next 15 to 20 years. However, under such adverse conditions, the assets of the DI Trust Fund could decline to such a low level that financial problems with that fund would occur before the end of this decade. Thus, the DI program needs careful monitoring in the short range.

The long-range 75-year estimates indicate that, under the intermediate assumptions, the OASDI program will experience about 25 to 30 years of positive annual balances, with continuing annual deficits thereafter. Based on the intermediate alternative II-A assumptions, the positive balances in the first part of the 75-year projection period nearly offset the later deficits, so that the program, as a whole, has an actuarial deficit of 0.31 percent of taxable payroll. Based on the intermediate alternative II-B assumptions, the OASDI program has larger future deficits that yield an actuarial deficit of 0.91 percent of taxable payroll, which is 0.21 percent larger than in the 1989 report. The deficit of 0.91 percent results from an estimated income rate of 13.04 percent of taxable payroll over the 75-year projection period (including beginning trust fund balances), which is 93.5 percent of the estimated 13.95-percent cost rate. The program has traditionally been considered to be adequately financed over the next 75 years when the long-range income rate is between 95 percent and 105 percent of the long-range cost rate. However, because the estimates based on the same assumptions indicate that the program is solvent for the next 20 to 30 years, the Trustees do not recommend that any immediate action be taken to change either the financing or the benefit provisions for the OASDI program. The Board does recommend continued extensive study of possible ways to address the long-range deficits, as well as the implications of the expected large buildup of the trust funds. The current Advisory Council on Social Security, which is mentioned below, is examining these issues and is scheduled to report its recommendations in January 1991.

During the first part of the long-range projection period, the combined OASI and DI Trust Funds are expected to accumulate rapidly to a peak fund ratio of 476 percent of annual outgo in the year 2014, based on the alternative II-B assumptions. Thereafter, the fund ratio is estimated to decline until the funds are exhausted in 2043, or 3 years earlier than estimated in last year's report. Thus, according to the alternative II-B estimates, the OASDI program will have enough funds to cover expenditures for more than 50 years into the future.

For OASI and DI, separately, the long-range actuarial balances, based on the alternative II-A assumptions, are deficits of 0.15 percent and 0.16 percent of taxable payroll, respectively. Based on the alternative II-B assumptions, the programs have actuarial deficits which are 0.69 percent and 0.22 percent of taxable payroll, respectively. Because of the size of the DI deficit, relative to its cost rate, the DI program needs careful monitoring in the long-range period, as well as in the short-range period.

The appointment of an Advisory Council on Social Security was announced by the Secretary of Health and Human Services in June 1989. Under the Social Security Act, the Advisory Council is to study and review the status of the Social Security cash benefit and Medicare programs. The Council is scheduled to submit its recommendations to the Secretary Of Health and Human Services in January 1991.

1. Program Description

The OASDI program consists of two separate parts which pay monthly benefits to workers and their families:

(1) Old-Age and Survivors Insurance (OASI) pays benefits after a worker retires and to survivors after a worker dies.

(2) Disability Insurance (DI) pays benefits after a worker becomes disabled.

The Board of Trustees of the trust funds is required by law to report annually to the Congress on the financial condition of the funds and on estimated future results. The Board is composed of five members, three of whom serve in an ex officio capacity: the Secretaries of the Treasury, Labor, and Health and Human Services. The other two positions, for which nominations are pending, are for members of the public.

Most OASDI revenue consists of contributions paid by employees, their employers, and the self-employed. (Additional contributions are paid into a separate trust fund for the Hospital Insurance part of Medicare. This summary focuses on OASDI and does not discuss Medicare.) The contribution rates are established by law. Contributions are paid on earnings not exceeding the earnings base—$51,300 in 1990.

The earnings base will rise in the future as average wages increase. The current and scheduled future OASI and DI contribution rates for employees and employers, each, are shown below (as percentages):

Year	OASI	DI	Total
1990-99	5.60	0.60	6.20
2000 and later	5.49	.71	6.20

Since 1984, a portion (not more than one-half) of OASDI benefits received by higher income beneficiaries is subject to Federal income taxation. The revenues collected as a result of this provision are transferred from the general fund of the Treasury to the trust funds.

The outgo of the OASI and DI Trust Funds consists of benefit payments and administrative expenses. Trust fund assets may not be used for any other purposes.

During periods when outgo temporarily exceeds income, trust fund assets are used to meet the shortfall. In the event of recurring shortfalls, the trust funds can allow time for legislation to be enacted to restore balance to the program. The assets of the trust funds are invested in U.S. Government securities bearing rates of interest similar to those for long-term securities issued to the general public.

2. Recent Results

During 1989, about 132 million workers made contributions to the OASDI program. At the end of September 1989, 39.0 million persons were receiving monthly benefits under the OASDI program. Administrative expenses represented about 1.1 percent of benefit payments in fiscal year 1989.

Income to the OASI and DI Trust Funds in fiscal year 1989 was \$284.9 billion, while outgo was \$232.5 billion. Thus, the assets of the combined funds increased by \$52.4 billion during the fiscal year. A summary of the OASDI financial operations in fiscal year 1989 is shown below (in billions):

Trust fund assets at end of fiscal year 1988	$104.2
Income during year:	
Contributions	270.8
Revenue from taxation of benefits	3.8
Net interest	10.3
Total income	284.9
Outgo during year:	
Benefit payments	227.1
Administrative expenses	2.4
Transfer to Railroad Retirement program	2.9
Total outgo	232.5
Net increase in assets during year	52.4
Trust fund assets at end of fiscal year 1989	156.7

Note: Totals may not equal sums of components, due to rounding.

3. Actuarial Estimates

The annual report contains 75-year estimates of each fund's financial operations and status. Because precise prediction of the future is impossible, alternative sets of assumptions, representing a reasonable range of possible future experience, are used to make short-range and long-range estimates. Future experience could, however, fall outside the range indicated by these assumptions.

Future OASDI income and outgo will depend on a variety of economic and demographic factors, including economic growth, inflation, unemployment, fertility, and mortality. These factors affect the levels of workers' earnings and OASDI benefits, as well as the numbers of people making contributions and receiving benefits.

The estimates in this report were prepared using four alternative sets of assumptions. Two sets—alternatives II-A and II-B—are designated "intermediate." Both intermediate sets share the same demographic assumptions, but differ with respect to economic assumptions; somewhat more robust economic growth is assumed for alternative II-A than for alternative II-B. One set—alternative I—is designated as "optimistic," and another—alternative III—is designated as "pessimistic."

No single measure is used to assess the actuarial status of the OASDI funds. Short-range measures usually focus on the adequacy of reserves available to pay benefits. Long-range measures usually focus on the balance between income and outgo during the projection period as well as the adequacy of the reserves.

The *contingency fund ratio* is the usual measure of the OASDI program's ability to pay benefits on time in the near future. This ratio is the amount in the trust funds at the beginning of the year, including advance tax transfers for January, divided by that year's expenditures. Thus, if the trust fund ratio is 50 percent, the amount in the fund represents about 6 months' outgo. A ratio of at least 8 to 9 percent is required to pay benefits at the beginning of each month. At the beginning of 1990, the fund ratio for OASDI was about 74 percent.

In analyzing the actuarial status of OASDI for the next 75 years, several different measures are commonly used. The annual *income rate* is the combined OASDI employee-employer contribution rate scheduled in the law, plus the income from taxation of benefits, expressed as a percentage of taxable payroll. The annual *cost rate* is the annual outgo expressed as a percentage of taxable payroll. The annual balance, which is the difference between the annual income rate and the annual cost rate, measures the adequacy of funding in each year of the long-range projection period. If the difference is negative, the annual balance is a deficit. The level and pattern of annual positive balances and annual deficits during various periods of time within the next 75 years measure the financial strength of the program over such periods.

If a trust fund becomes exhausted during the projection period, the year in which the exhaustion occurs is an important measure of the financial condition of the fund.

Summarized income and cost rates over the 75-year projection period can be compared directly to measure the adequacy of the program's overall level of financing during the entire long-range period. The summarized income and cost rates reflect the full effect of interest. In addition, the trust fund balance at the beginning of the projection period, expressed as a percentage of taxable payroll, is included in the summarized income rate for the 75-year period.

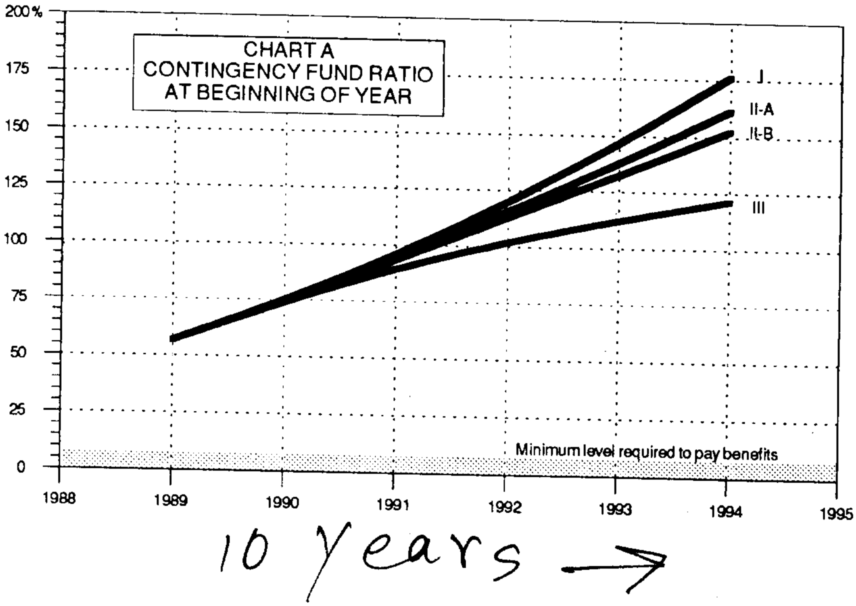
The *actuarial balance* for the 75-year long-range projection period, is the difference between the summarized estimated income rate and the summarized estimated cost rate. If this actuarial balance is negative, the program is said to have an actuarial deficit. Such a deficit is a warning that future changes may be needed in the program's financing or benefit provisions, although it does not present a complete picture without the other measures of financing discussed here.

4. Short-Range Financing (1990-94)

Estimates for the next 5 years are used to assess the adequacy of OASDI financing in the short range. In this period, the numbers of persons receiving OASDI benefits can be estimated fairly accurately. Changes in the national economy, however, which are difficult to predict, can have major effects on income and outgo.

The actuarial estimates shown in the 1990 report indicate that the combined assets of the OASI and DI Trust Funds will be sufficient to pay OASDI benefits on time throughout the 5-year period and for many years thereafter, based on all four sets of assumptions. The contingency fund ratio for the combined funds is estimated to reach at least 150 percent by the beginning of 1994 under both alternatives II-A and II-B. In addition, the estimates based on alternatives I, II-A, and II-B indicate that the OASI and DI programs, separately, can operate satisfactorily for many years. During the next 9 years, however, if experience is very adverse, such as under alternative III, the assets of the DI Trust Fund could decline to such a low level that financial problems would occur.

Chart A shows the OASDI contingency fund ratio for 1989 and the estimated OASDI ratios for 1990-94, on the basis of all four sets of assumptions. The fund ratios for the combined trust funds are estimated to increase each year.



5. Long-Range Financing (1990-2064)

Long-Range 75-year estimates for OASDI, although sensitive to variations in the assumptions, indicate the trend and general range of the program's future financial status. During this long-range period, income and outgo are greatly affected by demographic, as well as economic, conditions. Most of the beneficiaries during the next 75 years have already been born, so that their numbers are projected mainly from the present population. The numbers of workers involved in these projections, however, depend largely on future birth rates, which are subject to more variability.

Several important demographic trends are anticipated, which will raise the proportion of the aged in the population during the next 75 years. First, because of the large number of persons born in the two decades after World War II, rapid growth is expected in the aged population after the turn of the century. Second, assumed declines in death rates would increase the numbers of aged persons more gradually, but on a permanent basis. At the same time, birth rates, which began to decline in the 1960s and are assumed to remain relatively low in the future, would hold down the numbers of young people.

Chart B shows the long-range trend in the number of covered workers per OASDI beneficiary. (The term "beneficiary" includes not only retired workers, but also disabled workers, spouses, children, and survivor beneficiaries.) Based on the intermediate assumptions, this ratio is estimated to decline gradually from 3.4 in 1989 to 3.0 in 2010. From 2010 to 2030, the estimated ratio falls rapidly to 2.0 as the number of beneficiaries increases more rapidly than the number of covered workers. After 2030, the ratio is estimated to decline gradually.

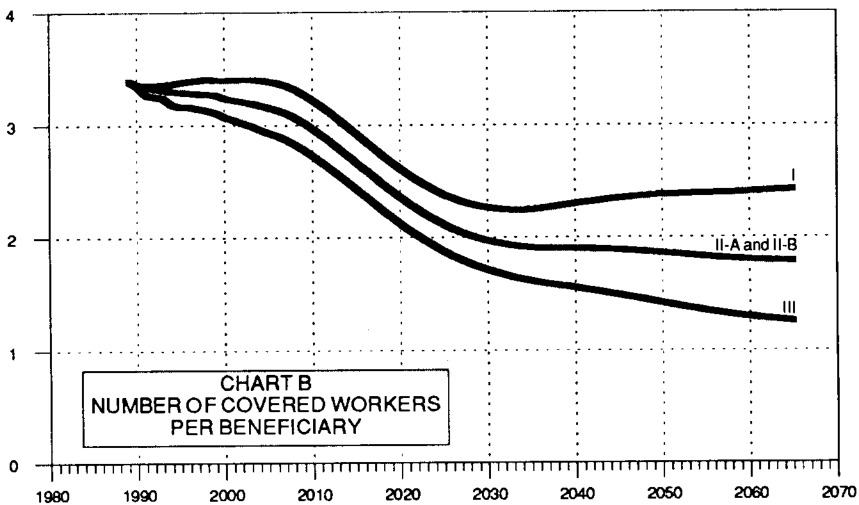


CHART B
NUMBER OF COVERED WORKERS
PER BENEFICIARY

Chart C shows the estimated OASDI income and cost rates for the long-range projection period. During the first three decades of this period, the estimates indicate that the income rate will generally exceed the cost rate, resulting in substantial positive balances each year. Beginning about 2020, the reverse is true for all but the optimistic assumptions, with the cost rate exceeding the income rate, thus resulting in substantial deficits. These positive balances and deficits do not reflect interest earnings, which result in trust fund growth continuing for about 10 years after the first actuarial deficits occur. The cost rate is estimated to increase rapidly after the first half of the 75-year projection period, primarily because the number of beneficiaries is projected to increase more rapidly than the number of covered workers.

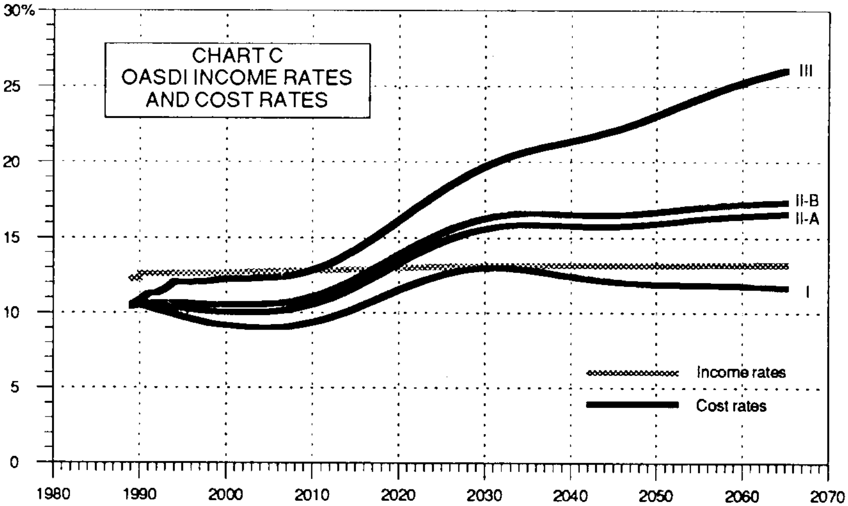
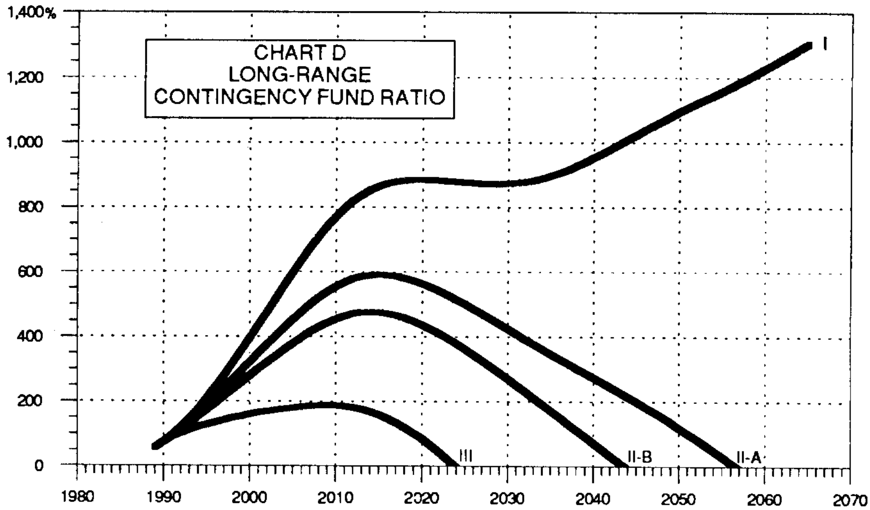


Chart D shows the projected OASDI contingency fund ratios for the 75-year period. The ratio rises steadily and reaches 476 percent in 2014, based on the intermediate alternative II-B assumptions; then the ratio declines until the combined funds are exhausted in 2043. The importance of the trust funds' accumulation of reserves is emphasized by Chart D. As the chart shows, the build-up in the reserves will be needed later on to pay benefits to the increasing numbers of retired persons who were born in the high birth-rate years from the mid-1940s to the mid-1960s.



The table below presents a comparison of the annual income and cost rates for the 75-year long-range projection period, based on the four sets of assumptions. The figures are expressed as percentages of taxable payroll.

Assumptions	Income rate	Cost rate	Actuarial balance
Optimistic I	12.91	11.15	1.76
Intermediate II-A	13.01	13.32	-.31
Intermediate II-B	13.04	13.95	-.91
Pessimistic III	13.19	17.06	-3.87

Note: Income rate, cost rate, and actuarial balance are defined in the text.

The long-range OASDI actuarial deficit of 0.91 percent of taxable payroll, based on the intermediate II-B assumptions, results from an income rate of 13.04 percent of taxable payroll over the 75-year period (including beginning trust fund balances) and a cost rate of 13.95 percent over the period. In the absence of other changes, the long-range actuarial balance will tend to worsen slowly in future annual reports, as the valuation period moves forward and additional distant years of deficit are included in the valuation. The actuarial deficits in the later years of the 75-year projection period are caused primarily by the demographic trends described above, in combination with a flat contribution rate schedule.

I. THE BOARD OF TRUSTEES

The Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund are held by the Board of Trustees under the authority of section 201(c)(1) of the Social Security Act. The Board is composed of five members, three of whom serve in an ex officio capacity: the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. The other two positions, for which nominations are pending, are for members of the public.

By law, the Secretary of the Treasury is designated as the Managing Trustee, and the Commissioner of Social Security is designated as the Secretary of the Board. The Board of Trustees reports to the Congress each year on the operations and status of the trust funds, in compliance with section 201(c)(2) of the Social Security Act. This annual report, for 1990, is the 50th such report.

II. ADVISORY COUNCIL ON SOCIAL SECURITY

The Secretary of Health and Human Services on June 19, 1989, announced the appointment of an Advisory Council on Social Security under the provisions of section 706 of the Social Security Act. The Council consists of a Chair and 12 members representing employers and employees, self-employed persons, and the public.

Under the law, the Social Security Advisory Council is charged with making a comprehensive study of the status of the Social Security cash benefit and Medicare programs. This study is to include an examination of the financial status of the trust funds in relation to the long-term commitments of the programs, benefit levels, the scope of coverage, and other aspects of the programs, including their impact on public assistance.

The Council is scheduled to submit its final recommendations to the Secretary of Health and Human Services in January 1991. The Council's final report will then be transmitted by the Secretary to the Congress and to the Board of Trustees of each of the trust funds. The Council's recommendations with respect to the old-age and survivors insurance and disability insurance program will be included in a later annual report of the Board of Trustees.

III. SOCIAL SECURITY AMENDMENTS SINCE THE 1989 REPORT

Since the 1989 Annual Report was transmitted to the Congress on April 24, 1989, only one law affecting the OASDI program in a significant way has been enacted. The Omnibus Budget Reconciliation Act of 1989 (Public Law 101-239, enacted into law on December 19, 1989) included a number of provisions affecting the OASDI program. The more important legislative changes, from an actuarial standpoint, are described below.

1. Extends for 1 year the provision that enables disability beneficiaries, whose benefits would otherwise be terminated due to a determination of medical cessation of disability, to have their benefits temporarily continued while they are appealing that cessation decision. Under the provision, benefits may be continued until an administrative law judge makes a decision on the appeal. The provision was extended to include determinations made prior to January 1, 1991. However, benefits may not be continued under this provision beyond June 1991.
2. Excludes catastrophic health insurance "maintenance of effort" payments in 1989 and 1990 from average wage calculations and from coverage and taxation. These payments were refunds to employees for the value of certain health insurance protection that duplicated benefits under the catastrophic health insurance provisions. (The provision is moot for 1990, however, since the Medicare Catastrophic Coverage Repeal Act of 1989 repealed the "maintenance of effort" requirements with respect to duplicate benefits after 1989.)
3. Eliminates the "carryover" reduction in retirement and disability benefits due to receipt of reduced widow(er)'s benefits prior to age 62. (Any reduction in the retirement benefit due to receipt of retirement benefits before the normal retirement age was computed independently based on age at first receipt of retirement benefits.) The provision is effective prospectively—for persons reaching age 62 in 1990 and later and, in the case of disability, becoming disabled in 1990 and later.
4. Provides for including certain "deferred compensation" (e.g., income-tax-deferred contributions under Section 401(k) of the Internal Revenue Code) in calculating average wages for indexing purposes under the Social Security program. Although deferred compensation was generally covered under Social Security beginning in 1984, it has not been reflected in the determination of the average wage index which is used to adjust various program amounts. Specifically, the law provides that beginning with the measurement of average wages for 1990, deferred compensation will be included. Then, beginning with program amounts for 1993 (which will be determined by using the percentage increase in average wages from 1990 to 1991), the year-to-year growth in average wages, including deferred compensation, will be used to automatically adjust those program amounts that are indexed to average wages. In addition, special transitional provisions apply for determining the contribution and

benefit base for the years 1990-92. In determining the base for 1990, the average wage increase from 1987 to 1988 is deemed to be 2 percentage points higher than the measured increase (which excludes the effect of deferred compensation). This resulted in a base of $51,300 for 1990, instead of the $50,400 amount determined before the change. The resulting additional 2-percent increase in the 1990 base was intended to represent the approximate cumulative effect of deferred compensation on the average wage since 1983. The base for 1991 will continue to reflect the 2-percent higher level. The base for 1992 will reflect the actual cumulative effect of deferred compensation, so that any difference from the 2-percent higher level will be reflected in the change from the 1991 base to the 1992 base.

5. Eliminates the special dependency tests for child's insurance benefits in the case of children who are adopted before age 18 by retired or disabled-worker beneficiaries so that these children are treated the same as natural children. The provision is effective for benefits payable for months after December 1989, based on applications filed on or after January 1, 1990.
6. Generally extends through September 30, 1990, certain exclusions from Social Security coverage of employer payments to, and benefits provided by, qualified employer-provided educational assistance programs and group legal services plans.

Detailed information regarding these changes and other less significant changes can be found in documents prepared by and for the Congress. The actuarial estimates shown in this report reflect the anticipated effects of these changes.

IV. BASIS FOR TRUST FUND RECEIPTS AND EXPENDITURES

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. Beginning January 1, 1987, these appropriated amounts include contributions paid by, or on behalf of, workers employed by State and local governments and by such employers, with respect to wages covered under the program through State agreements. (Prior to 1987, such contributions were collected by the State and deposited directly into the trust funds.) 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. (Prior to 1988, employers were required to pay contributions on only that part of tip income deemed to be wages under the Federal minimum- wage law.) 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 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 maximum amount of earnings on which contributions are payable in a year, and 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 rates, or tax rates, applicable in each calendar year, and the allocation of the rates between the two trust funds, are shown in table 1. For 1991 and later, the rates shown are those scheduled in present law. The contribution and benefit bases are also shown in table 1. The bases for 1975-78 were determined under the automatic-adjustment provisions in section 230 of the Social Security Act. The bases for 1979-81 were specified in the law, as amended in 1977. The bases for 1982-90 were again determined under the automatic- adjustment provisions, as will be the bases for 1991 and later. (The total contribution rates for the OASDI and Hospital Insurance programs combined, and for each program separately, are shown in table E1, Appendix E.)

TABLE 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[1]	51,300	6.200	5.600	.600	12.4000	11.2000	1.2000
Rates scheduled in present law:							
1991-99	(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

[1] In 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.

[2] Subject to automatic adjustment.

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. This provision reduces contributions for those self-employed persons with earnings less than, or not greatly above, the contribution and benefit base.

All contributions, except for amounts received under State agreements for covered wages paid prior to January 1, 1987, are collected by the Internal Revenue Service and deposited in the general fund of the Treasury. 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.

Amounts representing the estimated total collections of OASDI contributions by the IRS for each month are credited to the OASI and DI Trust Funds on the first day of the month. Because these estimated collections are credited to the trust funds on the first of the month, instead of throughout the month as contributions are actually received, the trust funds pay interest to the general fund to reimburse it for the interest costs attributable to these advance transfers. Periodic adjustments (principal only) 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.

Beginning in 1984, a portion (not more than one-half) 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 reimbursement 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, in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below), in obligations guaranteed as to both principal and interest by the United States, or in certain federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. These obligations may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

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

From December 29, 1981, until January 1, 1988, the Social Security Act authorized borrowing among the OASI, DI, and HI Trust Funds when necessary "to best meet the need for financing the benefit payments" from the three funds. (Although the initial borrowing authority expired at the end of 1982, the Social Security Amendments of 1983 reinstated the borrowing authority and extended it through 1987.) Interfund loans under the borrowing authority were made to the OASI Trust Fund from the DI and HI Trust Funds in November and December 1982. The loans were fully repaid by May 1, 1986. No additional interfund loans were made after 1982. In this report, the assets of the OASI Trust Fund, as of the end of each year 1982-85, include any amounts then owed to the DI and HI Trust Funds. The assets of the trust funds to which amounts were owed do not include such amounts. This procedure is followed because the borrowed amounts were available for the payment of benefits or other obligations of the OASI fund, while such amounts were not readily available to the lending funds.

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

A. OLD-AGE AND SURVIVORS INSURANCE TRUST FUND

A statement of the income and disbursements of the Federal Old-Age and Survivors Insurance Trust Fund in fiscal year 1989, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table 2.

TABLE 2.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND DURING FISCAL YEAR 1989
[In thousands]

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

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

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

Included in total receipts during fiscal year 1989 were $247,604 million representing contributions appropriated to the fund (including transfers of $2,092 million from the general fund of the Treasury to offset the tax credits allowed against contributions due on earnings of self-employed persons). Another $305 million was received from the general fund of the Treasury representing partial payment for the contributions that would have been paid on estimated deemed wage credits for military service in 1989 if such credits had been considered to be covered wages. (The amount to be transferred under section 229(b) of the Social Security Act was originally determined to be about $356 million. Only $305 million was transferred in fiscal year 1989 because the transfer was limited to amounts available in the fiscal year 1989 appropriation. It is anticipated that the difference will be transferred in 1990.) As an offset to gross contributions, $792 million was transferred from the trust fund to the general fund of the Treasury for the estimated amount of refunds to employees who worked for more than one employer during a year and paid contributions on wages in excess of the contribution and benefit base.

Net contributions thus amounted to $247,116 million, an increase of 9.1 percent over the amount in the preceding fiscal year. This level of growth in contribution income resulted primarily from the effects of (1) increased covered employment and earnings, (2) the increase in the OASI tax rate that became effective on January 1, 1988, and (3) the increases in the contribution and benefit base that became effective on January 1 of each year 1988 and 1989. (Table 1 in the preceding section shows the contribution and benefit bases that became effective for 1988 and 1989.)

Income from the taxation of benefits amounted to $3,638 million, of which 98 percent represented amounts credited to the trust fund in advance, on an estimated basis, together with an adjustment to 1987 transfers to account for actual experience. The remaining 2 percent of the total income from taxation of benefits represented amounts withheld from the benefits paid to non-resident aliens.

Special payments are made to uninsured persons who either attained age 72 before 1968, or who attained age 72 after 1967 and had 3 quarters of coverage for each year after 1966 and before the year of attainment of age 72. The costs associated with providing such payments to persons having fewer than 3 quarters of coverage are reimbursable from the general fund of the Treasury. Accordingly, a reimbursement of $43 million was transferred to the OASI Trust Fund in fiscal year 1989, as required by section 228 of the Social Security Act. The reimbursement reflected the costs of payments made in fiscal year 1987.

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

Security Income program due to adjustments in the allocation of administrative expenses; less (3) interest arising from the revised allocation of administrative expenses among the trust funds; less (4) reimbursement to the general fund for interest costs resulting from the advance transfer of contributions.

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

Of the $209,102 million in total disbursements, $204,600 million was for net benefit payments, excluding collected overpayments of $747 million and the reimbursement of $47 million for unnegotiated benefit checks. The amount of net benefit payments in fiscal year 1989 represents an increase of 6.3 percent over the corresponding amount in fiscal year 1988. This increase was due primarily to (1) the automatic cost-of-living benefit increases of 4.2 percent and 4.0 percent which became effective for December 1987 and December 1988 respectively, under the automatic-adjustment provisions in section 215(i) of the Social Security Act, (2) an increase in the total number of beneficiaries, and (3) an increase in the average benefit amount resulting from the rising level of earnings.

As described in the preceding section, certain provisions of the Railroad Retirement Act coordinate the Railroad Retirement and OASDI programs and govern the financial interchanges arising from the allocation of costs between the two programs. The objective of the financial interchanges is to place the trust funds in the same financial position in which they would have been if railroad employment had always been covered under Social Security. Accordingly, the Railroad Retirement Board and the Secretary of Health and Human Services determined that a transfer of $2,689,600,000 to the Social Security Equivalent Benefit Account (SSEBA) from the OASI Trust Fund would put the trust fund in such a financial position as of September 30, 1988. A total amount of $2,845,311,000 was transferred to the SSEBA in June 1989, including interest to the date of transfer amounting to $155,711,000.

The remaining $1,657 million of disbursements from the OASI Trust Fund represented net administrative expenses. The expenses of administering the OASDI and Medicare programs are allocated and charged directly to each of the various trust funds, through which those programs are financed, on the basis of provisional estimates. Similarly, the expenses of administering the Supplemental Security Income program are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, adjustments to the allocations of administrative expenses for prior periods are effected by interfund transfers and transfers between the OASI Trust Fund and the general fund account for the Supplemental Security Income program, with appropriate interest adjustments.

Section 1131 of the Social Security Act authorizes annual reimbursements from the general fund of the Treasury to the OASI Trust Fund for additional administrative expenses incurred as a result of furnishing information on deferred vested benefits to pension plan participants, as required by the Employee Retirement Income Security Act of 1974 (Public Law 93-406). The reimbursement in fiscal year 1989 amounted to $1,025,000.

Net administrative expenses charged to the OASI and DI Trust Funds in fiscal year 1989 totaled $2,407 million. (The operations of the DI Trust Fund are presented in detail in the next subsection.) This amount represented 0.9 percent of contribution income and 1.1 percent of expenditures for benefit payments. Corresponding percentages for each trust fund separately and for the OASDI program as a whole are shown in table 3 for each of the last 5 years.

TABLE 3.—NET ADMINISTRATIVE EXPENSES AS A PERCENTAGE OF CONTRIBUTION INCOME AND OF BENEFIT PAYMENTS, BY TRUST FUND, FISCAL YEARS 1985-89

Fiscal year	OASI Trust Fund		DI Trust Fund		Total	
	Contribution income	Benefit payments	Contribution income	Benefit payments	Contribution income	Benefit payments
1985	0.9	1.0	3.6	3.2	1.1	1.2
1986	.9	.9	3.3	3.1	1.1	1.1
1987	.8	.8	3.8	3.6	1.0	1.1
1988	.8	.9	3.7	3.8	1.0	1.2
1989	.7	.8	3.2	3.3	.9	1.1

In table 4, the actual amounts of contributions and benefit payments in fiscal year 1989 are compared to the corresponding estimated amounts which appeared in the 1988 and 1989 Annual Reports. The estimates shown are the ones based on the alternative II-B set of assumptions from each report. Actual OASI and DI contributions and benefit payments were reasonably close, relatively, to the estimates shown in the 1989 Annual Report. The estimates in the 1988 report, however, understated OASI and DI tax contributions.

Reference was made in an earlier section to the appropriation of contributions to the trust funds on an estimated basis, with subsequent periodic adjustments to account for differences from the amounts of contributions actually payable on the basis of reported earnings. In interpreting the figures in table 4, it should be noted that the "actual" amount of contributions in fiscal year 1989 reflects the aforementioned adjustments to contributions for prior fiscal years. The "estimated" contributions in fiscal year 1989 also include the adjustments for prior years, but on an estimated basis.

TABLE 4.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, FISCAL YEAR 1989
[Amounts in millions]

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

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

At the end of fiscal year 1989, about 39.0 million persons were receiving monthly benefits under the OASDI program. Of these persons, about 34.9 million and 4.1 million were receiving monthly benefits from the OASI Trust Fund and the DI Trust Fund, respectively. The estimated distribution of benefit payments (before reflecting the reimbursement for unnegotiated checks) in fiscal years 1988 and 1989, by type of beneficiary, is shown in table 5 for each trust fund separately.

TABLE 5.—ESTIMATED DISTRIBUTION OF BENEFIT PAYMENTS FROM THE OASI AND DI TRUST FUNDS, BY TYPE OF BENEFICIARY OR PAYMENT, FISCAL YEARS 1988 AND 1989

[Amounts in millions]

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

[1] Less than 0.05 percent.

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

The assets of the OASI Trust Fund at the end of fiscal year 1989 totaled $148,319 million, consisting of $148,565 million in U.S. Government obligations and, as an offset, an extension of credit amounting to $246 million against securities to be redeemed within the following few days. Table 6 shows the total assets of the fund and their distribution at the end of each fiscal year 1988 and 1989.

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

	September 30, 1988	September 30, 1989
Obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
8.375 percent, 1990	—	$7,931,379,000.00
9.25 percent, 1989	$12,305,822,000.00	—
Bonds:		
8.375 percent, 1990	313,296,000.00	—
8.375 percent, 1991-2000	3,132,950,000.00	3,132,950,000.00
8.375 percent, 2001	2,370,396,000.00	2,370,396,000.00
8.625 percent, 1990-2001	15,620,772,000.00	15,620,772,000.00
8.625 percent, 2002	3,672,127,000.00	3,672,127,000.00
8.75 percent, 1990-2000	—	38,324,352,000.00
8.75 percent, 2001-03	—	10,452,099,000.00
8.75 percent, 2004	—	9,396,468,000.00
9.25 percent, 1990	2,240,308,000.00	2,240,308,000.00
9.25 percent, 1991-2000	22,403,090,000.00	22,403,090,000.00
9.25 percent, 2001-02	4,480,616,000.00	4,480,616,000.00
9.25 percent, 2003	5,912,435,000.00	5,912,435,000.00
10.375 percent, 1989	2,057,101,000.00	—
10.375 percent, 1990	2,057,101,000.00	2,057,101,000.00
10.375 percent, 1991	1,865,345,000.00	1,865,345,000.00
10.375 percent, 1992-99	4,521,488,000.00	4,521,488,000.00
10.375 percent, 2000	2,057,101,000.00	2,057,101,000.00
10.75 percent, 1992-96	5,111,155,000.00	5,111,155,000.00
10.75 percent, 1997-98	2,044,460,000.00	2,044,460,000.00
13.75 percent, 1991	191,756,000.00	191,756,000.00
13.75 percent, 1992-96	2,348,420,000.00	2,348,420,000.00
13.75 percent, 1997-98	939,370,000.00	939,370,000.00
13.75 percent, 1999	1,491,915,000.00	1,491,915,000.00
Total investments	97,137,024,000.00	148,565,103,000.00
Undisbursed balances[1]	–172,691,216.36	–246,198,668.48
Total assets	96,964,332,783.64	148,318,904,331.52

[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 for special issues, the amount maturing in each year is the amount shown divided by the number of years.

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

Table 7 shows the investment transactions of the OASI and DI Trust Funds, separate and combined, in fiscal year 1989. All amounts shown in the table are at par value.

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

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

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

The effective annual rate of interest earned by the assets of the OASI Trust Fund during the 12 months ending on June 30, 1989, was 9.8 percent, as compared to 9.9 percent earned during the 12 months ending on June 30, 1988. (This period is used, rather than the fiscal year, because interest on special issues is paid semiannually on June 30 and December 31.) The interest rate on special issues purchased by the trust fund in June 1989 was 8.75 percent, payable semiannually. Special-issue bonds with a total par value of $58,173 million were purchased in June 1989.

Section 201(d) of the Social Security Act provides that the public-debt obligations issued for purchase by the OASI and DI Trust Funds shall have maturities fixed with due regard for the needs of the funds. The usual practice in the past has been to spread the holdings of special issues, as of each June 30, so that the amounts maturing in each of the next 15 years are approximately equal. Accordingly, the amounts and maturity dates of the special-issue bonds purchased on June 30, 1989, were selected in such a way that the maturity dates of the total portfolio of special issues were spread evenly over the 15-year period 1990-2004.

B. DISABILITY INSURANCE TRUST FUND

A statement of the income and disbursements of the Federal Disability Insurance Trust Fund during fiscal year 1989, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table 8.

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

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

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

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

Included in total receipts were $23,742 million representing contributions appropriated to the fund (including transfers of $198 million from the general fund of the Treasury to offset the tax credits allowed against contributions due on earnings of self-employed persons) and $30 million in payments from the general fund of the Treasury representing a portion of the contributions that would have been paid on estimated deemed wage credits for military service in 1989 if such credits had been considered to be covered wages (an additional amount will be credited in fiscal year 1990 for this last purpose, for the same reason given in the preceding subsection). As an offset, $77 million was transferred from the trust fund to the general fund of the Treasury for the estimated amount of refunds to employees who worked for more than one employer during a year and paid contributions on wages in excess of the contribution and benefit base.

Net contributions amounted to $23,694 million, an increase of 9.0 percent from the amount in the preceding fiscal year. This increase is primarily attributable to the same factors, insofar as they apply to the DI program, that accounted for the change in contributions to the OASI Trust Fund (described in the preceding subsection). Income from the taxation of benefit payments amounted to $135 million in fiscal year 1989.

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

Of the $23,389 million in total disbursements, $22,514 million was for net benefit payments, excluding collected overpayments of $99 million and the reimbursement of $3 million for unnegotiated benefit checks. This represents an increase of 5.3 percent over the corresponding amount of benefit payments in fiscal year 1988. This increase reflects somewhat the same factors that resulted in the net increase in benefit payments from the OASI Trust Fund (as described in the preceding subsection).

Provisions governing the financial interchanges between the Railroad Retirement and OASDI programs are described in a preceding section. The determination made as of September 30, 1988, required that a transfer of $83,400,000 be made from the DI Trust Fund to the Social Security Equivalent Benefit Account. A total amount of $88,228,000 was transferred to the SSEBA in June 1989, including interest to the date of transfer amounting to $4,828,000.

The remaining disbursements amounted to $751 million for net administrative expenses (including $4,000,000 for demonstration projects and experiments to test the effect of alternative methods for assisting disabled beneficiaries' attempts to work), and $36 million for the costs of vocational rehabilitation services furnished to disabled-worker beneficiaries and to those children of disabled workers who were receiving benefits on the basis of disabilities that began before age 22. Reimbursement from the trust funds for the costs of such services is made only in those cases where the services contributed to the successful rehabilitation of the beneficiaries.

The assets of the DI Trust Fund at the end of fiscal year 1989 totaled $8,363 million, consisting of $8,428 million in U.S. Government obligations and, as an offset, an extension of credit amounting to $65 million against securities to be redeemed within the following few days. Table 9 shows the total assets of the fund and their distribution at the end of each fiscal year 1988 and 1989.

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

	September 30, 1988	September 30, 1989
Investments in public-debt obligations:		
Public issues:		
Treasury bonds:		
3.5 percent, 1990	$10,500,000.00	$10,500,000.00
3.5 percent, 1998	5,000,000.00	5,000,000.00
4.125 percent, 1989-94	68,400,000.00	68,400,000.00
4.25 percent, 1987-92	80,800,000.00	80,800,000.00
7.5 percent, 1988-93	26,500,000.00	26,500,000.00
7.625 percent, 2002-07	10,000,000.00	10,000,000.00
8 percent, 1996-2001	26,000,000.00	26,000,000.00
8.25 percent, 2000-05	3,750,000.00	3,750,000.00
11.75 percent, 2010	30,250,000.00	30,250,000.00
Total investments in public issues at par value, as shown above	261,200,000.00	261,200,000.00
Unamortized premium or discount, net	−714,629.84	−604,489.64
Total investments in public issues at book value	260,485,370.16	260,595,510.36
Obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
8.375 percent, 1990	—	130,167,000.00
9.25 percent, 1989	282,808,000.00	—
Bonds:		
8.375 percent, 1992	160,260,000.00	160,260,000.00
8.375 percent, 1993	201,767,000.00	201,767,000.00
8.375 percent, 1994-95	219,226,000.00	219,226,000.00
8.375 percent, 1996-2000	1,008,835,000.00	1,008,835,000.00
8.375 percent, 2001	591,226,000.00	591,226,000.00
8.75 percent, 1991	—	125,926,000.00
8.75 percent, 1992	—	41,507,000.00
8.75 percent, 1993	47,479,000.00	47,479,000.00
8.75 percent, 1994	339,277,000.00	339,277,000.00
8.75 percent, 2002-03	—	1,182,452,000.00
8.75 percent, 2004	—	191,712,000.00
9.25 percent, 1990	465,300,000.00	159,323,000.00
9.25 percent, 1991	465,300,000.00	465,300,000.00
9.75 percent, 1993	142,337,000.00	142,337,000.00
9.75 percent, 1994	142,336,000.00	142,336,000.00
9.75 percent, 1995	481,613,000.00	481,613,000.00

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

	September 30, 1988	September 30, 1989
Investments in public-debt obligations: (Cont.)		
Obligations sold only to the trust funds (special issues): (Cont.)		
Bonds: (Cont.)		
10.375 percent, 1992-93	$203,006,000.00	$203,006,000.00
10.375 percent, 1996-98	304,512,000.00	304,512,000.00
10.375 percent, 1999	152,904,000.00	152,904,000.00
10.375 percent, 2000	389,459,000.00	389,459,000.00
10.75 percent, 1992	287,956,000.00	287,956,000.00
10.75 percent, 1993	98,140,000.00	98,140,000.00
10.75 percent, 1996-98	863,865,000.00	863,865,000.00
13.75 percent, 1999	236,555,000.00	236,555,000.00
Total obligations sold only to the trust funds (special issues)	7,084,161,000.00	8,167,140,000.00
Total investments in public-debt obligations (book value[1])	7,344,646,370.16	8,427,735,510.36
Undisbursed balances[2]	-71,922,200.23	-64,513,206.54
Total assets (book value[1])	7,272,724,169.93	8,363,222,303.82

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

[2]Negative figures represented extensions of credit against securities to be redeemed within the following few days.

Note: Special issues are always purchased at par value. Therefore, book value and par value are the same for each special issue, and the common value is shown above. Where the maturity years are grouped for special issues, the amount maturing in each year is the amount shown divided by the number of years.

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

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

VI. ACTUARIAL ESTIMATES

Section 201(c)(2) of the Social Security Act requires the Board of Trustees to report annually to the Congress on the operations and status of the OASI and DI Trust Funds during the preceding fiscal year and on the expected operations and status of those trust funds during the ensuing 5 fiscal years. Such information for the fiscal year that ended September 30, 1989, is presented in the preceding section of this report. Estimates of the operations and status of the trust funds during fiscal years 1990-94 are presented in this section. Similar estimates for calendar years 1990-94 are also presented.

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

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

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

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

As in the 1988 and 1989 reports, the actuarial balance in this report is calculated on the basis of the present value of future income, outgo, and taxable payroll. The present value is calculated by discounting the future annual amounts at the assumed rate of interest. The income and cost rates over the projection period are then obtained by dividing the present value of the taxable payroll into the present values of income and outgo, respectively. The difference between the income rate and cost rate over the long-range projection period, after an adjustment to take into account the fund balance at the valuation date, is computed to obtain the long-range actuarial balance.

The long-range actuarial balance measures the extent by which the program is overfinanced, if the balance is positive, or underfinanced, if the balance is negative. Exact actuarial balance, i.e., an actuarial balance of zero, indicates that the present value of the income over the entire 75-year period combined with the trust-fund balance at the start of the period is equal to the present value of all projected costs over the period.

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

In the past, the Annual Report has stated whether or not the actuarial balances for the OASI and DI funds were within 5 percent of the cost rate over the full 75-year period. A long-range deficit (or surplus) of more than 5 percent of the cost rate was deemed sufficiently large to indicate inadequate (or excess) financing over the next 75 years. When the balance was between 95 and 105 percent of the cost rate, the system was said to be in close actuarial balance, and when it was outside of that range the system was said to be out of close actuarial balance.

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

Because the program is entering a period of large fund accumulation, the Board, for the last 2 years, has recommended that the subject of the proper level of fund accumulation be made a specific part of the agenda for the 1991 Social Security Advisory Council. The Advisory Council, which was appointed in 1989, is reviewing this issue. In addition, the Council has commissioned a Technical Panel of Experts, consisting of actuaries and economists, to review the cost estimates for the program, including an evaluation of the underlying assumptions and methods and the measures used to assess the program's financial soundness.

A. ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

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

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

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

Economic assumptions

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

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

Calendar year	Average annual percentage increase in—			Real-wage differential[3] (percent)	Average annual interest rate[4] (percent)	Average annual unemployment rate[5] (percent)	Average annual percentage increase in labor force[6]
	Real GNP[1]	Average annual wage in covered employment	Consumer Price Index[2]				
Past experience:							
1960-64	3.9	3.4	1.3	2.1	3.7	5.7	1.3
1965-69	4.4	5.4	3.4	2.0	5.2	3.8	2.1
1970-74	2.4	6.3	6.1	.1	6.7	5.4	2.3
1975	-1.3	6.7	9.2	-2.5	7.4	8.5	1.9
1976	4.9	8.7	5.7	3.0	7.1	7.7	2.4
1977	4.7	7.3	6.5	.8	7.1	7.1	2.9
1978	5.3	9.7	7.6	2.1	8.2	6.1	3.2
1979	2.5	9.8	11.4	-1.6	9.1	5.8	2.6
1980	-.2	9.0	13.5	-4.5	11.0	7.1	1.9
1981	1.9	9.7	10.2	-.6	13.3	7.6	1.6
1982	-2.5	6.5	6.0	.5	12.8	9.7	1.4
1983	3.6	5.0	3.0	2.0	11.0	9.6	1.2
1984	6.4	[7]7.2	3.4	3.8	12.4	7.5	1.8
1985	3.0	[7]4.3	3.5	.8	10.8	7.2	1.7
1986	3.4	[7]4.3	1.6	2.8	8.0	7.0	2.0
1987	3.7	[7]5.0	3.6	1.4	8.4	6.2	1.7
1988	4.4	[7]5.1	4.0	1.1	8.8	5.5	1.4
1989	2.9	[7]6.3	4.8	1.5	8.7	5.3	1.8

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

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

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

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

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

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

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

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

[7]Preliminary.

[8]This value is for 2010. The annual percentage increase in labor force and real GNP is assumed to continue to change after 2010 for each alternative to reflect the dependence of labor force growth on the size and age-sex distribution of the population. The increases in real GNP for 2065 are 2.7, 1.8, 1.5, and 0.5 percent for alternatives I, II-A, II-B, and III, respectively. The changes in total labor force for 2065 are 0.5, 0.0, 0.0, and -0.6 percent for alternatives I, II-A, II-B, and III, respectively.

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

The period of sustained real economic growth, which began in the fourth quarter of 1982, is assumed to continue through the end of the decade under alternatives I, II-A, and II-B. Real growth is assumed to be stronger for alternative I than for alternative II-A. Similarly, growth for alternative II-A is stronger than that for alternative II-B.

For alternative III, the period of real economic growth is assumed to have ended in the first quarter of 1990; a recession is assumed to occur during the 4 quarters of 1990. After 9 quarters of recovery, a second recession is assumed to begin in the second quarter of 1993, lasting through the first quarter of 1994.

For each of the alternatives I, II-A, and II-B, the unemployment rate is assumed to move gradually toward its ultimate average level. For alternative III, the unemployment rate is assumed to reach its ultimate average level after the recovery that is assumed to follow the second recession. Unemployment rates through 1999 are in the most commonly cited form, the civilian rate, which describes the differences between aggregate civilian labor force and aggregate civilian employment. For years after 1999, however, total rates are presented. These include the military (which reduces the rate by about 0.1 percent relative to the civilian rate) and are age-sex adjusted to the 1989 labor force. Such total rates better represent the total population covered by the OASDI program and adjust for the changing age-sex distribution of the labor force, which can obscure the comparison of unemployment rates over different time periods. After the early 1990s, the projected rates of growth in real GNP, for all four alternatives, are determined by the assumed rates of growth in employment, average hours worked, and labor productivity.

Assumed values for the other economic variables are consistent with the assumed rates of real GNP growth. For alternative II-A, the average annual unemployment rate rises slightly from the level experienced for 1989, 5.3 percent, to the assumed ultimate average rate of 5.5 percent in 1990. Thereafter, the total unemployment rate (age-sex adjusted to the 1989 labor force) remains at 5.5 percent while the non-age-sex-adjusted rate declines slightly, reflecting the changing age-sex distribution of the labor force. The annual rate of increase in the average wage in covered employment is assumed to decline from the assumed 6.3-percent increase in 1989 to its ultimate rate of 4.7 percent by 2010. The annual rate of increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is assumed to decline steadily from 4.8 percent in 1989 to an ultimate rate of 3.0 percent in 1996. The CPI-W (hereinafter denoted as "CPI") is used to determine automatic cost-of-living benefit increases under the OASDI program. The real-wage differential (i.e., the difference between the annual rates of increase in the average wage in covered employment and in the CPI) is assumed to remain between 1.7 and 2.0 percentage points after 1989, reaching its ultimate value of 1.7 percentage points by 2010. The annual interest rate is assumed to reach its ultimate value of 5.5 percent by 2000. The annual rate of growth in total labor force is projected to drop substantially from the level of 1.2 to 2.0 percent for the past decade to less than 1.0 percent after 1992, reflecting the slowing rate of increase in the working-age population.

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

Demographic assumptions

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

The demographic assumptions for alternatives II-A and II-B are identical. The assumed ultimate total fertility rate of 1.9 children per woman is attained in 2014, after a very gradual decrease from the estimated 1989 level of 1.93 children per woman. The age-sex-adjusted death rate is assumed to decrease gradually during the entire projection period, with a reduction of 35 percent from the 1989 level by 2065. The resulting life expectancies at birth in 2065 are 77.3 years for men and 83.8 years for women, compared to 71.6 and 78.6 years, respectively, in 1989. Life expectancies at age 65 in 2065 are projected to be 18.2 years for men and 22.3 years for women, compared to 14.9 and 18.8 years, respectively, in 1989. The projected death rates reflect the effects of assumed cases of Acquired Immunodeficiency Syndrome (AIDS), using projections through 1992 prepared by the Centers for Disease Control (CDC) as a starting point. Total net immigration is assumed to be 600,000 persons per year. The assumed level of net annual immigration is the combination of 400,000 net legal immigrants per year and 200,000 net other-than-legal immigrants per year.

For alternative I, the total fertility rate is assumed to rise to an ultimate level of 2.2 children per woman for 2014. The age-sex-adjusted death rate is assumed to decrease more slowly than for alternatives II-A and II-B, with the reduction from the 1989 level being 18 percent by 2065. The resulting life expectancies at birth in 2065 are 74.8 years for men and 80.8 years for women, while at age 65 they are 16.0 and 19.9 years, respectively. Total net immigration is assumed to be 750,000 persons per year. The assumed level of net annual immigration is the combination of 450,000 net legal immigrants per year and 300,000 net other-than-legal immigrants per year.

For alternative III, the total fertility rate is assumed to decrease to an ultimate level of 1.6 by 2014. The age-sex-adjusted death rate is assumed to decrease more rapidly than for alternatives II-A and II-B, with the reduction from the 1989 level being 51 percent by 2065. The resulting life expectancies at birth in 2065 are 80.8 years for men and 87.9 years for women, while at age 65 they are 21.3 and 25.6 years, respectively. Total net immigration is assumed to be 450,000 persons per year, the combination of 350,000 net legal immigrants per year and 100,000 net other-than-legal immigrants per year.

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

Calendar year	Total fertility rate[1]	Age-sex-adjusted death rate[2] (per 100,000)	Life expectancy[3] At birth: Male	Life expectancy[3] At birth: Female	Life expectancy[3] At age 65: Male	Life expectancy[3] At age 65: Female
Past experience:						
1940	2.23	1,532.8	61.4	65.7	11.9	13.4
1945	2.42	1,366.4	62.9	68.4	12.6	14.4
1950	3.03	1,225.3	65.6	71.1	12.8	15.1
1955	3.50	1,134.2	66.7	72.8	13.1	15.6
1960	3.61	1,128.6	66.7	73.2	12.9	15.9
1965	2.88	1,103.6	66.8	73.8	12.9	16.3
1970	2.43	1,041.8	67.1	74.9	13.1	17.1
1975	1.77	934.0	68.7	76.6	13.7	18.0
1976	1.74	923.2	69.1	76.8	13.7	18.1
1977	1.80	898.0	69.4	77.2	13.9	18.3
1978	1.76	892.4	69.6	77.3	13.9	18.3
1979	1.82	864.2	70.0	77.7	14.2	18.6
1980	1.85	878.0	69.9	77.5	14.0	18.4
1981	1.83	853.4	70.4	77.9	14.2	18.6
1982	1.83	827.8	70.8	78.2	14.5	18.8
1983	1.81	835.0	70.9	78.1	14.3	18.6
1984	1.80	828.2	71.1	78.2	14.4	18.7
1985	1.84	830.0	71.1	78.2	14.4	18.6
1986	1.84	822.8	71.2	78.3	14.5	18.7
1987	1.87	813.9	71.3	78.4	14.6	18.7
1988[4]	1.91	809.5	71.5	78.4	14.9	18.7
1989[4]	1.93	802.5	71.6	78.6	14.9	18.8
Alternative I:						
1990	1.94	797.0	71.8	78.6	15.0	18.8
1995	2.00	777.6	72.4	78.9	15.0	18.8
2000	2.06	765.9	72.8	79.0	15.0	18.8
2005	2.11	755.8	73.0	79.2	15.1	18.8
2010	2.16	745.7	73.2	79.3	15.1	18.9
2015	2.20	736.2	73.4	79.5	15.2	19.0
2020	2.20	727.0	73.5	79.6	15.3	19.0
2025	2.20	718.0	73.7	79.8	15.4	19.1
2030	2.20	709.3	73.9	79.9	15.5	19.2
2035	2.20	700.8	74.0	80.0	15.6	19.3
2040	2.20	692.6	74.1	80.2	15.6	19.4
2045	2.20	684.5	74.3	80.3	15.7	19.5
2050	2.20	676.7	74.4	80.4	15.8	19.6
2055	2.20	669.1	74.6	80.6	15.9	19.7
2060	2.20	661.6	74.7	80.7	16.0	19.8
2065	2.20	654.4	74.8	80.8	16.0	19.9

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

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

[1]The total fertility rate for any year is the average number of children who would be born to a woman in her lifetime if she were to experience the birthrates by age observed in, or assumed for, the selected year, and if she were to survive the entire child-bearing period. The ultimate total fertility rate is assumed to be reached in 2014.

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

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

[4]Estimated.

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

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

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

B. AUTOMATIC ADJUSTMENTS

Under the automatic-adjustment provisions of the law, benefits generally are increased once a year to reflect increases in the cost of living. These automatic increases may be modified under certain circumstances, as explained below. For persons becoming eligible for benefits in 1979 and later, the increases generally begin with the year in which the worker reaches age 62, or becomes disabled or dies, if earlier. An automatic cost-of-living benefit increase of 4.7 percent, effective for December 1989, was announced in October 1989, as described in Appendix C. The automatic cost-of-living benefit increase for any year is normally based on the change in the CPI from the third quarter of the previous year through the third quarter of the current year. [1]

The law provides for an automatic increase in the contribution and benefit base, based on the increase in average wages, for the year following a year in which an automatic benefit increase becomes effective. The base for 1990 was initially determined under the automatic-adjustment provision. It was subsequently revised, however, before taking effect, to comply with the "Omnibus Budget Reconciliation Act of 1989" (as noted in a preceding section). The revised contribution and benefit base for 1990 was established at $51,300.

The exempt amounts under the retirement earnings test are also increased automatically by the increase in average wages, following an automatic benefit increase. An automatic increase in the exempt amount for beneficiaries at ages 65 through 69—from $8,880 in 1989 to $9,360 in 1990—was announced in October 1989. Similarly, an automatic increase was announced in the exempt amount for beneficiaries under age 65—from $6,480 in 1989 to $6,840 in 1990. Appendix C describes the aforementioned adjustments, as well as the determinations of the following amounts:

1. The amount of earnings a worker must have in 1990 to be credited with a quarter of coverage;
2. The dollar amounts (or "bend points") in the formulas used to compute benefits payable on the earnings of workers who first become eligible for retirement or disability benefits, or who die before becoming eligible for such benefits, in 1990; and

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[1] If the combined assets of the OASI and DI Trust Funds, as a percentage of annual expenditures, are below a specified level, the automatic benefit increase is limited to the lesser of the increases in wages or prices. This specified level was 15.0 percent with respect to benefit increases for December of each year 1984-88, and is 20.0 percent for all subsequent years. This "stabilizer" provision has not affected any benefit increases since its enactment in 1983, and it would not affect any specific future increases shown in this report under any of the four sets of assumptions. Under all but alternative I, however, the combined trust funds eventually fall below the 20.0-percent threshold shortly before exhaustion in the next century. Thus, at that time, the stabilizer provision could affect a benefit increase if average wages are then increasing at a slower pace than prices.

3. The average of total wages reported for calendar year 1988, to be used for indexing earnings of workers who first become eligible for benefits, or who die before such eligibility, in 1990 or later.

An historical summary of the Social Security program amounts determined under the automatic-adjustment provisions, and the average-wage series used for indexing earnings, are shown in Appendix D. Estimates of the corresponding amounts through 1995 are also shown in Appendix D.

The four alternative sets of economic assumptions described previously result in the cost-of-living benefit increases and contribution and benefit bases shown in table 12 for each year through 1995. (The actual benefit increase for 1989 and the actual contribution and benefit bases for 1989 and 1990 are also shown as a basis for comparison.)

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

Calendar year	Cost-of-living benefit increase[1] (percent) based on alternative—				Contribution and benefit base[2] based on alternative—			
	I	II-A	II-B	III	I	II-A	II-B	III
1989	4.7	4.7	4.7	4.7	$48,000	$48,000	$48,000	$48,000
1990	3.4	4.0	4.5	5.0	51,300	51,300	51,300	51,300
1991	3.0	4.1	4.5	5.0	54,600	54,300	54,300	54,000
1992	2.8	3.8	4.4	6.9	57,600	57,300	57,300	55,800
1993	2.4	3.6	4.3	6.3	60,900	60,600	60,300	58,200
1994	2.2	3.3	4.2	5.0	64,200	63,900	63,600	61,800
1995	2.1	3.0	4.0	5.2	67,200	67,200	66,900	65,400

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

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

C. ESTIMATED OPERATIONS AND STATUS OF THE TRUST FUNDS DURING THE PERIOD OCTOBER 1, 1989, TO DECEMBER 31, 1994

This subsection presents estimates of the operations and status of the OASI and DI Trust Funds during the period October 1, 1989, to December 31, 1994, based on the assumptions described in the preceding subsections. As previously stated, no changes are assumed to occur in the present statutory provisions and regulations under which the OASDI program operates. [1]

These estimates indicate that the assets of the OASI and DI Trust Funds would be sufficient to permit the timely payment of benefits throughout the next 5 years under each of the four sets of assumptions shown. The assets of the OASI Trust Fund are estimated to increase substantially during 1990-94 under each alternative. DI assets are also expected to increase rapidly in 1990-94, except based on the alternative III assumptions. Under these adverse conditions, DI assets would cease growing by the end of the 5-year projection period, and would be depleted within another 4 years thereafter.

The estimated operations of the OASI Trust Fund shown in this report under alternatives I, II-A, and II-B are significantly less favorable than the corresponding estimates in the 1989 Annual Report. This change is primarily attributable to a reduction in actual payroll tax income in the last 2 years, compared to prior expectations, and a corresponding revision in projections of future tax income. Although the amounts of total wages and salaries in 1988 and 1989 were close to prior estimates, their distribution by wage level was somewhat different than estimated. In particular, recent data indicate that the proportion of covered earnings that is taxable (i.e., the proportion that is below the contribution and benefit base) has declined somewhat. As a result, projected tax income is reduced (by roughly $3 to $4 billion annually for OASDI) compared to the projections in the 1989 report. Projected income is also lower as a result of lower actual and projected interest earnings on trust fund assets. The estimated operations of the OASI Trust Fund shown in this report under alternative III are very similar to the corresponding estimates in the 1989 report.

For the DI Trust Fund during 1990-94, the estimated operations in this report under alternatives I, II-A, and II-B are also somewhat less favorable than the corresponding estimates from the 1989 report, for the same reasons cited above. In contrast, the alternative III projections are somewhat more favorable than in the 1989 report.

OASI Trust Fund operations

Estimates of the operations and status of the OASI Trust Fund during calendar years 1990-94 are shown in table 13 based on each of the four alternative sets of assumptions, which are described in a preceding

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[1] The estimates shown in this subsection reflect 12 months of benefit payments in each year of the short-range projection period. In practice, 13 benefit payments can be made in certain years, with the next year having only 11 payments. This situation can result from the statutory requirement that benefit checks be delivered early when the normal check delivery date is a Saturday, Sunday, or legal public holiday. For example, the benefit checks for December 1992 would normally be delivered on January 3, 1993; however, because that day will be a Sunday, and the two preceding days a Saturday and a holiday, the checks will actually be delivered on December 31, 1992. The annual benefit figures are shown as if those benefit checks will be delivered on the usual date.

subsection. Actual operations for calendar year 1989 are also shown in the table.

The increases in estimated income shown in table 13 on the basis of each set of assumptions reflect increases in estimated taxable earnings as well as the increase in the OASI tax rate that became effective for 1990. For each alternative, employment and earnings are assumed to increase in every year through 1994 (except that employment declines temporarily during each of the economic recessions assumed under alternative III). The number of persons with taxable earnings under the OASDI program is expected to increase on the basis of alternatives I, II-A, II-B, and III, from 132 million during calendar year 1989 to about 139 million, 138 million, 137 million, and 133 million, respectively, by 1994. The total annual amount of taxable earnings is expected to increase from about $2,260 billion in 1989 to $3,088 billion, $3,088 billion, $3,053 billion, and $2,870 billion, in 1994, on the basis of alternatives I, II-A, II-B, and III, respectively. (In 1989 dollars—taking account of assumed increases in the CPI from 1989 to 1994 based on each alternative—the estimated amounts of taxable earnings in 1994 are $2,688 billion, $2,568 billion, $2,465 billion, and $2,186 billion, on the basis of alternatives I, II-A, II-B, and III, respectively.) These increases are due in part to the increases in the contribution and benefit base in 1990-94 under the automatic-adjustment provisions. The increases in taxable earnings are also due to (1) projected increases in employment levels and average earnings in covered employment, and (2) various provisions enacted into law in 1983-87, including the mandatory coverage of all newly hired Federal civilian employees and the voluntary coverage of certain Federal employees who were not previously covered.

TABLE 13.—ESTIMATED OPERATIONS OF THE OASI TRUST FUND BY ALTERNATIVE, CALENDAR YEARS 1989-94

[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Contingency fund	
					Amount[1]	Ratio[2]
1989[1]	$264.7	$212.5	$52.2	$155.1	$125.4	59
Alternative I:						
1990	287.5	227.9	59.6	214.7	178.5	78
1991	312.7	240.7	72.0	286.7	239.7	100
1992	336.8	252.6	84.3	370.9	313.3	124
1993	361.6	264.2	97.4	468.3	398.9	151
1994	386.5	274.9	111.6	579.9	498.2	181
Alternative II-A:						
1990	287.1	228.1	59.0	214.1	178.5	78
1991	312.1	242.5	69.5	283.6	239.1	99
1992	336.5	257.4	79.1	362.7	310.3	121
1993	362.2	272.1	90.1	452.8	390.8	144
1994	388.6	286.7	101.9	554.7	482.8	168
Alternative II-B:						
1990	286.7	228.1	58.6	213.7	178.5	78
1991	309.8	243.7	66.2	279.8	238.6	98
1992	333.3	259.5	73.7	353.6	306.3	118
1993	358.3	275.9	82.4	436.0	381.4	138
1994	384.7	292.5	92.3	528.3	465.8	159

TABLE 13.—ESTIMATED OPERATIONS OF THE OASI TRUST FUND BY ALTERNATIVE, CALENDAR YEARS 1989-94 (Cont.)
[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Contingency fund Amount[1]	Contingency fund Ratio[2]
Alternative III:						
1990	$281.6	$228.3	$53.3	$208.3	$178.5	78
1991	294.9	245.2	49.7	258.0	232.1	95
1992	318.0	262.6	55.4	313.4	283.2	108
1993	343.7	285.8	57.9	371.4	340.5	119
1994	361.5	308.8	52.8	424.1	399.5	129

[1]Represents assets at beginning of year, plus advance tax transfers for January.

[2]Represents assets at beginning of year, plus advance tax transfers, as a percentage of disbursements during the year. See text concerning interpretation of these ratios.

[3]Figures for 1989 represent actual experience.

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

Rising disbursements during calendar years 1990-94 reflect the assumed automatic benefit increases previously shown, as well as the long-range upward trend in the numbers of beneficiaries and in the amounts of average monthly earnings underlying benefits payable by the program. The growth in the number of beneficiaries in the past and the expected growth in the future result both from the increase in the aged population and from the increase in the proportion of the population which is eligible for benefits. The latter increase is primarily due to various amendments enacted after 1950, which modified eligibility provisions and extended coverage to additional categories of employment.

Growth has also occurred, and will continue to occur, in the proportion of eligible persons who, in fact, receive benefits. This growth is due to several factors, among which are (1) the amendments enacted since 1950 which affect the conditions governing the receipt of benefits and (2) the increasing percentage of eligible persons who are aged 70 and over and who therefore may receive benefits regardless of earnings.

The estimates shown in table 13 indicate that income would substantially exceed disbursements in every year of the short-range projection period, based on each of the four alternative sets of assumptions used in this report. The assets of the OASI Trust Fund at the beginning of 1989, including advance tax transfers for January, were equal to 59 percent of the fund's disbursements in 1989. As described in the introduction to this section, this ratio is known as the "contingency fund ratio"; it provides a useful measure of the relative level of trust fund assets. During 1989, income exceeded disbursements by $52.2 billion. As a result, the contingency fund ratio increased to about 78 percent at the beginning of 1990.

Assets are estimated to increase substantially in each year of the short-range projection period, based on each of the four alternative sets of assumptions. The increase in the contingency fund ratio from 78 percent at the beginning of 1990 to the vicinity of 130-180 percent at the beginning of 1994 is due, in part, to the increases in the OASI tax rate that became effective in 1988 and 1990. Asset growth is also assisted by recent increases in taxable earnings that have generally exceeded the rate of growth in benefit payments and the expected continuation of this experience (except under alternative III).

In interpreting the contingency fund ratios in table 13, it should be noted that, at the beginning of any month, assets of at least 8-9 percent of annual expenditures are required to make the benefit payments that are due at the beginning of the month. Therefore, the difference between the estimated contingency fund ratios shown above, and the minimum level of 8-9 percent, represents the reserve available to handle adverse contingencies.

DI Trust Fund operations

The estimated operations and status of the DI Trust Fund during calendar years 1990-94 on the basis of the four sets of assumptions are shown in table 14, together with figures on actual experience in 1989. On the basis of each alternative, income is estimated to increase steadily during 1990-94. This increase reflects the same factors, insofar as they apply to income to the DI Trust Fund, that are reflected in the estimated increase in income to the OASI Trust Fund during the same period.

TABLE 14.—ESTIMATED OPERATIONS OF THE DI TRUST FUND BY ALTERNATIVE, CALENDAR YEARS 1989-94
[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Contingency fund: Amount[2]	Contingency fund: Ratio[3]
1989[1]	$24.8	$23.8	$1.0	$7.9	$9.0	38
Alternative I:						
1990	29.7	25.1	4.6	12.5	10.4	41
1991	32.3	26.2	6.1	18.6	15.2	58
1992	34.8	27.2	7.6	26.1	21.4	79
1993	37.3	28.3	9.0	35.2	29.1	103
1994	39.9	29.5	10.4	45.6	38.4	130
Alternative II-A:						
1990	29.6	25.4	4.2	12.1	10.4	41
1991	32.2	27.0	5.2	17.3	14.8	55
1992	34.6	28.7	5.8	23.1	20.1	70
1993	37.1	30.6	6.5	29.6	26.1	85
1994	39.7	32.6	7.1	36.7	32.8	101
Alternative II-B:						
1990	29.5	25.4	4.1	12.0	10.4	41
1991	31.9	27.1	4.8	16.8	14.7	54
1992	34.2	29.0	5.2	22.1	19.6	68
1993	36.7	31.0	5.7	27.8	25.0	81
1994	39.3	33.2	6.1	33.8	30.9	93
Alternative III:						
1990	28.9	25.7	3.2	11.1	10.4	40
1991	30.2	27.9	2.4	13.5	13.7	49
1992	32.4	30.3	2.2	15.7	16.2	54
1993	34.8	33.4	1.3	17.0	18.6	56
1994	36.2	36.8	-.7	16.3	20.0	54

[1]See footnote 1 of table 13.
[2]See footnote 2 of table 13.
[3]See footnote 3 of table 13.

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

Disbursements are estimated to increase because of automatic benefit increases and because of projected increases in the amounts of average monthly earnings on which benefits are based. In addition, on the basis of all four sets of assumptions, the number of DI beneficiaries is projected to continue increasing throughout the short-range projection period.

The projected growth in the number of DI beneficiaries primarily reflects the effects of (1) gradual increases in the number of persons estimated to be insured for disability benefits and (2) assumed increases in the proportion of those insured who become disabled. The proportion of insured workers who become disabled in a given year has fluctuated substantially in past years, and the causes for the variation have not been precisely determined. The trend has generally been upward since 1982, but shows some signs of leveling off. An increasing trend has been projected in past annual reports; actual increases, however, have frequently been larger than expected. In this report, with the exception of alternative I, the proportion of workers becoming disabled is assumed to continue increasing somewhat beyond the short-range period but is not assumed to return to the high levels experienced during the 1970s. Under alternative I, this proportion is assumed to decline slightly from its level in 1989.

The continuing spread of Acquired Immunodeficiency Syndrome (AIDS) has recently contributed to a significant increase in both DI awards and terminations. Due to the extremely high mortality rates of affected individuals, the total number of disabled workers currently receiving benefits has not increased greatly as a result of AIDS. Although many aspects of AIDS are well understood, there remains considerable uncertainty regarding future medical advances and future incidence of the disease. To reflect this uncertainty, the projected numbers of benefit awards to AIDS patients (and their projected longevity) are varied by alternative. Through 1992, the projected range of results under the alternative sets of assumptions is very similar to the corresponding range developed by the Centers for Disease Control. Under the intermediate sets of assumptions, benefit awards to people with AIDS are projected to continue to increase steadily in the short range. Under alternative I the number of new awards begins to decline in the near future, while the number projected under alternative III increases at a very rapid rate throughout the short-range period.

At the beginning of 1989, the assets of the DI Trust Fund (including advance tax transfers for January) represented 38 percent of annual expenditures. During 1989, DI income exceeded DI expenditures by about $1.0 billion. Thus, DI assets increased slightly during the year, and the contingency fund ratio grew to about 41 percent for the beginning of 1990. Income is estimated to exceed expenditures through 1994 under the alternative I, II-A, and II-B sets of assumptions, as a result of the continuing favorable economic experience and the increase in the DI tax rate that became effective in 1990. Under alternatives I, II-A, and II-B, the DI contingency fund ratio is projected to increase steadily in 1990-94, reaching more than 90 percent by the beginning of 1994, based on alternative II-B, or higher levels, based on alternatives I or II-A.

Under the conditions assumed for alternative III, DI assets would grow slowly in 1990-93, to about 56 percent of annual expenditures at the beginning of 1993. Under these assumptions, however, the DI Trust Fund would begin to decline in 1994 and would be depleted in 1998 in the absence of corrective legislation, as will be discussed in the next section.

Combined OASI and DI Trust Fund operations

The estimated operations and status of the OASI and DI Trust Funds, combined, during calendar years 1990-94 on the basis of the four alternatives, are shown in table 15, together with figures on actual experience in 1989. These figures are the sums of the corresponding figures shown in tables 13 and 14.

TABLE 15.—ESTIMATED OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, BY ALTERNATIVE, CALENDAR YEARS 1989-94

[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in funds	Funds at end of year	Contingency fund Amount[1]	Contingency fund Ratio[2]
1989[3]	$289.4	$236.2	$53.2	$163.0	$134.4	57
Alternative I:						
1990	317.2	253.0	64.2	227.2	188.9	75
1991	345.0	266.9	78.1	305.2	254.9	95
1992	371.6	279.7	91.8	397.1	334.7	120
1993	398.9	292.5	106.4	503.4	428.0	146
1994	426.4	304.4	122.0	625.5	536.5	176
Alternative II-A:						
1990	316.7	253.5	63.2	226.2	188.9	74
1991	344.2	269.5	74.7	300.9	253.9	94
1992	371.1	286.1	85.0	385.8	330.4	115
1993	399.3	302.7	96.6	482.4	416.8	138
1994	428.4	319.3	109.0	591.5	515.7	161
Alternative II-B:						
1990	316.3	253.5	62.7	225.7	188.9	74
1991	341.7	270.8	70.9	296.7	253.3	94
1992	367.5	288.5	79.0	375.7	325.9	113
1993	394.9	306.8	88.1	463.8	406.4	132
1994	424.0	325.6	98.4	562.1	496.7	153
Alternative III:						
1990	310.5	254.0	56.5	219.5	188.9	74
1991	325.1	273.1	52.1	271.5	245.8	90
1992	350.4	292.8	57.6	329.1	299.4	102
1993	378.5	319.2	59.3	388.4	359.1	112
1994	397.7	345.6	52.1	440.5	419.6	121

[1]See footnote 1 of table 13.

[2]See footnote 2 of table 13.

[3]See footnote 3 of table 13.

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

At the beginning of 1989, the contingency fund ratio for the OASI and DI Trust Funds combined was 57 percent, as shown in table 15. During 1989, total income to the two trust funds was $53.2 billion higher than total expenditures, resulting in combined OASDI assets at the beginning of 1990 which represented about 74 percent of estimated combined expenditures for the year. Based on alternatives I, II-A, and II-B, the contingency fund ratio for the combined funds is projected to increase substantially, exceeding 150 percent at the beginning of 1994, based on alternative II-B, or higher levels, based on alternatives I or II-A. Under the alternative III assumptions, assets would grow more slowly, but would still reach 121 percent at the beginning of 1994.

Section 215(i) of the Social Security Act defines an "OASDI fund ratio" for the purpose of determining automatic benefit increases in 1984 and later. If this ratio is below a specified threshold, the benefit increase would be based on the lesser of certain wage and price increases. Following the final repayment in January 1986 of amounts borrowed from the HI Trust Fund, the "OASDI fund ratio" specified for the purpose of determining benefit increases is equal to the contingency fund ratio shown in table 15. Under all four alternatives, this ratio would not be lower than the 20.0-percent threshold applicable in 1989 and later. Thus, the benefit-increase "stabilizer" provision would not be triggered at any time during the short-range projection period under any of the sets of assumptions used in this report.

Figure 1 illustrates the pattern of the estimated future contingency fund ratios under the four alternatives for OASI and DI, combined. Contingency fund ratios for selected years prior to 1990, and estimates for 1990-94 under the four alternatives, are shown in table 16 for OASI, DI, and both funds combined. In evaluating the ratios shown in figure 1 and table 16, it should be recalled that a minimum of 8-9 percent is needed to meet monthly cash-flow requirements. The shaded area in figure 1 depicts this requirement.

FIGURE 1.—ESTIMATED CONTINGENCY FUND RATIOS, FOR OASI AND DI TRUST FUNDS COMBINED, CALENDAR YEARS 1989-94

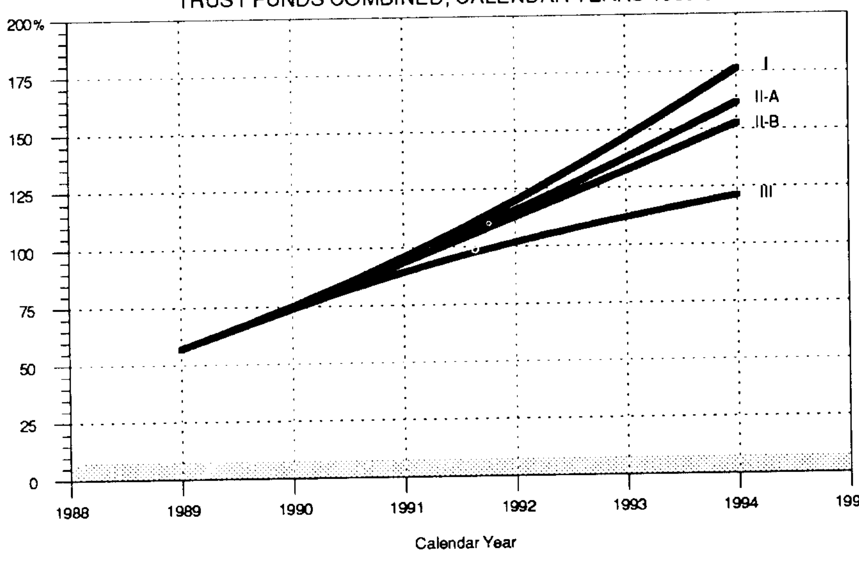


TABLE 16.—CONTINGENCY FUND RATIOS[1] BY TRUST FUND, SELECTED CALENDAR YEARS 1950-89, AND ESTIMATED FUTURE RATIOS BY ALTERNATIVE, CALENDAR YEARS 1990-94
[In percent]

Calendar year	OASI Trust Fund	DI Trust Fund	OASI and DI Trust Funds, combined
Past experience:			
1950	1,156	—	1,156
1955	405	—	405
1960	180	304	186
1965	109	121	110
1970	101	126	103
1975	63	92	66
1980	23	35	25
1981	18	21	18
1982	15	17	15
1983	15	14	14
1984	20	35	21
1985	24	27	24
1986	28	38	29
1987	30	44	31
1988	41	38	41
1989	59	38	57
Alternative I:			
1990	78	41	75
1991	100	58	95
1992	124	79	120
1993	151	103	146
1994	181	130	176
Alternative II-A:			
1990	78	41	74
1991	99	55	94
1992	121	70	115
1993	144	85	138
1994	168	101	161
Alternative II-B:			
1990	78	41	74
1991	98	54	94
1992	118	68	113
1993	138	81	132
1994	159	93	153
Alternative III:			
1990	78	40	74
1991	95	49	90
1992	108	54	102
1993	119	56	112
1994	129	54	121

[1]Represents assets at beginning of year, plus (for 1984 and later) advance tax transfers for January, as a percentage of disbursements during the year.

Table 17 shows that expenditures in calendar year 1989 from both trust funds, combined, were 10.47 percent of taxable payroll for the year—1.76 percentage points less than the income rate of 12.23 percent. Since 1982, the cost rate has generally declined—from about 11.9 percent in 1982 to 10.5 percent in 1989. This reduction was primarily attributable to the combined effect of (1) the continuing favorable economic experience, which has resulted in faster growth in covered earnings than in benefit payments, and (2) the declining proportion of beneficiaries with benefits determined under the computation method used prior to the 1977 amendments. As described in various other references, the benefit computation procedure in effect prior to the 1977 amendments had the unintended effect of increasing benefit levels for new beneficiaries at a faster rate than the increase in average wages. Other factors contributing to the recent decline in cost rates include rapid growth in the work force (as the last of the "baby boom" reached working age), declines in the number of certain types of beneficiaries (such as children of retired, disabled, or deceased workers) as a result of both demographic causes and various past amendments, and the provisions of the 1983 amendments that reduced benefits and expanded coverage of employment.

Several of these factors appear to be in the process of changing somewhat, compared to their trend since 1983. The cost rate for 1990 is estimated to *increase* slightly, as a result of an expected aggregate percentage increase in benefit payments that exceeds the estimated increase in taxable payroll. The higher-than-trend increase in benefit payments is attributable to the 4.7-percent benefit increase for December 1989, and the change to the "$1-for-$3" benefit offset rate for beneficiaries at ages 65 through 69 under the retirement test (effective in January 1990). Simultaneously, a lower-than-trend increase in taxable payroll is expected due to significantly slower growth in covered workers, and to a decline in average net earnings from self-employment (resulting from the new deduction for 1990 and later, as described in a previous section of this report).

Based on alternatives I and II-A, the OASDI cost rate is estimated to decline slowly during the short-range projection period, reaching 9.88 and 10.36 percent, respectively, in 1994. Based on alternative II-B, the cost rate would remain in the neighborhood of 10.6 percent through 1994. Under alternative III, it would increase significantly, to 12.06 percent in 1994. These percentages are shown in table 17 for both trust funds, separately and combined. Table 17 also shows a comparison of the cost rates with the corresponding income rates. As explained previously, the income rate represents the sum of the combined employee-employer contribution rate and the income derived from the Federal income taxation of OASDI benefits, expressed as a percentage of effective taxable payroll. The difference between the income rate and the cost rate for a given year is referred to as the "balance" for that year.

TABLE 17.—COMPARISON OF INCOME RATES AND COST RATES, BY TRUST FUND, SELECTED CALENDAR YEARS 1950-89, AND ESTIMATED RATES BY ALTERNATIVE, CALENDAR YEARS 1990-94

[As a percentage of taxable payroll]

Calendar year	OASI Trust Fund			DI Trust Fund			Total		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Past experience:									
1950	3.00	1.17	1.83	—	—	—	3.00	1.17	1.83
1955	4.00	3.34	.66	—	—	—	4.00	3.34	.66
1960	5.50	5.59	–.09	0.50	0.30	0.20	6.00	5.89	.11
1965	6.75	7.23	–.48	.50	.70	–.20	7.25	7.93	–.68
1970	7.30	7.32	–.02	1.10	.81	.29	8.40	8.12	.28
1975	8.75	9.29	–.54	1.15	1.36	–.21	9.90	10.65	–.75
1980	9.04	9.32	–.28	1.12	1.37	–.25	10.16	10.69	–.53
1981	9.40	9.96	–.56	1.30	1.39	–.09	10.70	11.35	–.65
1982	9.15	10.59	–1.44	1.65	1.34	.31	10.80	11.93	–1.13
1983	[1]9.91	10.27	–.36	[1]1.33	1.22	.10	[1]11.24	11.49	–.25
1984	10.58	10.08	.49	1.01	1.16	–.14	11.59	11.24	.35
1985[2]	[1]10.71	9.96	.76	[1]1.07	1.13	–.06	[1]11.79	11.09	.70
1986[2]	10.59	9.84	.74	1.01	1.12	–.10	11.60	10.96	.64
1987[2]	10.57	9.58	.98	1.00	1.09	–.10	11.56	10.68	.89
1988[2]	11.22	9.54	1.69	1.06	1.07	–.01	12.28	10.61	1.68
1989[2]	11.17	9.42	1.75	1.06	1.05	.01	12.23	10.47	1.76
Alternative I:									
1990	[1]11.36	9.47	1.89	[1]1.21	1.04	.17	[1]12.58	10.52	2.06
1991	11.39	9.36	2.03	1.21	1.02	.19	12.59	10.38	2.22
1992	11.39	9.21	2.17	1.21	.99	.22	12.60	10.21	2.39
1993	11.39	9.08	2.31	1.21	.97	.24	12.60	10.05	2.55
1994	11.39	8.92	2.47	1.21	.96	.25	12.60	9.88	2.72
Alternative II-A:									
1990	[1]11.38	9.51	1.87	[1]1.21	1.06	.15	[1]12.59	10.57	2.03
1991	11.39	9.46	1.93	1.21	1.05	.16	12.60	10.51	2.09
1992	11.39	9.42	1.98	1.21	1.05	.16	12.60	10.47	2.13
1993	11.40	9.37	2.03	1.21	1.05	.16	12.61	10.42	2.19
1994	11.40	9.31	2.09	1.21	1.06	.15	12.61	10.36	2.25
Alternative II-B:									
1990	[1]11.40	9.54	1.86	[1]1.21	1.06	.15	[1]12.61	10.60	2.01
1991	11.39	9.58	1.81	1.21	1.07	.14	12.60	10.64	1.96
1992	11.40	9.59	1.80	1.21	1.07	.14	12.61	10.67	1.94
1993	11.40	9.61	1.79	1.21	1.08	.13	12.61	10.69	1.92
1994	11.41	9.60	1.81	1.21	1.09	.12	12.62	10.69	1.93
Alternative III:									
1990	[1]11.42	9.76	1.66	[1]1.21	1.10	.11	[1]12.63	10.85	1.78
1991	11.40	10.14	1.26	1.21	1.15	.06	12.61	11.29	1.32
1992	11.41	10.15	1.26	1.21	1.17	.04	12.62	11.32	1.30
1993	11.42	10.36	1.05	1.21	1.21	([3])	12.63	11.58	1.05
1994	11.43	10.77	.66	1.21	1.29	–.07	12.64	12.06	.58

[1]Income rates for 1983, 1985, and 1990 are adjusted to include the lump-sum payments from the general fund of the Treasury (or adjustments to such payments) for the cost of noncontributory wage credits for military service in 1940-56.

[2]Figures shown are preliminary.

[3]Income rate differs from cost rate by less than 0.005 percent of taxable payroll.

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

As stated previously, estimates of the operations of the trust funds during calendar years 1990-94 have been presented in the preceding tables of this section on the basis of four different sets of economic assumptions, because of the uncertainty of future economic and demographic developments. Under the provisions of the Social Security Act, however, estimates of the expected operations and status of the trust funds during the next 5 *fiscal* years are required to be shown in this report. Accordingly, detailed estimates of the expected operations and status of the trust funds during each fiscal year 1990-94 are shown in the remaining tables of this section for the two intermediate sets of assumptions (alternatives II-A and II-B) only. Similar detailed estimates are also shown on a calendar-year basis for 1990-94.

Data on the actual operations of the OASI Trust Fund for selected years during 1940-89, and estimates of the expected operations of the trust fund during 1990-94 on the basis of the intermediate sets of assumptions, are shown in tables 18 and 19 on a fiscal- and calendar-year basis, respectively. Corresponding figures on the operations of the DI Trust Fund are shown in tables 20 and 21. Operations of both trust funds combined are shown in tables 22 and 23. (Data relating to the operations of the two trust funds for years not shown in tables 18-23 are contained in past annual reports.) The figures shown in tables 19, 21, and 23 for 1981, 1982, 1987, and 1988 are adjusted to reflect 12 months of benefit payments in each year. Similarly, the estimated figures for 1992 and 1993 are also so adjusted.

TABLE 18.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED FISCAL YEARS 1940-89 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1990-94 ON THE BASIS OF THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Fiscal year[1]	Total	Net contributions[2]	Income from taxation of benefits	Payments from the general fund of the Treasury[3]	Net interest[4]	Total	Benefit payments[5]	Administrative expenses	Transfers to Railroad Retirement program	Interfund borrowing transfers[6]	Net increase in fund	Fund at end of period
Past experience:												
1940	$592	$550	—	—	$42	$28	$16	$12	—	—	$564	$1,745
1945	1,434	1,310	—	—	124	267	240	27	—	—	1,167	6,613
1950	2,367	2,106	—	$4	257	784	727	57	—	—	1,583	12,893
1955	5,525	5,087	—	—	438	4,427	4,333	103	-$10	—	1,098	21,141
1960	10,360	9,843	—	—	517	11,073	10,270	202	600	—	-713	20,829
1965	16,443	15,857	—	—	586	15,962	15,226	300	436	—	482	20,180
1970	31,746	29,955	—	442	1,350	27,321	26,268	474	579	—	4,425	32,616
1975	58,757	56,017	—	447	2,292	56,676	54,847	848	982	—	2,081	39,948
1980	100,051	97,608	—	557	1,886	103,228	100,626	1,160	1,442	—	-3,177	24,566
1981	121,572	119,016	—	540	2,016	122,304	119,421	1,298	1,585	—	-732	23,834
1982	126,629	124,246	—	675	1,708	137,928	134,661	1,474	1,793	—	-11,299	12,535
1983	148,434	136,127	—	6,096	6,210	151,827	148,025	1,551	2,251	$17,519	14,125	26,661
1984	160,729	156,553	$2,132	125	1,919	159,820	155,831	1,585	2,404	—	909	27,570
1985	179,881	175,305	3,151	105	1,321	169,210	165,310	1,589	2,310	-4,364	6,308	33,877
1986	195,331	187,007	3,329	2,293	2,701	178,534	174,340	1,609	2,585	-13,155	3,642	37,519
1987	206,846	199,554	3,323	69	3,900	186,101	182,003	1,541	2,557	—	20,745	58,265
1988	235,720	226,409	3,335	55	5,922	197,021	192,502	1,729	2,790	—	38,700	96,964
1989	260,457	247,116	3,638	43	9,660	209,102	204,600	1,657	2,845	—	51,355	148,319
Alternative II-A:												
1990	280,261	263,299	2,928	34	14,000	224,014	219,322	1,670	3,022	—	56,247	204,566
1991	305,458	281,982	4,718	6	18,752	239,081	234,161	1,769	3,150	—	66,378	270,944
1992	328,476	299,292	5,155	20	24,008	253,649	248,536	1,847	3,266	—	74,827	345,770
1993	355,578	320,604	5,600	15	29,359	268,475	263,153	1,917	3,405	—	87,103	432,873
1994	382,281	340,946	6,026	12	35,297	283,095	277,606	1,981	3,508	—	99,186	532,060
Alternative II-B:												
1990	280,120	263,104	2,928	34	14,054	224,014	219,322	1,670	3,022	—	56,106	204,425
1991	303,881	280,023	4,735	413	18,710	239,926	235,006	1,769	3,150	—	63,955	268,380
1992	325,491	296,345	5,194	20	23,931	255,543	250,413	1,845	3,285	—	69,947	338,327
1993	351,970	317,002	5,671	16	29,281	271,834	266,473	1,916	3,445	—	80,136	418,463
1994	378,374	337,015	6,139	12	35,208	288,351	282,788	1,987	3,576	—	90,023	508,486

See following page for footnotes.

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

[2]Beginning in 1983, includes government contributions on deemed wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $5,388 million representing (1) retroactive contributions on deemed wage credits for military service in 1957-82, less (2) all reimbursements received prior to 1983 for the costs of such credits. An adjustment to these amounts totaling $466 million was transferred to the trust fund from the general fund of the Treasury in 1984.

[3]Includes payments (1) in 1947-52 and in 1967 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1972-83, for costs of deemed wage credits for military service performed after 1956; and (3) in 1969 and later, for costs of benefits to certain uninsured persons who attained age 72 before 1968.

[4]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in October 1973, the figures shown include relatively small amounts of gifts to the fund. Beginning in 1983, these figures reflect payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1983 includes $6,677 million in interest on (1) retroactive government contributions on deemed wage credits for military service in 1957-82, and (2) unnegotiated benefit checks issued before 1983. The amount shown for 1984 includes an interest adjustment of $1,732 million on government contributions on deemed wage credits for military service in 1957-83. The amounts shown for 1985 and 1986 include interest adjustments of $76.5 million and $11.5 million, respectively, on unnegotiated checks issued before April 1985.

[5]Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $288 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[6]Positive figure represents amounts lent to the OASI Trust Fund from the DI and HI Trust Funds. Negative figures represent amounts repaid from the OASI Trust Fund to the DI and HI Trust Funds.

TABLE 19.—OPERATIONS OF THE OASI TRUST FUND DURING SELECTED CALENDAR YEARS 1940-89 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1990-94 ON THE BASIS OF THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

Calendar year	Income					Disbursements						
	Total	Net contributions[1]	Income from taxation of benefits	Payments from the general fund of the Treasury[2]	Net interest[3]	Total	Benefit payments[4]	Administrative expenses	Transfers to Railroad Retirement program	Interfund borrowing transfers[5]	Net increase in fund	Fund at end of period
Past experience:												
1940	$368	$325	—	—	$43	$62	$35	$26	—	—	$306	$2,031
1945	1,420	1,285	—	—	134	304	274	30	—	—	1,116	7,121
1950	2,928	2,667	—	$4	257	1,022	961	61	—	—	1,905	13,721
1955	6,167	5,713	—	—	454	5,079	4,968	119	-$7	—	1,087	21,663
1960	11,382	10,866	—	—	516	11,198	10,677	203	318	—	184	20,324
1965	16,610	16,017	—	—	593	17,501	16,737	328	436	—	-890	18,235
1970	32,220	30,256	—	449	1,515	29,848	28,798	471	579	—	2,371	32,454
1975	59,605	56,816	—	425	2,364	60,395	58,517	896	982	—	-790	36,987
1980	105,841	103,456	—	540	1,845	107,678	105,083	1,154	1,442	—	-1,837	22,823
1981	125,361	122,627	—	675	2,060	126,695	123,803	1,307	1,585	—	-1,334	21,490
1982	125,198	123,673	—	680	845	142,119	138,806	1,519	1,793	$17,519	598	22,088
1983	150,584	138,337	—	5,541	6,706	152,999	149,221	1,528	2,251	—	-2,416	19,672
1984	169,328	164,122	$2,835	105	2,266	161,883	157,841	1,638	2,404	—	7,445	27,117
1985	184,239	176,958	3,208	2,203	1,871	171,150	167,248	1,592	2,310	-4,364	8,725	35,842
1986	197,393	190,741	3,424	160	3,069	181,000	176,813	1,601	2,585	-13,155	3,239	39,081
1987	210,736	202,735	3,257	55	4,690	187,668	183,587	1,524	2,557	—	23,068	62,149
1988	240,770	229,775	3,384	43	7,568	200,020	195,454	1,776	2,790	—	40,750	102,899
1989	264,653	250,195	2,439	34	11,985	212,489	207,971	1,673	2,845	—	52,164	155,063
Alternative II-A:												
1990	287,145	266,466	4,400	6	16,272	228,105	223,423	1,660	3,022	—	59,039	214,103
1991	312,067	285,913	4,823	20	21,312	242,540	237,602	1,788	3,150	—	69,527	283,630
1992	336,479	304,582	5,268	15	26,614	257,361	252,231	1,864	3,266	—	79,118	362,748
1993	362,190	324,206	5,711	12	32,261	272,116	266,779	1,932	3,405	—	90,074	452,821
1994	388,636	344,169	6,131	9	38,327	286,720	281,218	1,995	3,508	—	101,916	554,737
Alternative II-B:												
1990	286,742	265,655	4,400	413	16,273	228,105	223,423	1,660	3,022	—	58,637	213,700
1991	309,816	283,664	4,846	20	21,287	243,666	238,728	1,788	3,150	—	66,150	279,850
1992	333,254	301,382	5,312	16	26,544	259,505	254,358	1,862	3,285	—	73,749	353,599
1993	358,273	320,294	5,791	12	32,176	275,869	270,490	1,934	3,445	—	82,404	436,002
1994	384,748	340,207	6,255	9	38,277	292,463	286,883	2,004	3,576	—	92,285	528,287

See following page for footnotes.

[1]Beginning in 1983, includes government contributions on deemed wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $5,388 million representing (1) retroactive contributions on deemed wage credits for military service in 1957-82, less (2) all reimbursements received prior to 1983 for the costs of such credits. An adjustment to these amounts totaling $466 million was transferred to the trust fund from the general fund of the Treasury in 1984.

[2]Includes payments (1) in 1947-51 and in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1971-82, for costs of deemed wage credits for military service performed after 1956; and (3) in 1968 and later, for costs of benefits to certain uninsured persons who attained age 72 before 1968.

[3]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in October 1973, the figures shown include relatively small amounts of gifts to the fund. Beginning in 1983, these figures reflect payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1983 includes $6,677 million in interest on (1) retroactive government contributions on deemed wage credits for military service in 1957-82, and (2) unnegotiated benefit checks issued before 1983. The amount shown for 1984 includes an interest adjustment of $1,732 million on government contributions on deemed wage credits for military service in 1957-83. The amount shown for 1985 includes an interest adjustment of $88 million on unnegotiated checks issued before April 1985.

[4]Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $288 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[5]Positive figure represents amounts lent to the OASI Trust Fund from the DI and HI Trust Funds. Negative figures represent amounts repaid from the OASI Trust Fund to the DI and HI Trust Funds.

TABLE 20.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED FISCAL YEARS 1960-89 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1990-94 ON THE BASIS OF THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Fiscal year[1]	Total	Net contributions[2]	Income from taxation of benefits	Payments from the general fund of the Treasury[3]	Net interest[4]	Total	Benefit payments[5]	Administrative expenses	Transfers to Railroad Retirement program	Interfund borrowing transfers[6]	Net increase in fund	Fund at end of period
Past experience:												
1960	$1,034	$987	—	—	$47	$533	$528	$32	-$27	—	$501	$2,167
1965	1,237	1,175	—	—	62	1,495	1,392	79	24	—	-257	2,007
1970	4,380	4,141	—	$16	223	2,954	2,795	149	10	—	1,426	5,104
1975	7,920	7,356	—	52	512	7,982	7,701	253	29	—	-62	8,191
1980	17,376	16,805	—	118	453	15,320	14,998	334	-12	—	2,056	7,680
1981	12,993	12,589	—	130	273	17,280	16,846	405	29	—	-4,288	3,392
1982	21,398	20,866	—	168	363	18,035	17,437	572	26	—	3,363	6,755
1983	21,846	19,036	—	1,295	1,515	18,231	17,544	659	28	-$5,081	-1,466	5,290
1984	17,732	16,394	$143	—	1,195	18,379	17,772	585	22	—	-647	4,643
1985	17,984	16,876	217	—	891	19,294	18,648	603	43	2,540	1,230	5,873
1986	20,130	18,139	229	1,017	746	20,196	19,529	600	68	2,541	2,475	8,348
1987	20,047	19,324	-16	—	738	21,222	20,427	738	57	—	-1,175	7,173
1988	22,369	21,736	56	—	577	22,269	21,405	803	61	—	100	7,273
1989	24,479	23,694	135	—	650	23,389	22,550	751	88	—	1,090	8,363
Alternative II-A:												
1990	28,394	27,475	158	—	761	24,951	24,142	763	46	—	3,444	11,807
1991	31,614	30,217	228	88	1,081	26,584	25,724	818	41	—	5,031	16,838
1992	33,800	32,060	262	—	1,478	28,289	27,389	863	37	—	5,511	22,349
1993	36,514	34,344	293	—	1,877	30,111	29,163	909	39	—	6,403	28,752
1994	39,167	36,528	326	—	2,313	32,094	31,097	955	42	—	7,074	35,825
Alternative II-B:												
1990	28,375	27,453	158	—	764	24,951	24,142	763	46	—	3,424	11,787
1991	31,412	30,007	229	102	1,074	26,673	25,813	818	41	—	4,739	16,527
1992	33,469	31,746	264	—	1,459	28,483	27,583	863	38	—	4,985	21,512
1993	36,090	33,953	297	—	1,840	30,445	29,496	909	41	—	5,645	27,157
1994	38,693	36,107	331	—	2,254	32,602	31,599	958	45	—	6,091	33,247

See following page for footnotes.

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

[2]Beginning in 1983, includes government contributions on deemed wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage c.edits, a net amount of $402 million representing (1) retroactive contributions on deemed wage credits for military service in 1957-82, less (2) all reimbursements received prior to 1983 for the costs of such credits. An adjustment to these amounts totaling $62 million was transferred to the trust fund from the general fund of the Treasury in 1984.

[3]Includes payments (1) in 1967 and later, for costs of noncontributory wage credits for military service performed before 1957; and (2) in 1972-83, for costs of deemed wage credits for military service performed after 1956.

[4]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the metbod of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in July 1974, the figures shown include relatively small amounts of gifts to the fund. Beginning in 1983, these figures reflect payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1983 includes $660 million in interest on (1) retroactive government contributions on deemed wage credits for military service in 1957-82, and (2) unnegotiated benefit checks issued before 1983. The amount shown for 1984 includes an interest adjustment of $169 million on government contributions on deemed wage credits for military service in 1957-83. The amount shown for 1985 includes an interest adjustment of $14.8 million on unnegotiated checks issued before April 1985.

[5]Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $48 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[6]Negative figure represents amounts lent by the DI Trust Fund to the OASI Trust Fund. Positive figures represent repayment of these amounts.

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

TABLE 21.—OPERATIONS OF THE DI TRUST FUND DURING SELECTED CALENDAR YEARS 1960-89 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1990-94 ON THE BASIS OF THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Calendar year	Total	Net contributions[1]	Income from taxation of benefits	Payments from the general fund of the Treasury[2]	Net interest[3]	Total	Benefit payments[4]	Administrative expenses	Transfers to Railroad Retirement program	Interfund borrowing transfers[5]	Net increase in fund	Fund at end of period
Past experience:												
1960	$1,063	$1,010	—	—	$53	$600	$568	$36	–$5	—	$464	$2,289
1965	1,247	1,188	—	—	59	1,687	1,573	90	24	—	–440	1,606
1970	4,774	4,481	—	$16	277	3,259	3,085	164	10	—	1,514	5,614
1975	8,035	7,444	—	90	502	8,790	8,505	256	29	—	–754	7,354
1980	13,871	13,255	—	130	485	15,872	15,515	368	–12	—	–2,001	3,629
1981	17,078	16,738	—	168	172	17,658	17,192	436	29	—	–580	3,049
1982	22,715	21,995	—	174	546	17,992	17,376	590	26	–$5,081	–358	2,691
1983	20,682	17,991	—	1,121	1,569	18,177	17,524	625	28	—	2,505	5,195
1984	17,309	15,945	$190	—	1,174	18,546	17,898	626	22	—	–1,237	3,959
1985	19,301	17,191	222	1,017	870	19,478	18,827	608	43	2,540	2,363	6,321
1986	19,439	18,399	238	—	803	20,522	19,853	600	68	2,541	1,459	7,780
1987	20,303	19,691	[6]–36	—	648	21,425	20,519	849	57	—	–1,122	6,658
1988	22,699	22,039	61	—	600	22,494	21,695	737	61	—	206	6,864
1989	24,795	23,993	95	—	707	23,753	22,911	754	88	—	1,041	7,905
Alternative II-A:												
1990	29,596	28,410	205	88	894	25,417	24,591	780	46	—	4,179	12,084
1991	32,150	30,638	236	—	1,277	26,983	26,111	831	41	—	5,167	17,251
1992	34,576	32,631	271	—	1,675	28,739	27,826	876	37	—	5,838	23,089
1993	37,124	34,730	301	—	2,093	30,586	29,625	922	39	—	6,538	29,626
1994	39,743	36,874	335	—	2,534	32,622	31,612	968	42	—	7,121	36,747
Alternative II-B:												
1990	29,522	28,322	205	102	893	25,417	24,591	780	46	—	4,104	12,009
1991	31,901	30,398	237	—	1,266	27,101	26,230	830	41	—	4,800	16,809
1992	34,207	32,287	273	—	1,648	28,957	28,044	875	38	—	5,250	22,059
1993	36,657	34,307	305	—	2,046	30,956	29,994	922	41	—	5,701	27,760
1994	39,256	36,450	340	—	2,465	33,173	32,157	972	45	—	6,082	33,842

See following page for footnotes.

[1]Beginning in 1983, includes government contributions on deemed wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $402 million representing (1) retroactive contributions on deemed wage credits for military service in 1957-82, less (2) all reimbursements received prior to 1983 for the costs of such credits. An adjustment to these amounts totaling $62 million was transferred to the trust fund from the general fund of the Treasury in 1984.

[2]Includes payments (1) in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; and (2) in 1971-82, for costs of deemed wage credits for military service performed after 1956.

[3]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust fund on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in July 1974, the figures shown include relatively small amounts of gifts to the fund. Beginning in 1983, these figures reflect payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust fund to the general fund on advance tax transfers is reflected. The amount shown for 1983 includes $660 million in interest on (1) retroactive government contributions on deemed wage credits for military service in 1957-82, and (2) unnegotiated benefit checks issued before 1983. The amount shown for 1984 includes an interest adjustment of $169 million on government contributions on deemed wage credits for military service in 1957-83. The amount shown for 1985 includes an interest adjustment of $14.8 million on unnegotiated checks issued before April 1985.

[4]Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $48 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[5]Negative figure represents amounts lent by the DI Trust Fund to the OASI Trust Fund. Positive figures represent repayment of these amounts.

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

TABLE 22.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED FISCAL YEARS 1960-89 AND ESTIMATED FUTURE OPERATIONS DURING FISCAL YEARS 1990-94 ON THE BASIS OF THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Fiscal year[1]	Total	Net contributions[2]	Income from taxation of benefits	Payments from the general fund of the Treasury[3]	Net interest[4]	Total	Benefit payments[5]	Administrative expenses	Transfers to Railroad Retirement program	Interfund borrowing transfers[6]	Net increase in funds	Funds at end of period
Past experience:												
1960	$11,394	$10,830	—	—	$564	$11,606	$10,798	$234	$574	—	-$212	$22,996
1965	17,681	17,032	—	—	648	17,456	16,618	379	459	—	224	22,187
1970	36,127	34,096	—	$458	1,572	30,275	29,063	623	589	—	5,851	37,720
1975	66,677	63,374	—	499	2,804	64,658	62,547	1,101	1,010	—	2,018	48,138
1980	117,427	114,413	—	675	2,339	118,548	115,624	1,494	1,430	—	-1,121	32,246
1981	134,565	131,606	—	670	2,289	139,584	136,267	1,703	1,614	—	-5,019	27,226
1982	148,027	145,113	—	843	2,072	155,963	152,097	2,046	1,820	—	-7,936	19,290
1983	170,280	155,163	—	7,391	7,725	170,058	165,569	2,210	2,279	$12,437	12,660	31,950
1984	178,461	172,946	$2,275	125	3,114	178,199	173,603	2,170	2,426	—	262	32,212
1985	197,865	192,181	3,368	105	2,211	188,504	183,959	2,192	2,353	-1,824	7,538	39,750
1986	215,461	205,146	3,558	3,310	3,447	198,730	193,869	2,209	2,653	-10,613	6,117	45,867
1987	226,893	218,878	3,307	69	4,638	207,323	202,430	2,279	2,614	—	19,570	65,437
1988	258,090	248,145	3,390	55	6,500	219,290	213,907	2,532	2,851	—	38,800	104,237
1989	284,936	270,811	3,772	43	10,310	232,491	227,150	2,407	2,934	—	52,445	156,682
Alternative II-A:												
1990	308,655	290,774	3,087	34	14,761	248,964	243,463	2,433	3,068	—	59,691	216,373
1991	337,073	312,199	4,946	94	19,834	265,665	259,885	2,588	3,191	—	71,408	287,781
1992	362,276	331,352	5,417	20	25,487	281,938	275,924	2,710	3,303	—	80,338	368,119
1993	392,093	354,948	5,894	15	31,235	298,587	292,317	2,826	3,444	—	93,506	461,625
1994	421,448	377,474	6,352	12	37,610	315,188	308,702	2,936	3,550	—	106,260	567,885
Alternative II-B:												
1990	308,495	290,557	3,087	34	14,818	248,965	243,464	2,433	3,068	—	59,530	216,212
1991	335,293	310,030	4,964	515	19,784	266,599	260,819	2,588	3,191	—	68,694	284,907
1992	358,960	328,091	5,458	20	25,391	284,027	277,996	2,708	3,323	—	74,933	359,839
1993	388,060	350,955	5,968	16	31,121	302,279	295,968	2,825	3,486	—	85,780	445,619
1994	417,067	373,122	6,470	12	37,463	320,953	314,387	2,945	3,621	—	96,114	541,733

See following page for footnotes.

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

[2]Beginning in 1983, includes government contributions on deemed wage credits for military service in 1957 and later. The amount sbown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $5,790 million representing (1) retroactive contributions on deemed wage credits for military service in 1957-82, less (2) all reimbursements received prior to 1983 for the costs of such credits. An adjustment to these amounts totaling $528 million was transferred to the trust funds from the general fund of the Treasury in 1984.

[3]Includes payments (1) in 1947-52 and in 1967 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1972-83, for costs of deemed wage credits for military service performed after 1956; and (3) in 1969 and later, for costs of benefits to certain uninsured persons who attained age 72 before 1968.

[4]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust funds on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in October 1973, the figures shown include relatively small amounts of gifts to the funds. Beginning in 1983, these figures reflect payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust funds to the general fund of the Treasury on advance tax transfers is reflected. The amount shown for 1983 includes $7,337 million in interest on (1) retroactive government contributions on deemed wage credits for military service in 1957-82, and (2) unnegotiated benefit checks issued before 1983. The amount shown for 1984 includes an interest adjustment of $1,901 million on government contributions on deemed wage credits for military service in 1957-83. The amounts shown for 1985 and 1986 include interest adjustments of $91.3 million and $11.5 million, respectively, on unnegotiated checks issued before April 1985.

[5]Beginning in 1967, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $336 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[6]Positive figure represents amounts lent to the OASI Trust Fund from the HI Trust Fund. Negative figures represent amounts repaid from the OASI Trust Fund to the HI Trust Fund.

TABLE 23.—OPERATIONS OF THE OASI AND DI TRUST FUNDS, COMBINED, DURING SELECTED CALENDAR YEARS 1960-89 AND ESTIMATED FUTURE OPERATIONS DURING CALENDAR YEARS 1990-94 ON THE BASIS OF THE INTERMEDIATE SETS OF ASSUMPTIONS

[In millions]

	Income					Disbursements						
Calendar year	Total	Net contributions[1]	Income from taxation of benefits	Payments from the general fund of the Treasury[2]	Net interest[3]	Total	Benefit payments[4]	Administrative expenses	Transfers to Railroad Retirement program	Interfund borrowing transfers[5]	Net increase in funds	Funds at end of period
Past experience:												
1960	$12,445	$11,876	—	—	$569	$11,798	$11,245	$240	$314	—	$647	$22,613
1965	17,857	17,205	—	—	651	19,187	18,311	418	459	—	−1,331	19,841
1970	36,993	34,737	—	$465	1,791	33,108	31,884	635	589	—	3,886	38,068
1975	67,640	64,259	—	515	2,866	69,184	67,022	1,152	1,010	—	−1,544	44,342
1980	119,712	116,711	—	670	2,330	123,550	120,598	1,522	1,430	—	−3,838	26,453
1981	142,438	139,364	—	843	2,231	144,352	140,995	1,743	1,614	—	−1,914	24,539
1982	147,913	145,667	—	854	1,391	160,111	156,182	2,109	1,820	$12,437	239	24,778
1983	171,266	156,328	—	6,662	8,276	171,177	166,744	2,153	2,279	—	89	24,867
1984	186,637	180,066	$3,025	105	3,440	180,429	175,739	2,264	2,426	—	6,208	31,075
1985	203,540	194,149	3,430	3,220	2,741	190,628	186,075	2,200	2,353	−1,824	11,088	42,163
1986	216,833	209,140	3,662	160	3,871	201,522	196,667	2,202	2,653	−10,613	4,698	46,861
1987	231,039	222,425	3,221	55	5,338	209,093	204,106	2,373	2,614	—	21,946	68,807
1988	263,469	251,814	3,445	43	8,168	222,514	217,149	2,513	2,851	—	40,955	109,762
1989	289,448	274,189	2,534	34	12,692	236,242	230,882	2,427	2,934	—	53,206	162,968
Alternative II-A:												
1990	316,741	294,876	4,605	94	17,166	253,523	248,014	2,440	3,068	—	63,218	226,187
1991	344,218	316,551	5,059	20	22,588	269,523	263,713	2,619	3,191	—	74,694	300,881
1992	371,056	337,213	5,538	15	28,289	286,100	280,057	2,740	3,303	—	84,956	385,837
1993	399,313	358,936	6,013	12	34,353	302,702	296,404	2,854	3,444	—	96,611	482,448
1994	428,379	381,043	6,466	9	40,861	319,342	312,830	2,962	3,550	—	109,036	591,484
Alternative II-B:												
1990	316,264	293,977	4,605	515	17,166	253,523	248,014	2,440	3,068	—	62,741	225,709
1991	341,718	314,062	5,083	20	22,553	270,768	264,958	2,618	3,191	—	70,950	296,659
1992	367,461	333,669	5,585	16	28,192	288,463	282,402	2,738	3,323	—	78,999	375,657
1993	394,931	354,601	6,096	12	34,222	306,825	300,484	2,856	3,486	—	88,105	463,762
1994	424,003	376,657	6,595	9	40,742	325,636	319,040	2,976	3,621	—	98,367	562,129

See following page for footnotes.

[1]Beginning in 1983, includes government contributions on deemed wage credits for military service in 1957 and later. The amount shown for 1983 includes, in addition to the annual contributions on 1983 wage credits, a net amount of $5,790 million representing (1) retroactive contributions on deemed wage credits for military service in 1957-82, less (2) all reimbursements received prior to 1983 for the costs of such credits. An adjustment to these amounts totaling $528 million was transferred to the trust funds from the general fund of the Treasury in 1984.

[2]Includes payments (1) in 1947-51 and in 1966 and later, for costs of noncontributory wage credits for military service performed before 1957; (2) in 1971-82, for costs of deemed wage credits for military service performed after 1956; and (3) in 1968 and later, for costs of benefits to certain uninsured persons who attained age 72 before 1968.

[3]Net interest includes net profits or losses on marketable investments. Beginning in 1967, administrative expenses are charged currently to the trust funds on an estimated basis, with a final adjustment, including interest, made in the following fiscal year. The amounts of these interest adjustments are included in net interest. For years prior to 1967, a description of the method of accounting for administrative expenses is contained in the 1970 Annual Report. Beginning in October 1973, the figures shown include relatively small amounts of gifts to the funds. Beginning in 1983, these figures reflect payments from a borrowing trust fund to a lending trust fund for interest on amounts owed under the interfund borrowing provisions. Also, beginning in 1983, interest paid from the trust funds to the general fund of the Treasury on advance tax transfers is reflected. The amount shown for 1983 includes $7,337 million in interest on (1) retroactive government contributions on deemed wage credits for military service in 1957-82, and (2) unnegotiated benefit checks issued before 1983. The amount shown for 1984 includes an interest adjustment of $1,901 million on government contributions on deemed wage credits for military service in 1957-83. The amount shown for 1985 includes an interest adjustment of $102.8 million on unnegotiated checks issued before April 1985.

[4]Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, amounts are reduced by amount of reimbursement for unnegotiated benefit checks. The amount shown for 1983 is reduced by $336 million for all unnegotiated checks issued before 1983; reductions in subsequent years are relatively small.

[5]Positive figure represents amounts lent to the OASI Trust Fund from the HI Trust Fund. Negative figures represent amounts repaid from the OASI Trust Fund to the HI Trust Fund.

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

(Required by section 201(c) of the Social Security Act)

Effective January 1957, monthly benefits have been payable from the OASI Trust Fund to disabled children aged 18 and over of retired and deceased workers in those cases for which the disability began before age 18. The age before which disability is required to have begun was subsequently changed to age 22. Effective February 1968, reduced monthly benefits have been payable from this trust fund to disabled widows and widowers at ages 50 and above.

On December 31, 1989, about 651,000 persons were receiving monthly benefits from the OASI Trust Fund because of their disabilities or the disabilities of children. This total includes 52,000 mothers and fathers (wives or husbands under age 65 of retired-worker beneficiaries and widows or widowers of deceased insured workers) who met all other qualifying requirements and were receiving unreduced benefits solely because they had disabled-child beneficiaries (or disabled children aged 16 or 17) in their care. Benefits paid from this trust fund to the persons described above totaled $2,669 million in calendar year 1989. Table 24 shows these and similar figures for selected calendar years during 1960-89, and estimated experience for 1990-94.

TABLE 24.— BENEFITS PAYABLE FROM THE OASI TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES, SELECTED CALENDAR YEARS 1960-94

[Beneficiaries in thousands; benefit payments in millions]

Calendar year	Disabled beneficiaries, end of year			Amount of benefit payments[1]		
	Total	Children[2]	Widows-widowers	Total	Children[2]	Widows-widowers[3]
Past experience:						
1960	117	117	—	$59	$59	—
1965	214	214	—	134	134	—
1970	316	281	36	301	260	$41
1975	435	376	58	664	560	104
1980	519	460	59	1,223	1,097	126
1981	527	473	54	1,421	1,296	125
1982	533	484	49	1,566	1,451	115
1983	550	504	46	1,691	1,581	110
1984	574	528	47	1,882	1,707	175
1985	594	547	47	2,043	1,860	183
1986	614	565	49	2,198	2,001	197
1987	629	580	49	2,314	2,111	203
1988	640	591	49	2,503	2,292	211
1989	651	602	49	2,669	2,448	221
Alternative II-A:						
1990	667	616	50	2,907	2,668	239
1991	684	632	52	3,126	2,867	259
1992	702	648	55	3,365	3,079	287
1993	721	664	57	3,611	3,296	315
1994	739	681	59	3,860	3,521	339
Alternative II-B:						
1990	667	616	50	2,907	2,668	239
1991	684	632	52	3,141	2,880	261
1992	702	648	55	3,393	3,105	289
1993	721	664	57	3,659	3,341	318
1994	739	681	59	3,936	3,591	345

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

[2] Also includes certain mothers and fathers (see text).

[3] In 1983 and prior years, reflects the offsetting effect of lower benefits payable to disabled widows and widowers who continue to receive benefits after attaining age 60 (62, for disabled widowers, prior to 1973) as compared to the higher nondisabled widow's and widower's benefits that would otherwise be payable.

Total benefit payments from the OASI Trust Fund with respect to disabled beneficiaries are estimated to increase from $2,907 million in calendar year 1990 to $3,860 million in calendar year 1994, based on alternative II-A, and to $3,936 million in calendar year 1994, based on alternative II-B.

In calendar year 1989, benefit payments (including expenditures for vocational rehabilitation services) with respect to disabled persons from the OASI Trust Fund and from the DI Trust Fund (including payments from the latter fund to all children and spouses of disabled-worker beneficiaries) totaled $25,581 million, of which $2,669 million, or 10.4 percent, represented payments from the OASI Trust Fund. These and similar figures for selected calendar years during 1960-89 and estimates for calendar years 1990-94 are presented in table 25.

TABLE 25.—BENEFIT PAYMENTS UNDER THE OASDI PROGRAM WITH RESPECT TO DISABLED BENEFICIARIES, BY TRUST FUND, SELECTED CALENDAR YEARS 1960-94

[Amounts in millions]

Calendar year	Total[1]	DI Trust Fund[2]	OASI Trust Fund: Amount[3]	OASI Trust Fund: Percentage of total
Past experience:				
1960	$627	$568	$59	9.4
1965	1,707	1,573	134	7.9
1970	3,386	3,085	301	8.9
1975	9,169	8,505	664	7.2
1980	16,738	15,515	1,223	7.3
1981	18,613	17,192	1,421	7.6
1982	18,942	17,376	1,566	8.3
1983	19,215	17,524	1,691	8.8
1984	19,782	17,900	1,882	9.5
1985	20,879	18,836	2,043	9.8
1986	22,054	19,856	2,198	10.0
1987	22,841	20,527	2,314	10.1
1988	24,211	21,708	2,503	10.3
1989	25,581	22,911	2,669	10.4
Alternative II-A:				
1990	27,501	24,595	2,907	10.6
1991	29,241	26,115	3,126	10.7
1992	31,195	27,830	3,365	10.8
1993	33,240	29,629	3,611	10.9
1994	35,477	31,616	3,860	10.9
Alternative II-B:				
1990	27,501	24,595	2,907	10.6
1991	29,375	26,234	3,141	10.7
1992	31,441	28,048	3,393	10.8
1993	33,657	29,997	3,659	10.9
1994	36,097	32,161	3,936	10.9

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

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

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

E. ACTUARIAL STATUS OF THE TRUST FUNDS

Historically, the actuarial status of the OASDI program has been measured by the actuarial balance, as described earlier in this section. Recent annual reports have shown both medium-range and long-range actuarial balances, which have been computed, respectively, for the 25-year and 75-year valuation periods beginning with the calendar year of issuance of the report. Thus, the medium-range and long-range actuarial balances shown in this report, calculated on a present-value basis, pertain to the periods 1990-2014 and 1990-2064, respectively. Also presented is the actuarial balance for the first 50 years of the 75-year projection period.

As described earlier in this section, a single measure of the actuarial balance over a long period may not reveal problems which could occur during that period. Therefore, in addition to the medium-range and long-range actuarial balances, other indicators of the financial conditions of the program are shown in this report. One is the series of projected annual balances (that is, the year-by-year differences between the projected income rates and cost rates), with particular attention being paid to the level of the annual balances at the end of the long-range period and the time at which the annual balances may change from positive to negative values. Another is the series of projected contingency fund ratios, with particular attention being paid to the amount and year of maximum fund ratio accumulation and to the year of exhaustion of the funds. These additional indicators are defined in the introduction to this section.

The estimates are sensitive to changes in the underlying economic and demographic assumptions. The degree of sensitivity, however, varies considerably among the various assumptions. For example, variations in assumed fertility rates have little effect on the estimates for the early years, because almost all of the covered workers and beneficiaries projected for the early years were born prior to the start of the projection period. However, lower fertility rates have large impacts on the actuarial balance in the later years. Variations in economic factors, such as interest rates and increases in wages and prices, have significant effects on the estimates for the short term, as well as for the long term. In general, the degree of confidence that can be placed in the assumptions and estimates is greater for the earlier years than for the later years. Nonetheless, even for the earlier years, the estimates are only an indication of the expected trend and general range of future program experience. Appendix B contains a more detailed discussion of the effects on the estimates of varying certain economic and demographic assumptions.

Table 26 presents a comparison of the estimated income rates and cost rates by trust fund and alternative. As previously mentioned, the annual income rate excludes net interest income, as well as certain other transfers from the general fund of the Treasury. Detailed long-range projections of trust-fund operations, in nominal dollar amounts, are shown in Appendix F.

The projections for OASDI under the intermediate alternatives (II-A and II-B) show income rates that increase slowly and steadily due to the combination of the flat payroll tax rate and the gradually increasing effect of the taxation of benefits. The pattern followed by the cost rates is much different. Costs as a percent of taxable payroll are projected to be relatively stable for about 15 years, to increase rather rapidly for the next 30 years (through 2035), to decline slightly for the next 10 years, and to increase steadily thereafter. The relatively high cost rates during the third 25-year subperiod are at a level of about 16.1 percent of taxable payroll under the II-A assumptions and about 16.9 percent of taxable payroll under the II-B assumptions. The income rate during the third 25-year subperiod covers about 81 percent of the cost under alternative II-A and about 78 percent of the cost under alternative II-B.

Attention is called to the projected pattern of the OASDI annual balances (that is, the difference between the income rates and the cost rates). Under alternative II-A assumptions the annual balances are positive for about 30 years and are negative thereafter. This annual deficit rises to 3.42 percent of taxable payroll by 2065. The pattern is similar under the alternative II-B assumptions, but early year positive balances are smaller and later deficits are larger. The deficit rises to 4.16 percent of taxable payroll by 2065 under alternative II-B.

TABLE 26.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1990-2065

[As a percentage of taxable payroll]

Calendar year	OASI			DI			Total		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Alternative I:									
1990	11.36	9.47	1.89	1.21	1.04	0.17	12.58	10.52	2.06
1991	11.39	9.36	2.03	1.21	1.02	.19	12.59	10.38	2.22
1992	11.39	9.21	2.17	1.21	.99	.22	12.60	10.21	2.39
1993	11.39	9.08	2.31	1.21	.97	.24	12.60	10.05	2.55
1994	11.39	8.92	2.47	1.21	.96	.25	12.60	9.88	2.72
1995	11.39	8.77	2.62	1.21	.95	.26	12.60	9.72	2.88
1996	11.39	8.63	2.76	1.21	.95	.27	12.60	9.58	3.03
1997	11.39	8.50	2.89	1.21	.95	.27	12.60	9.44	3.16
1998	11.39	8.37	3.01	1.21	.95	.26	12.60	9.32	3.28
1999	11.39	8.26	3.13	1.21	.96	.25	12.60	9.22	3.38
2000	11.18	8.19	2.99	1.43	.97	.46	12.61	9.16	3.45
2005	11.24	7.92	3.32	1.44	1.08	.36	12.68	9.00	3.67
2010	11.30	8.13	3.17	1.44	1.23	.21	12.74	9.36	3.38
2015	11.35	8.97	2.38	1.45	1.32	.13	12.80	10.29	2.50
2020	11.42	10.17	1.25	1.45	1.36	.09	12.87	11.53	1.34
2025	11.47	11.11	.37	1.45	1.42	.03	12.92	12.53	.40
2030	11.51	11.58	-.07	1.45	1.39	.06	12.96	12.97	-.01
2035	11.51	11.51	.00	1.45	1.34	.11	12.96	12.85	.11
2040	11.50	11.09	.41	1.45	1.32	.13	12.95	12.42	.53
2045	11.49	10.71	.77	1.45	1.35	.10	12.94	12.07	.87
2050	11.48	10.55	.94	1.45	1.36	.09	12.94	11.91	1.03
2055	11.49	10.50	.98	1.45	1.36	.09	12.94	11.86	1.08
2060	11.49	10.45	1.04	1.45	1.34	.11	12.94	11.79	1.15
2065	11.48	10.35	1.13	1.45	1.34	.11	12.93	11.69	1.24
Alternative II-A:									
1990	11.38	9.51	1.87	1.21	1.06	.15	12.59	10.57	2.03
1991	11.39	9.46	1.93	1.21	1.05	.16	12.60	10.51	2.09
1992	11.39	9.42	1.98	1.21	1.05	.16	12.60	10.47	2.13
1993	11.40	9.37	2.03	1.21	1.05	.16	12.61	10.42	2.19
1994	11.40	9.31	2.09	1.21	1.06	.15	12.61	10.36	2.25
1995	11.40	9.23	2.17	1.21	1.07	.14	12.61	10.30	2.31
1996	11.40	9.14	2.26	1.21	1.08	.13	12.61	10.22	2.40
1997	11.40	9.06	2.35	1.21	1.09	.12	12.61	10.15	2.47
1998	11.40	8.98	2.42	1.21	1.11	.10	12.62	10.09	2.53
1999	11.40	8.92	2.49	1.21	1.13	.08	12.62	10.05	2.57
2000	11.20	8.89	2.31	1.43	1.15	.28	12.63	10.04	2.59

TABLE 26.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1990-2065 (Cont.)

[As a percentage of taxable payroll]

Calendar year	OASI			DI			Total		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Alternative II-A: (Cont.)									
2005	11.27	8.76	2.51	1.44	1.30	0.14	12.71	10.06	2.65
2010	11.34	9.07	2.28	1.45	1.50	-.06	12.79	10.57	2.22
2015	11.41	10.11	1.30	1.45	1.64	-.18	12.86	11.74	1.12
2020	11.49	11.60	-.11	1.46	1.71	-.25	12.95	13.31	-.36
2025	11.56	12.91	-1.35	1.46	1.80	-.34	13.02	14.72	-1.69
2030	11.62	13.81	-2.19	1.46	1.79	-.33	13.08	15.60	-2.52
2035	11.64	14.14	-2.49	1.46	1.75	-.29	13.10	15.89	-2.79
2040	11.65	14.04	-2.39	1.46	1.76	-.30	13.11	15.80	-2.69
2045	11.65	13.94	-2.29	1.46	1.83	-.36	13.11	15.76	-2.65
2050	11.66	14.08	-2.43	1.46	1.87	-.40	13.12	15.95	-2.83
2055	11.68	14.37	-2.70	1.46	1.87	-.41	13.14	16.25	-3.11
2060	11.69	14.61	-2.92	1.46	1.85	-.39	13.15	16.46	-3.31
2065	11.70	14.73	-3.03	1.46	1.85	-.39	13.16	16.58	-3.42
Alternative II-B:									
1990	11.40	9.54	1.86	1.21	1.06	.15	12.61	10.60	2.01
1991	11.39	9.58	1.81	1.21	1.07	.14	12.60	10.64	1.96
1992	11.40	9.59	1.80	1.21	1.07	.14	12.61	10.67	1.94
1993	11.40	9.61	1.79	1.21	1.08	.13	12.61	10.69	1.92
1994	11.41	9.60	1.81	1.21	1.09	.12	12.62	10.69	1.93
1995	11.41	9.57	1.84	1.21	1.10	.11	12.62	10.67	1.95
1996	11.41	9.51	1.90	1.21	1.11	.10	12.62	10.63	2.00
1997	11.41	9.46	1.95	1.21	1.13	.08	12.62	10.59	2.03
1998	11.41	9.41	2.00	1.21	1.15	.06	12.63	10.56	2.06
1999	11.41	9.37	2.04	1.21	1.17	.04	12.63	10.54	2.09
2000	11.21	9.36	1.85	1.43	1.20	.24	12.65	10.56	2.09
2005	11.29	9.24	2.05	1.44	1.35	.09	12.74	10.59	2.14
2010	11.37	9.52	1.85	1.45	1.56	-.11	12.82	11.08	1.74
2015	11.43	10.56	.88	1.46	1.70	-.24	12.89	12.25	.64
2020	11.52	12.09	-.57	1.46	1.77	-.31	12.98	13.86	-.88
2025	11.60	13.46	-1.86	1.46	1.87	-.41	13.06	15.33	-2.27
2030	11.65	14.43	-2.77	1.46	1.85	-.39	13.12	16.28	-3.16
2035	11.68	14.80	-3.12	1.46	1.81	-.35	13.14	16.62	-3.47
2040	11.68	14.73	-3.04	1.46	1.82	-.36	13.15	16.55	-3.40
2045	11.68	14.62	-2.94	1.46	1.89	-.43	13.15	16.52	-3.37
2050	11.69	14.77	-3.07	1.47	1.93	-.47	13.16	16.70	-3.54
2055	11.71	15.06	-3.35	1.47	1.94	-.47	13.18	17.00	-3.82
2060	11.73	15.31	-3.58	1.47	1.92	-.45	13.19	17.23	-4.04
2065	11.73	15.44	-3.71	1.47	1.92	-.45	13.20	17.36	-4.16
Alternative III:									
1990	11.42	9.76	1.66	1.21	1.10	.11	12.63	10.85	1.78
1991	11.40	10.14	1.26	1.21	1.15	.06	12.61	11.29	1.32
1992	11.41	10.15	1.26	1.21	1.17	.04	12.62	11.32	1.30
1993	11.42	10.36	1.05	1.21	1.21	.00	12.63	11.58	1.05
1994	11.43	10.77	.66	1.21	1.29	-.07	12.64	12.06	.58
1995	11.43	10.70	.74	1.21	1.31	-.10	12.65	12.01	.64
1996	11.44	10.69	.75	1.21	1.35	-.13	12.65	12.04	.62
1997	11.44	10.67	.77	1.22	1.39	-.18	12.65	12.06	.59
1998	11.44	10.66	.78	1.22	1.44	-.23	12.66	12.11	.55
1999	11.44	10.69	.76	1.22	1.50	-.28	12.66	12.18	.48
2000	11.25	10.70	.55	1.44	1.53	-.09	12.68	12.23	.46
2005	11.34	10.60	.74	1.45	1.71	-.26	12.79	12.31	.48
2010	11.43	10.87	.55	1.46	1.96	-.50	12.89	12.84	.05
2015	11.50	12.05	-.55	1.47	2.15	-.68	12.97	14.20	-1.23
2020	11.61	13.88	-2.28	1.47	2.26	-.79	13.08	16.14	-3.07
2025	11.71	15.70	-3.99	1.47	2.41	-.94	13.18	18.11	-4.93
2030	11.79	17.27	-5.48	1.48	2.42	-.94	13.27	19.69	-6.42
2035	11.85	18.30	-6.45	1.48	2.42	-.94	13.33	20.72	-7.39
2040	11.89	18.88	-6.99	1.48	2.48	-1.00	13.36	21.35	-7.99
2045	11.92	19.44	-7.52	1.48	2.62	-1.14	13.40	22.07	-8.67
2050	11.97	20.34	-8.37	1.48	2.72	-1.24	13.45	23.06	-9.61
2055	12.02	21.46	-9.43	1.48	2.75	-1.27	13.51	24.21	-10.70
2060	12.08	22.51	-10.43	1.48	2.72	-1.23	13.56	25.23	-11.66
2065	12.12	23.31	-11.19	1.48	2.71	-1.23	13.60	26.02	-12.42

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

Table 27 summarizes, on a present-value basis, the projected annual figures presented in the previous table. Because any form of summarization involves choices of what to include and exclude in the summarized values, it is important to recognize that these summarized values should not be used as if they uniquely determined the status of the program or the financial effect of proposed modifications to it. These values are principally indicators that point towards possible significant situations projected for the future. As such, they are useful tools in an assessment of the long-range financial condition of the program.

Table 27 first shows the summarized rates for each of the 25-year subperiods, excluding the funds on hand at the beginning of the period. The table next shows the summarized rates including the funds on hand for valuation periods of the first 25 years, the first 50 years, and the entire 75-year period.

The values in table 27 show that the program would generally operate with positive balances over shorter valuation periods. For the first 25-year valuation period the summarizing values indicate positive balances of 3.40 percent of taxable payroll under alternative I, 2.58 percent under alternative II-A, 2.17 percent under II-B, and 0.77 percent under III. Thus, the program is more than adequately financed for the next 25-year valuation period under all four projections. Over a 50-year valuation period, 1990-2039, the program would have positive balances of 2.11 percent under alternative I, 0.69 percent under II-A, and 0.17 percent under II-B; it would have a deficit of 1.83 percent under the most pessimistic assumptions of alternative III. Thus, the program is more than adequately financed for the next 50-year valuation period under all but the most pessimistic set of assumptions.

On the other hand, for the entire 75-year valuation period, the program would have actuarial deficits except for the most optimistic set of assumptions, alternative I. The actuarial balance for this long-range valuation period is projected to be –0.31 percent of taxable payroll under alternative II-A and –0.91 percent of taxable payroll under alternative II-B. Because the 75-year income rate is equal to 97.7 percent of the long-range cost rate under alternative II-A, the program is said to be adequately financed under these assumptions. The program has traditionally been considered to be adequately financed over the next 75 years when the long-range income rate is between 95 percent and 105 percent of the long-range cost rate. However, under alternative II-B assumptions the long-range income rate is only 93.5 percent of the long-range cost rate. Considered separately, the OASI program is adequately financed over the next 75 years under alternative II-A (the long-range income rate is equal to 98.8 percent of the long-range cost rate), but under alternative II-B the long-range income rate is equal to 94.4 percent of the long-range cost rate. For the DI program, the long-range income rate is estimated to be less than 90 percent of the long-range cost rate under both alternative II-A and alternative II-B.

TABLE 27.—COMPARISON OF SUMMARIZED INCOME RATES AND COST RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1990-2064

[As a percentage of taxable payroll]

Calendar year	OASI Income rate	OASI Cost rate	OASI Balance	DI Income rate	DI Cost rate	DI Balance	Total Income rate	Total Cost rate	Total Balance
Alternative I:									
25-year subperiods:[1]									
1990-2014	11.29	8.46	2.83	1.34	1.07	0.27	12.63	9.53	3.10
2015-2039	11.44	10.86	.59	1.45	1.37	.08	12.89	12.23	.66
2040-2064	11.47	10.62	.84	1.45	1.35	.10	12.91	11.97	.94
Valuation periods:[2]									
25 years: 1990-2014	11.58	8.46	3.12	1.36	1.07	.28	12.93	9.53	3.40
50 years: 1990-2039	11.51	9.58	1.93	1.40	1.21	.19	12.91	10.80	2.11
75 years: 1990-2064	11.50	9.89	1.60	1.41	1.26	.16	12.91	11.15	1.76
Alternative II-A:									
25-year subperiods:[1]									
1990-2014	11.31	9.14	2.18	1.34	1.26	.09	12.66	10.39	2.26
2015-2039	11.54	12.80	−1.27	1.46	1.75	−.30	12.99	14.55	−1.56
2040-2064	11.64	14.28	−2.63	1.46	1.85	−.39	13.10	16.12	−3.02
Valuation periods:[2]									
25 years: 1990-2014	11.61	9.14	2.48	1.36	1.26	.10	12.97	10.39	2.58
50 years: 1990-2039	11.58	10.81	.77	1.40	1.48	−.08	12.98	12.29	.69
75 years: 1990-2064	11.60	11.74	−.15	1.42	1.58	−.16	13.01	13.32	−.31
Alternative II-B:									
25-year subperiods:[1]									
1990-2014	11.33	9.53	1.80	1.34	1.30	.04	12.67	10.83	1.84
2015-2039	11.57	13.38	−1.82	1.46	1.82	−.36	13.02	15.20	−2.18
2040-2064	11.68	14.97	−3.30	1.46	1.91	−.45	13.14	16.89	−3.75
Valuation periods:[2]									
25 years: 1990-2014	11.63	9.53	2.11	1.36	1.30	.06	12.99	10.83	2.17
50 years: 1990-2039	11.60	11.30	.30	1.40	1.54	−.13	13.01	12.83	.17
75 years: 1990-2064	11.62	12.31	−.69	1.42	1.64	−.22	13.04	13.95	−.91
Alternative III:									
25-year subperiods:[1]									
1990-2014	11.36	10.70	.66	1.34	1.59	−.24	12.71	12.29	.42
2015-2039	11.68	15.88	−4.20	1.47	2.36	−.89	13.15	18.24	−5.09
2040-2064	11.96	20.80	−8.84	1.48	2.68	−1.20	13.43	23.48	−10.05
Valuation periods:[2]									
25 years: 1990-2014	11.70	10.70	1.00	1.36	1.59	−.23	13.07	12.29	.77
50 years: 1990-2039	11.69	13.00	−1.31	1.41	1.93	−.52	13.10	14.93	−1.83
75 years: 1990-2064	11.76	14.94	−3.18	1.43	2.12	−.69	13.19	17.06	−3.87

[1]Income rates do not include beginning trust fund balances.

[2]Income rates do include beginning trust fund balances.

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

Also of interest are the long-range financial conditions of the separate OASI and DI programs. As may be concluded from tables 26 and 27, the OASI program is in much better financial condition than the DI program. The OASI program could operate for several decades (through at least 2040) into the future under all but the most pessimistic assumptions (alternative III), but the DI program would be able to do so only under the most optimistic assumptions (alternative I). The OASI program is projected to have long-range actuarial deficits of 0.15 percent and 0.69 percent of taxable payroll under the II-A and II-B assumptions, respectively, over the 75-year valuation period (including the beginning trust fund balances). The DI program is projected to have long-range actuarial deficits of 0.16 percent and 0.22 percent of taxable payroll under alternatives II-A and II-B, respectively (including the beginning trust fund balances).

Tables 26 and 27 also illustrate the range of possible long-range costs and actuarial balances. For OASI, the cost rate projected for 2065 ranges from a low of 10.35 percent of taxable payroll under alternative I to a high of 23.31 percent of taxable payroll under alternative III. The balances for that year are projected to range from a positive balance of 1.13 percent under alternative I to a deficit of 11.19 percent under alternative III. The summarized cost rate for the 75-year valuation period is projected to range from a low of 9.89 percent under alternative I to a high of 14.94 percent under alternative III. The long-range actuarial balances for the entire 75-year period range from a positive balance of 1.60 percent under alternative I to a deficit of 3.18 percent of taxable payroll under alternative III.

The spread in the DI cost for 2065 is from a low of 1.34 percent of taxable payroll under alternative I to a high of 2.71 percent of taxable payroll under alternative III. The summarized cost rate for the 75-year period ranges from a low of 1.26 percent of taxable payroll under alternative I to a high of 2.12 percent of taxable payroll under alternative III. The DI long-range actuarial balance ranges from a positive balance of 0.16 percent of taxable payroll under alternative I to a deficit of 0.69 percent of taxable payroll under alternative III.

The spread between the lowest and highest projected annual cost rates and balances grows wider as the projections move further into the future. For OASDI the projected spread of cost rates in 2000 is 3.07 percent of taxable payroll (from 9.16 percent to 12.23 percent for alternatives I and III, respectively). By 2025 the spread is projected to increase to 5.58 percent of taxable payroll (from 12.53 percent to 18.11 percent) and by 2050 it is 11.15 percent of taxable payroll (from 11.91 percent to 23.06 percent). Because of the even greater uncertainty in projecting costs and revenues in the more distant future, the Board recommends caution in using the specific values projected.

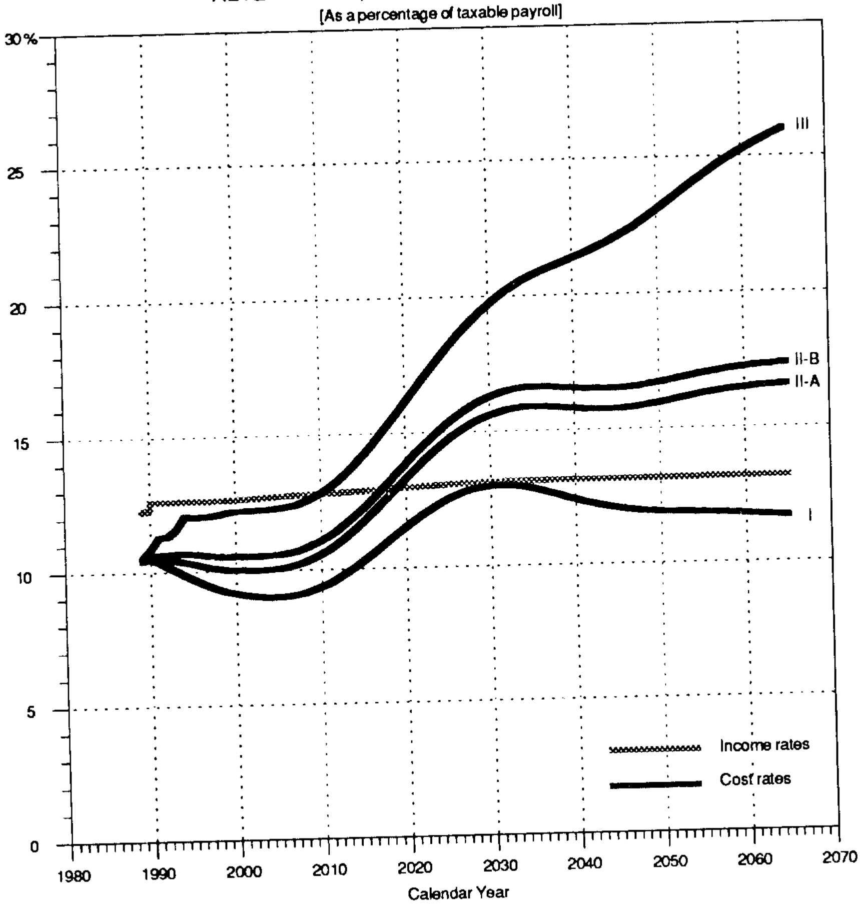
Figure 2 shows in graphical form the patterns of the OASDI annual income rates and cost rates. The income rates are shown only for alternative II-B in order to simplify the graphical presentation and because, as shown in table 26, the variation in the income rates by alternative is very small. The OASDI long-range summarized income rates for alternatives I and III, for the next 75 years differ by only 0.28 percent of taxable payroll. By 2065, the income rates for each year, under alternatives I and III, differ by only 0.67 percent of taxable payroll. The income rates in figure 2 and table 26 show a distinct increase in 1990, at which time the payroll-tax rate was increased. Thereafter, only small fluctuations are projected, as the rate of income from taxation of benefits varies only slightly, for each alternative, reflecting changes in the cost rate and the fact that benefit-taxation threshold amounts are not indexed.

The patterns of the annual balances are indicated in figure 2. For each alternative, the magnitude of each of the positive balances in the early years, as a percent of taxable payroll, is represented by the distance between the appropriate cost-rate curve and the income-rate curve above it. The magnitude of each of the deficits in subsequent years is represented by the distance between the appropriate cost-rate curve and the income-rate curve below it.

In the future, the cost of the OASDI program, as a percent of taxable payroll, will not necessarily be within the range encompassed by alternatives I and III. Nonetheless, because alternatives I and III define a reasonably wide range of economic and demographic conditions, the resulting estimates delineate a reasonable range for future program costs.

FIGURE 2.—ESTIMATED OASDI INCOME RATES AND COST RATES BY ALTERNATIVE, CALENDAR YEARS 1989-2065

[As a percentage of taxable payroll]



The components of the annual income rates are shown in table 28, for each alternative set of assumptions. The income rates reflect the scheduled payroll tax rates and the projected rate of income from the taxation of benefits, which reflect changes in the cost rates and the fact that benefit-taxation threshold amounts are not indexed. Summarized values for the annual rates shown in table 29.

TABLE 28.—ESTIMATED INCOME RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1990-2065

[As a percentage of taxable payroll]

Calendar year	OASI			DI			Total		
	Payroll tax	Taxation of benefits	Total	Payroll tax	Taxation of benefits	Total	Payroll tax	Taxation of benefits	Total
Alternative I:									
1990	11.20	0.16	11.36	1.20	0.01	1.21	12.40	0.18	12.58
1991	11.20	.19	11.39	1.20	.01	1.21	12.40	.19	12.59
1992	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1993	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1994	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1995	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1996	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1997	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1998	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1999	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
2000	10.98	.20	11.18	1.42	.01	1.43	12.40	.21	12.61
2005	10.98	.26	11.24	1.42	.02	1.44	12.40	.28	12.68
2010	10.98	.32	11.30	1.42	.02	1.44	12.40	.34	12.74
2015	10.98	.37	11.35	1.42	.03	1.45	12.40	.40	12.80
2020	10.98	.44	11.42	1.42	.03	1.45	12.40	.47	12.87
2025	10.98	.49	11.47	1.42	.03	1.45	12.40	.52	12.92
2030	10.98	.53	11.51	1.42	.03	1.45	12.40	.56	12.96
2035	10.98	.53	11.51	1.42	.03	1.45	12.40	.56	12.96
2040	10.98	.52	11.50	1.42	.03	1.45	12.40	.55	12.95
2045	10.98	.51	11.49	1.42	.03	1.45	12.40	.54	12.94
2050	10.98	.50	11.48	1.42	.03	1.45	12.40	.54	12.94
2055	10.98	.51	11.49	1.42	.03	1.45	12.40	.54	12.94
2060	10.98	.51	11.49	1.42	.03	1.45	12.40	.54	12.94
2065	10.98	.50	11.48	1.42	.03	1.45	12.40	.53	12.93
Alternative II-A:									
1990	11.20	.18	11.38	1.20	.01	1.21	12.40	.19	12.59
1991	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1992	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1993	11.20	.20	11.40	1.20	.01	1.21	12.40	.21	12.61
1994	11.20	.20	11.40	1.20	.01	1.21	12.40	.21	12.61
1995	11.20	.20	11.40	1.20	.01	1.21	12.40	.21	12.61
1996	11.20	.20	11.40	1.20	.01	1.21	12.40	.21	12.61
1997	11.20	.20	11.40	1.20	.01	1.21	12.40	.21	12.61
1998	11.20	.20	11.40	1.20	.01	1.21	12.40	.22	12.62
1999	11.20	.20	11.40	1.20	.01	1.21	12.40	.22	12.62
2000	10.98	.22	11.20	1.42	.01	1.43	12.40	.23	12.63
2005	10.98	.29	11.27	1.42	.02	1.44	12.40	.31	12.71
2010	10.98	.36	11.34	1.42	.03	1.45	12.40	.39	12.79
2015	10.98	.43	11.41	1.42	.03	1.45	12.40	.46	12.86
2020	10.98	.51	11.49	1.42	.04	1.46	12.40	.55	12.95
2025	10.98	.58	11.56	1.42	.04	1.46	12.40	.62	13.02
2030	10.98	.64	11.62	1.42	.04	1.46	12.40	.68	13.08
2035	10.98	.66	11.64	1.42	.04	1.46	12.40	.70	13.10
2040	10.98	.67	11.65	1.42	.04	1.46	12.40	.71	13.11
2045	10.98	.67	11.65	1.42	.04	1.46	12.40	.71	13.11
2050	10.98	.68	11.66	1.42	.04	1.46	12.40	.72	13.12
2055	10.98	.70	11.68	1.42	.04	1.46	12.40	.74	13.14
2060	10.98	.71	11.69	1.42	.04	1.46	12.40	.75	13.15
2065	10.98	.72	11.70	1.42	.04	1.46	12.40	.76	13.16
Alternative II-B:									
1990	11.20	.20	11.40	1.20	.01	1.21	12.40	.21	12.61
1991	11.20	.19	11.39	1.20	.01	1.21	12.40	.20	12.60
1992	11.20	.20	11.40	1.20	.01	1.21	12.40	.21	12.61
1993	11.20	.20	11.40	1.20	.01	1.21	12.40	.21	12.61
1994	11.20	.21	11.41	1.20	.01	1.21	12.40	.22	12.62
1995	11.20	.21	11.41	1.20	.01	1.21	12.40	.22	12.62
1996	11.20	.21	11.41	1.20	.01	1.21	12.40	.22	12.62
1997	11.20	.21	11.41	1.20	.01	1.21	12.40	.22	12.62
1998	11.20	.21	11.41	1.20	.01	1.21	12.40	.23	12.63
1999	11.20	.21	11.41	1.20	.01	1.21	12.40	.23	12.63
2000	10.98	.23	11.21	1.42	.01	1.43	12.40	.25	12.65

TABLE 28.—ESTIMATED INCOME RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1990-2065 (Cont.)

[As a percentage of taxable payroll]

Calendar year	OASI Payroll tax	OASI Taxation of benefits	OASI Total	DI Payroll tax	DI Taxation of benefits	DI Total	Total Payroll tax	Total Taxation of benefits	Total Total
Alternative II-B: (Cont.)									
2005	10.98	0.31	11.29	1.42	0.02	1.44	12.40	0.34	12.74
2010	10.98	.39	11.37	1.42	.03	1.45	12.40	.42	12.82
2015	10.98	.45	11.43	1.42	.04	1.46	12.40	.49	12.89
2020	10.98	.54	11.52	1.42	.04	1.46	12.40	.58	12.98
2025	10.98	.62	11.60	1.42	.04	1.46	12.40	.66	13.06
2030	10.98	.67	11.65	1.42	.04	1.46	12.40	.72	13.12
2035	10.98	.70	11.68	1.42	.04	1.46	12.40	.74	13.14
2040	10.98	.70	11.68	1.42	.04	1.46	12.40	.75	13.15
2045	10.98	.70	11.68	1.42	.04	1.46	12.40	.75	13.15
2050	10.98	.71	11.69	1.42	.05	1.47	12.40	.76	13.16
2055	10.98	.73	11.71	1.42	.05	1.47	12.40	.78	13.18
2060	10.98	.75	11.73	1.42	.05	1.47	12.40	.79	13.19
2065	10.98	.75	11.73	1.42	.05	1.47	12.40	.80	13.20
Alternative III:									
1990	11.20	.22	11.42	1.20	.01	1.21	12.40	.23	12.63
1991	11.20	.20	11.40	1.20	.01	1.21	12.40	.21	12.61
1992	11.20	.21	11.41	1.20	.01	1.21	12.40	.22	12.62
1993	11.20	.22	11.42	1.20	.01	1.21	12.40	.23	12.63
1994	11.20	.23	11.43	1.20	.01	1.21	12.40	.24	12.64
1995	11.20	.23	11.43	1.20	.01	1.21	12.40	.25	12.65
1996	11.20	.24	11.44	1.20	.01	1.21	12.40	.25	12.65
1997	11.20	.24	11.44	1.20	.02	1.22	12.40	.25	12.65
1998	11.20	.24	11.44	1.20	.02	1.22	12.40	.26	12.66
1999	11.20	.24	11.44	1.20	.02	1.22	12.40	.26	12.66
2000	10.98	.27	11.25	1.42	.02	1.44	12.40	.28	12.68
2005	10.98	.36	11.34	1.42	.03	1.45	12.40	.39	12.79
2010	10.98	.45	11.43	1.42	.04	1.46	12.40	.49	12.89
2015	10.98	.52	11.50	1.42	.05	1.47	12.40	.57	12.97
2020	10.98	.63	11.61	1.42	.05	1.47	12.40	.68	13.08
2025	10.98	.73	11.71	1.42	.05	1.47	12.40	.78	13.18
2030	10.98	.81	11.79	1.42	.06	1.48	12.40	.87	13.27
2035	10.98	.87	11.85	1.42	.06	1.48	12.40	.93	13.33
2040	10.98	.91	11.89	1.42	.06	1.48	12.40	.96	13.36
2045	10.98	.94	11.92	1.42	.06	1.48	12.40	1.00	13.40
2050	10.98	.99	11.97	1.42	.06	1.48	12.40	1.05	13.45
2055	10.98	1.04	12.02	1.42	.06	1.48	12.40	1.11	13.51
2060	10.98	1.10	12.08	1.42	.06	1.48	12.40	1.16	13.56
2065	10.98	1.14	12.12	1.42	.06	1.48	12.40	1.20	13.60

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

TABLE 29.—SUMMARIZED INCOME RATES BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1990-2065

[As a percentage of taxable payroll]

Calendar year	OASI Payroll tax	OASI Taxation of benefits	OASI Total	DI Payroll tax	DI Taxation of benefits	DI Total	Total Payroll tax	Total Taxation of benefits	Total Total
Alternative I:									
25 years: 1990-2014	11.05	0.24	11.29	1.33	0.02	1.34	12.37	0.26	12.63
50 years: 1990-2039	11.01	.36	11.36	1.37	.02	1.39	12.37	.38	12.75
75 years: 1990-2064	10.99	.40	11.39	1.38	.02	1.41	12.37	.43	12.80
Alternative II-A:									
25 years: 1990-2014	11.05	.27	11.31	1.32	.02	1.34	12.37	.29	12.66
50 years: 1990-2039	11.01	.41	11.41	1.37	.03	1.39	12.37	.44	12.81
75 years: 1990-2064	10.99	.48	11.48	1.38	.03	1.41	12.37	.52	12.89
Alternative II-B:									
25 years: 1990-2014	11.04	.28	11.33	1.32	.02	1.34	12.37	.30	12.67
50 years: 1990-2039	11.00	.44	11.44	1.37	.03	1.40	12.37	.46	12.83
75 years: 1990-2064	10.99	.51	11.50	1.38	.03	1.41	12.37	.55	12.92
Alternative III:									
25 years: 1990-2014	11.04	.32	11.36	1.32	.02	1.34	12.36	.34	12.71
50 years: 1990-2039	11.00	.50	11.51	1.36	.04	1.40	12.36	.54	12.90
75 years: 1990-2064	10.99	.63	11.62	1.38	.04	1.42	12.36	.67	13.04

Note: Totals exclude beginning trust fund balances but are otherwise equivalent to summarized income rates shown in table 27. Totals do not necessarily equal the sums of rounded components.

The primary reason that the estimated OASDI cost rate increases rapidly after 2005 is that the number of beneficiaries is projected to increase more rapidly than the number of covered workers. This occurs because the relatively large number of persons born during the period of high fertility rates from the end of World War II through the mid-1960s will reach retirement age, and begin to receive benefits, while the relatively small number of persons born during the subsequent period of low fertility rates will comprise the labor force. A comparison of the numbers of covered workers and beneficiaries is shown in table 30.

TABLE 30.—COMPARISON OF OASDI COVERED WORKERS AND BENEFICIARIES BY ALTERNATIVE, CALENDAR YEARS 1945-2065

Calendar year	Covered workers[1] (in thousands)	Beneficiaries[2] (in thousands) OASI	DI	Total	Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
Past experience:						
1945	46,390	1,106	—	1,106	41.9	2
1950	48,280	2,930	—	2,930	16.5	6
1955	65,200	7,563	—	7,563	8.6	12
1960	72,530	13,740	522	14,262	5.1	20
1965	80,680	18,509	1,648	20,157	4.0	25
1970	93,090	22,618	2,568	25,186	3.7	27
1975	100,200	26,998	4,125	31,123	3.2	31
1980	112,212	30,385	4,734	35,119	3.2	31
1985	120,098	32,776	3,874	36,650	3.3	31
1986	[3]122,960	33,349	3,972	37,321	3.3	30
1987	[3]125,548	33,917	4,034	37,952	3.3	30
1988	[3]129,564	34,343	4,077	38,421	3.4	30
1989	[3]131,934	34,754	4,105	38,859	3.4	29
Alternative I:						
1990	132,711	35,372	4,158	39,530	3.4	30
1995	140,163	37,241	4,217	41,458	3.4	30
2000	146,739	38,392	4,794	43,186	3.4	29
2005	152,405	39,498	5,485	44,983	3.4	30
2010	156,453	42,326	6,191	48,517	3.2	31
2015	158,610	47,647	6,567	54,214	2.9	34
2020	159,772	54,381	6,766	61,147	2.6	38
2025	161,015	60,597	7,113	67,710	2.4	42
2030	163,492	65,160	7,098	72,257	2.3	44
2035	167,155	67,341	7,042	74,383	2.2	44
2040	171,084	67,342	7,131	74,473	2.3	44
2045	174,963	67,150	7,442	74,592	2.3	43
2050	178,929	67,677	7,685	75,362	2.4	42
2055	183,294	68,898	7,867	76,765	2.4	42
2060	188,122	70,281	8,010	78,291	2.4	42
2065	193,130	71,598	8,221	79,819	2.4	41
Alternative II-A:						
1990	132,792	35,377	4,174	39,550	3.4	30
1995	139,030	37,425	4,516	41,942	3.3	30
2000	144,595	38,964	5,311	44,275	3.3	31
2005	149,204	40,463	6,240	46,703	3.2	31
2010	152,613	43,607	7,153	50,760	3.0	33
2015	153,654	49,261	7,657	56,918	2.7	37
2020	153,196	56,386	7,908	64,293	2.4	42
2025	152,303	63,033	8,293	71,325	2.1	47
2030	152,054	68,160	8,234	76,394	2.0	50
2035	152,498	70,958	8,125	79,083	1.9	52
2040	152,876	71,527	8,171	79,699	1.9	52
2045	152,850	71,761	8,454	80,215	1.9	52
2050	152,462	72,570	8,616	81,186	1.9	53
2055	152,166	73,890	8,651	82,541	1.8	54
2060	152,121	75,057	8,581	83,638	1.8	55
2065	152,168	75,813	8,588	84,401	1.8	55
Alternative II-B:						
1990	132,824	35,377	4,174	39,551	3.4	30
1995	138,180	37,425	4,515	41,940	3.3	30
2000	143,357	38,962	5,308	44,270	3.2	31
2005	147,487	40,458	6,235	46,693	3.2	32
2010	150,903	43,599	7,143	50,742	3.0	34
2015	151,914	49,248	7,641	56,890	2.7	37
2020	151,456	56,367	7,888	64,254	2.4	42
2025	150,597	63,007	8,269	71,276	2.1	47
2030	150,310	68,126	8,208	76,334	2.0	51
2035	150,766	70,915	8,096	79,011	1.9	52
2040	151,143	71,475	8,141	79,617	1.9	53
2045	151,124	71,700	8,423	80,123	1.9	53
2050	150,729	72,499	8,584	81,083	1.9	54

TABLE 30.—COMPARISON OF OASDI COVERED WORKERS AND BENEFICIARIES BY ALTERNATIVE, CALENDAR YEARS 1945-2065 (Cont.)

Calendar year	Covered workers[1] (in thousands)	Beneficiaries[2] (in thousands) OASI	DI	Total	Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
Alternative II-B: (Cont.)						
2055	150,437	73,811	8,618	82,429	1.8	55
2060	150,388	74,971	8,549	83,520	1.8	56
2065	150,441	75,722	8,556	84,278	1.8	56
Alternative III:						
1990	132,521	35,381	4,187	39,568	3.3	30
1995	134,321	37,583	4,835	42,418	3.2	32
2000	139,882	39,477	5,980	45,456	3.1	32
2005	142,739	41,395	7,223	48,619	2.9	34
2010	145,411	44,831	8,383	53,215	2.7	37
2015	145,385	50,778	9,018	59,795	2.4	41
2020	143,515	58,283	9,303	67,586	2.1	47
2025	140,792	65,403	9,716	75,119	1.9	53
2030	138,186	71,217	9,595	80,812	1.7	58
2035	135,777	74,847	9,425	84,272	1.6	62
2040	133,082	76,318	9,426	85,744	1.6	64
2045	129,712	77,391	9,674	87,064	1.5	67
2050	125,819	78,926	9,717	88,642	1.4	70
2055	121,842	80,751	9,536	90,287	1.3	74
2060	118,064	82,023	9,163	91,186	1.3	77
2065	114,530	82,429	8,890	91,319	1.3	80

[1]Workers who pay OASDI taxes at some time during the year.

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

[3]Preliminary.

Note: The numbers of beneficiaries do not include certain uninsured persons, most of whom both attained age 72 before 1968 and have fewer than 3 quarters of coverage, in which cases the costs are reimbursed by the general fund of the Treasury. The number of such uninsured persons was 11,820 as of June 30, 1989, and is estimated to be fewer than 500 by the turn of the century. Totals do not necessarily equal the sums of rounded components.

Table 30 shows that the number of covered workers per beneficiary, which was about 3.4 in 1989, is estimated to decline in the future. Based on alternative I, for which high fertility rates and small reductions in death rates are assumed, the ratio declines to 2.3 by 2030 and then rises to 2.4. Based on alternative III, for which low fertility rates and substantial reductions in death rates are assumed, the decline is much greater, reaching 1.3 workers per beneficiary by 2065. Based on alternatives II-A and II-B, the ratio declines to 1.8 workers per beneficiary.

The impact of the demographic shifts under the four alternatives on the OASDI cost rates is better understood by considering the projected number of beneficiaries per 100 workers. As compared to the current level of 30 beneficiaries per 100 covered workers, this ratio rises by the year 2065 to a significantly higher level, which ranges from 41 under alternative I to 80 under alternative III. The significance of these numbers can be seen by comparing figure 2 to figure 3. For each alternative, the shape of the curve in figure 3, which shows beneficiaries per 100 covered workers, is strikingly similar to that of the corresponding cost-rate curve in figure 2, thereby emphasizing the extent to which the cost of the OASDI program is determined by the age patterns of the population. Because the cost rate is basically the product of the number of beneficiaries and their average benefit, divided by the product of the number of covered workers and their average taxable earnings (and because average benefits rise at about the same rate as average earnings), it is reasonable that the pattern of the annual cost rates is similar to that of the annual ratios of beneficiaries to workers. A graphical presentation of covered workers per beneficiary is shown in the "Summary."

FIGURE 3.—RATIOS OF ESTIMATED OASDI BENEFICIARIES PER 100 COVERED WORKERS BY ALTERNATIVE, CALENDAR YEARS 1989-2065

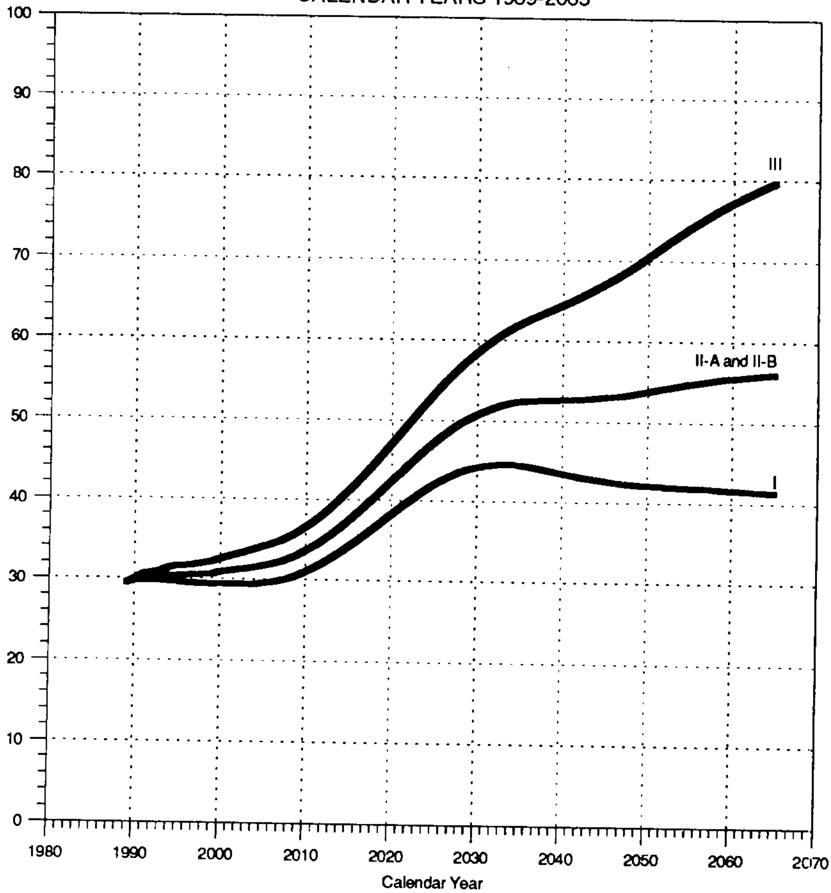


Table 31 shows, by alternative, the estimated contingency fund ratios for the separate and combined OASI and DI Trust Funds. The patterns of the combined fund ratios, over the 75-year period, are shown graphically in figure 4, for all four sets of assumptions. Both the OASI and DI ratios, which are still fairly low, gradually increase to very high levels. Based on alternatives II-A and II-B, the OASI ratio peaks about 2015, when it is 660 percent and 535 percent, respectively, and the DI ratio peaks about 2005, when it is 231 percent and 186 percent, respectively. Thereafter, the OASI and DI ratios decline steadily. Under alternative II-A, the OASI and DI Trust Funds become exhausted in 2060 and 2025, respectively; under alternative II-B, the OASI and DI funds become exhausted in 2046 and 2020, respectively. Based on alternative I, the ratios increase virtually throughout the long-range projection period reaching extremely high levels, around 1,300 and 1,000 percent for the OASI and DI programs, respectively. In contrast, under alternative III, the OASI and DI Trust Funds are estimated to be exhausted within 38 years and 9 years, respectively. Thus, because of the high ultimate cost rates that are projected under all but the most optimistic assumptions, eventually income will need to be increased and/or program costs will need to be reduced in order to prevent the OASI and DI Trust Funds from becoming exhausted.

The OASI and DI funds combined are projected to rise for several years under each of the alternative sets of assumptions. Under alternative I the combined fund ratios are still rising at the end of the 75-year period. The combined fund ratios reach peaks in about 2015 under alternatives II-A and II-B, and in about 2010 under alternative III, before turning down. The combined funds are projected to be exhausted in 2023 under the pessimistic assumptions in alternative III, in 2043 under the intermediate assumptions of alternative II-B (3 years earlier than in last year's report), and in 2056 under the intermediate assumptions of alternative II-A. This means that under even the most pessimistic assumptions the combined OASDI funds and income would be able to cover expenditures for about 33 years into the future and that under the alternative II-B assumptions the OASDI funds and income would be able to cover expenditures for about 53 years into the future. The program would be able to cover expenditures for about 66 years under alternative II-A and for the indefinite future under the most optimistic assumptions in alternative I. In the 1989 report, the combined trust funds were projected to be exhausted in 2025 under alternative III, in 2046 under alternative II-B, and in 2060 under alternative II-A.

TABLE 31.—ESTIMATED CONTINGENCY FUND RATIOS BY TRUST FUND AND ALTERNATIVE, CALENDAR YEARS 1990-2065
[In percent]

	Alternative I			Alternative II-A			Alternative II-B			Alternative III		
Calendar year	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total
1990	78	41	75	78	41	74	78	41	74	78	40	74
1991	100	58	95	99	55	94	98	54	94	95	49	90
1992	124	79	120	121	70	115	118	68	113	108	54	102
1993	151	103	146	144	85	138	138	81	132	119	56	112
1994	181	130	176	168	101	161	159	93	153	129	54	121
1995	214	159	209	195	115	187	181	105	173	138	49	128
1996	250	188	244	223	129	213	204	114	194	147	41	135
1997	288	216	280	252	140	240	227	122	216	157	31	142
1998	327	243	318	282	150	267	250	128	237	166	18	149
1999	368	268	357	313	157	295	274	132	258	176	2	154
2000	409	292	396	343	163	322	298	136	280	185	[1]	160
2005	617	454	597	486	231	453	408	186	379	219	[1]	180
2010	808	520	770	610	220	555	503	163	455	247	[1]	187
2015	910	560	865	660	173	592	535	102	475	236	[1]	159
2020	923	599	885	631	108	564	497	23	436	169	[1]	84
2025	910	615	877	567	26	501	422	[1]	362	60	[1]	[1]
2030	900	654	874	489	[1]	425	329	[1]	270	[1]	[1]	[1]
2035	917	720	897	411	[1]	347	230	[1]	172	[1]	[1]	[1]
2040	974	784	954	341	[1]	274	132	[1]	72	[1]	[1]	[1]
2045	1,051	821	1,025	272	[1]	200	34	[1]	[1]	[1]	[1]	[1]
2050	1,126	861	1,096	196	[1]	119	[1]	[1]	[1]	[1]	[1]	[1]
2055	1,193	910	1,160	111	[1]	30	[1]	[1]	[1]	[1]	[1]	[1]
2060	1,262	969	1,229	16	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
2065	1,342	1,023	1,305	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
Trust fund is estimated to be exhausted in:	[2]	[2]	[2]	2060	2025	2056	2046	2020	2043	2027	1998	2023

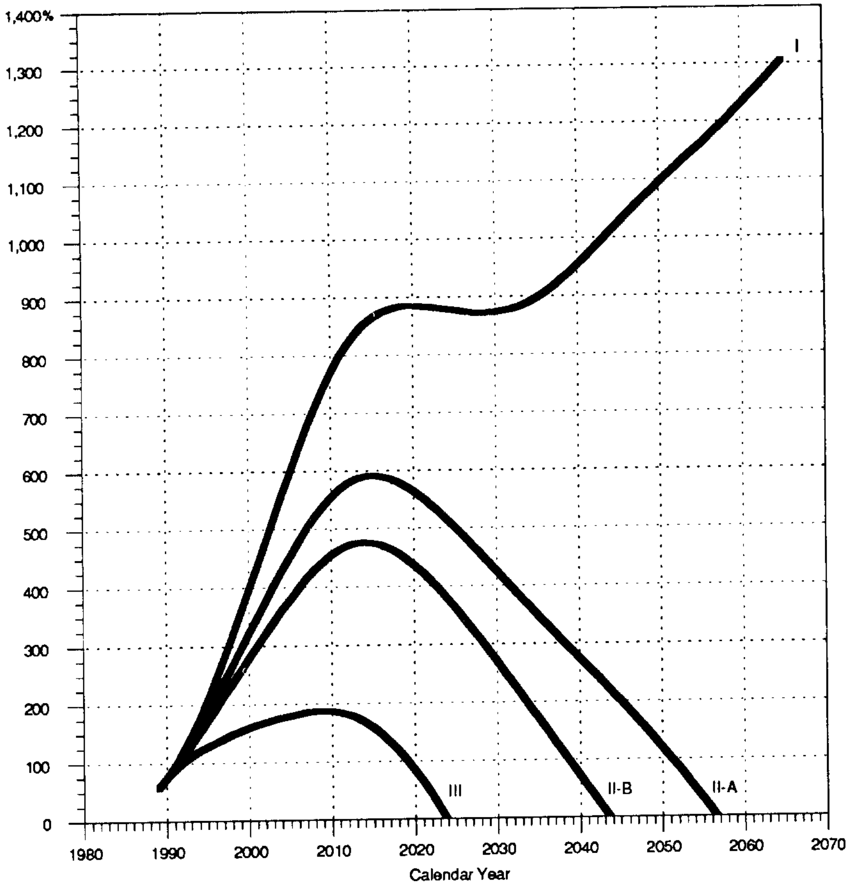
[1]The fund is estimated to be exhausted in the year shown in the last line of the table.

[2]The fund is not estimated to be exhausted within the projection period.

Note: See footnote 2 of table 13 for definition of contingency fund ratio. The OASDI ratios shown for years after a given fund is estimated to be exhausted are theoretical and are shown for informational purposes only.

A graphic illustration of the contingency fund ratios for the combined trust funds is shown in figure 4 for each of the alternative sets of assumptions.

FIGURE 4.—ESTIMATED CONTINGENCY FUND RATIOS, FOR OASI AND DI TRUST FUNDS COMBINED, CALENDAR YEARS 1989-2065



Reasons for changes from last year's report and this report in the long-range actuarial balance under the II-B assumptions are itemized in table 32. Also shown are the estimated effects associated with each reason for change.

Similar table in Summary

TABLE 32.—CHANGE IN ACTUARIAL BALANCE ESTIMATED ON THE BASIS OF ALTERNATIVE II-B BY TRUST FUND AND REASON FOR CHANGE
[As a percentage of taxable payroll]

Item	OASI	DI	Total
Shown in last year's report:[1]			
Income rate	11.60	1.41	13.02
Cost rate	12.13	1.59	13.72
Actuarial balance	-.53	-.17	-.70
Changes in actuarial balance due to changes in:			
Legislation	-.01	-.00	-.01
Valuation period	-.04	-.01	-.05
Demographic assumptions	+ .03	+ .00	+ .03
Economic assumptions	-.14	-.03	-.17
Disability assumptions	.00	-.01	-.01
Total change in actuarial balance	-.16	-.05	-.21
Shown in this report:[2]			
Actuarial balance	-.69	-.22	-.91
Income rate	11.62	1.42	13.04
Cost rate	12.31	1.64	13.95

[1]Income rates, cost rates, and taxable payroll are calculated on the basis of alternative II-B assumptions, as described in the 1989 report. Several of those assumptions have been modified for this year's report. A description of the modifications is presented in the text of this report. Includes the trust fund balances as of the start of the valuation period.

[2]Includes the trust fund balances as of the start of the valuation period.

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

The Omnibus Budget Reconciliation Act of 1989 (Public Law 101-239, enacted on December 19, 1989) included several provisions which affect the long-range cost of the OASDI program. (See Section II. of this report for a detailed description of these provisions.) The only significant effect results from the provision for inclusion of contributions to certain deferred compensation salary reduction plans in the calculation of the average wage index used for updating various OASDI program values. The effect of this provision is a small reduction in the actuarial balance.

In changing from the valuation period of last year's report, which was 1989-2063, to the valuation period of this report, 1990-2064, the balance year of 2064 is included. This results in a decrease in the long-range actuarial balance. (Note that the positive balance for 1989 is, in effect, retained because the funds accumulated during the year are included in the income rate and the actuarial balance for this year's report.)

Several demographic assumptions were modified: (1) the starting population, used in the projection of the Social Security Area population, was updated; (2) the total fertility rate was increased slightly for the first 25 projection years reflecting recently observed birthrates that were higher than expected; and (3) mortality assumptions were revised to incorporate the latest data and analyses. The net effect of these modifications is an increase in the long-range actuarial balance.

Economic assumptions and projected rates of employment were updated to incorporate the latest information and analyses. Slightly higher labor force participation rates are projected based on recent data. The percentage of the population with earnings in OASDI covered employment is projected to be somewhat lower, however, reflecting the increasing percentage of the population that is assumed to be of other-than-legal status and thus relatively less likely to have reported taxable earnings. This adjustment corrects an overstatement of the positive effect on the long-range actuarial balance from the assumption of 200,000 annual net other-than-legal immigrants, which was introduced with the 1988 report. Recent data indicate that the ratio of OASDI taxable earnings to earnings in covered employment has declined significantly in the past several years. Reduction in this taxable ratio is assumed to continue at a slower pace through the current decade, after which the ratio is assumed to stabilize. Change in the taxable ratio during periods when the contribution and benefit base is indexed to the average wage level indicates an increasing dispersion in earnings levels among workers. These changes have the net effect of decreasing the long-range actuarial balance by 0.17 percent of taxable payroll. The change in the percentage of covered earnings that is taxable, alone, decreases the estimated long-range actuarial balance by 0.16 percent of taxable payroll.

Projections of the number of disabled beneficiaries were modified to reflect the latest data and analyses. These modifications result in a small reduction in the long-range actuarial balance.

Other assumptions were updated and modified, but the net effect on the long-range actuarial balance is negligible.

The cost of the OASDI program has been discussed in this section in relation to taxable payroll, which is a program-related concept that is very useful in analyzing the financial status of the OASDI program. The cost can also be discussed in relation to broader economic concepts, such as the gross national product (GNP). Discussion of both the cost and the taxable payroll of the OASDI program in relation to GNP is presented in Appendix G.

VII. CONCLUSION

The actuarial estimates shown in this report indicate that the assets of the OASI and DI Trust Funds, on a combined basis, will increase rapidly for many years into the future, under all four sets of economic and demographic assumptions. Based on the intermediate assumptions, the assets of the combined funds will be sufficient to enable the timely payment of OASDI benefits for at least the next 50 years, under alternative II-B, or the next 65 years, under alternative II-A. Even on the basis of pessimistic assumptions, the combined funds will be sufficient to enable the timely payment of benefits for the next 35 years, without any additional legislation to increase income or reduce expenditures. (However, legislation to reallocate contribution rates between OASI and DI might be required at an earlier time.) Both the OASI and DI funds would continue to grow throughout the next 75 years, based on alternative I, so that benefits would be payable during all of the long-range period.

Based on all but the most optimistic assumptions, the assets of the combined trust funds are estimated to decline after the initial, long period of growth, until the combined funds would be exhausted. The estimates show that the combined OASI and DI Trust Funds would become exhausted in 2043, based on alternative II-B and in 2056, based on alternative II-A. Under the pessimistic assumptions, the combined funds would become exhausted in 2023.

The actuarial balance of the OASDI program as a whole over the next 75 years is a deficit of 0.31 percent of taxable payroll, on the basis of the intermediate alternative II-A assumptions. Based on the intermediate alternative II-B assumptions, the long-range balance is a deficit of 0.91 percent of taxable payroll. However, a single measure over a long period, such as the actuarial balance, is not sufficient to measure fully the extent or urgency of any financing problems it may indicate. As explained later in this section, the Trustees do not recommend that any legislative action be taken at this time to resolve the long-range deficit.

The deficit based on alternative II-B in this report is larger than the corresponding deficit of 0.70 percent of taxable payroll in the 1989 report primarily because of the declining trend in the percentage of total earnings in covered employment that is taxable under the Social Security program.

The OASDI long-range estimates based on both alternatives II-A and II-B show a pattern of annual balances that are positive throughout the first 27 or 28 years and negative thereafter. The positive balances are estimated to occur even without taking account of interest earnings. The addition of interest earnings to the positive cash flow results in trust fund growth, in dollars, that continues for about another decade after the annual balances (which do not account for the effect of interest income) first become negative. However, because the disbursements are estimated to increase more rapidly than the assets, OASDI assets decline, relative to annual disbursements. Based on alternative II-B, assets decrease from about 4 1/2 times to about 3 times annual expenditures, during this same time period.

The estimates for each trust fund, separately, indicate that the OASI program can operate satisfactorily for many years, as shown by all four sets of estimates. However, while the DI program would operate satisfactorily for many years on the basis of optimistic or intermediate assumptions such as those designated as alternatives I, II-A, and II-B, it would become exhausted in 1998, on the basis of the more pessimistic assumptions in alternative III.

For OASI and DI, separately, the long-range deficits, based on alternative II-B, are 0.69 percent and 0.22 percent of taxable payroll, respectively. Because the DI deficit is relatively large, compared to its cost rate of 1.42 percent of taxable payroll, the financial condition of the DI program needs to be carefully monitored in the long-range period. It also needs to be carefully monitored in the short-range period because the current DI assets are only sufficient to meet disbursements for about 5 or 6 months.

For the first 25-year subperiod, the OASDI program has a positive balance of 1.84 percent of taxable payroll. However, the balances in the second and third 25-year subperiods are deficits of 2.18 percent and 3.75 percent, respectively. (These balances, which are based on alternative II-B, do not include the funds on hand at the beginning of the projection period.) Thus, in the absence of other changes, the long-range actuarial balance will tend to decline slowly in future annual reports, as the valuation period moves forward and additional distant years of deficit are included in the valuation. The actuarial deficits in the later years of the 75-year projection period are caused primarily by the combination of high cost rates, due largely to demographic trends and relatively flat income rates which result from the flat contribution rate scheduled for 1991 and later and the relatively small increases in income from the taxation of benefits.

The Board notes that, as in the last annual report, the long-range income rate based on the alternative II-B assumptions is less than 95 percent of the long-range cost rate. The program has traditionally been considered to be adequately financed over the next 75 years when the long-range income rate is between 95 percent and 105 percent of the long-range cost rate. However, because the estimates based on the same assumptions show that the program is solvent for several decades into the future, the Trustees do not recommend that any immediate action be taken to change either the financing or the benefit provisions for the OASDI program. The Board believes that the implications of the expected large buildup of the trust funds and possible ways of addressing the deficits projected for distant future years should continue to be the subject of extensive study. The current Advisory Council on Social Security is examining these issues and is scheduled to report its recommendations in January 1991.

APPENDIX A.—ASSUMPTIONS AND METHODS UNDERLYING THE ACTUARIAL ESTIMATES

This appendix describes the assumptions and methods which underlie the actuarial estimates in this report. Unless specifically stated otherwise, the assumptions and methods were used for each of the four alternatives and for both the short-range and long-range periods. Some of the economic and demographic assumptions which vary by alternative are summarized in the section entitled "Actuarial Estimates." Further details about the assumptions, methods, and actuarial estimates are contained in Actuarial Studies published by the Office of the Actuary, Social Security Administration, and are available upon request.

TOTAL POPULATION

Projections were made of the population in the Social Security coverage area by age, sex, and marital status as of January 1 of each year 1989 through 2080. The projections started with an estimate of the United States population, including armed forces overseas, as of January 1, 1988, based on data from the Bureau of the Census. This population estimate was adjusted for net census undercount and increased for other U.S. citizens living abroad and for populations in the geographic areas covered by the OASDI program but not included in the U.S. population. This population was then projected using assumed rates of birth, death, marriage, and divorce and assumed levels of net immigration.

Historically, fertility rates in the U.S. have fluctuated widely. The total fertility rate is defined to be the average number of children that would be born to a woman in her lifetime if she were to experience the birthrates by age observed in, or assumed for, the selected year, and if she were to survive the entire child-bearing period. The total fertility rate decreased from 3.3 children per woman after World War I to 2.1 during the Great Depression, rose to 3.7 in 1957, and then fell to 1.7 in 1976. Since then, it has risen to a level currently estimated at 1.9.

These variations in fertility rates have resulted from changes in many factors, including social attitudes, economic conditions, and the use of birth-control methods. Future fertility rates may be expected to remain close to recent levels. The recent historical and projected trends in certain population characteristics are consistent with a continued relatively low fertility rate. These trends include the rising percentages of women who have never married, of women who are divorced, and of young women who are in the labor force. Based on consideration of these factors, ultimate total fertility rates of 2.2, 1.9, and 1.6 children per woman were selected for alternatives I, II-A and II-B, and III, respectively. For each alternative, the total fertility rate is assumed to reach its ultimate level in 2014. These ultimate values can be compared to those used by the Bureau of the Census for its latest series of population projections. Those fertility rates range from 2.2 to 1.5, with an intermediate assumption of 1.8.[1] A rate of 2.1 would ultimately result in a nearly constant population if net immigration were zero and if death rates were constant.

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[1] U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1018, "Projections of the Population of the United States By Age, Sex, and Race: 1988-2080," U.S. Government Printing Office, Washington, D.C., January 1989.

Historically, death rates in the U.S. have declined steadily. The age-sex-adjusted death rate—which 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 for the selected year—declined at an average rate of 1.2 percent per year between 1900 and 1988. These reductions in death rates have resulted from many factors, including increased medical knowledge and availability of health-care services and improvements in personal health-care practices such as diet and exercise. Based on consideration of the likelihood of continued progress in these and other areas, three alternative sets of ultimate annual percentage reductions in central death rates by age, sex, and cause of death were selected for 2014 and later. The intermediate set, which is used for both alternatives II-A and II-B, is considered to be the one closest to average expectations. The average annual percentage reductions used for alternative I are smaller than those for alternatives II-A and II-B, while those used for alternative III are greater. Between 1989 and 2014, the reductions in central death rates for alternatives II-A and II-B are assumed to change gradually from the average annual reductions by age, sex, and cause of death observed between 1968 and 1987, to the ultimate annual percentage reductions by age, sex, and cause of death assumed for 2014 and later. Alternative I reductions are assumed to change gradually from 50 percent of the average annual reductions observed between 1968 and 1987, while alternative III reductions are assumed to change gradually from 150 percent of the average annual reductions observed between 1968 and 1987. The age-sex-adjusted death rate (for all causes combined) declined at an average rate of 1.6 percent per year between 1968 and 1987.

After adjustment for changes in the age-sex distribution of the population, the resulting death rates were projected to decline at an average annual rate of about 0.3 percent, 0.6 percent, and 0.9 percent between 1989 and 2064 for alternatives I, II-A and II-B, and III, respectively.

Beginning with 1990, net immigration is assumed to be 750,000, 600,000, and 450,000 persons per year for alternatives I, II-A and II-B, and III, respectively. Of these net numbers of immigrants, 450,000, 400,000, and 350,000, respectively, are assumed to be legal, and the remainders are assumed to be other-than-legal. For 1988 and 1989, the net legal immigration is assumed to be 400,000 persons per year and, consistent with the estimates of other-than-legal immigration made by the Bureau of the Census since the 1980 Census, net other-than-legal immigration is assumed to be 200,000 persons per year.

Table A1 shows the projected population as of July 1 by broad age group, for the four alternatives. Also shown are tabulated aged dependency ratios (see table footnotes for definitions). Because eligibility for many types of OASDI benefits depends on marital status, the population was projected by marital status, as well as by age and sex. Marriage and divorce rates were based on recent data from the National Center for Health Statistics.

TABLE A1.—SOCIAL SECURITY AREA POPULATION AS OF JULY 1 AND DEPENDENCY RATIOS, BY ALTERNATIVE AND BROAD AGE GROUP, CALENDAR YEARS 1950-2065

Calendar year	Population (in thousands)				Dependency ratio	
	Under 20	20-64	65 and over	Total	Aged[1]	Total[2]
Past experience:						
1950	53,895	92,739	12,752	159,386	0.138	0.719
1960	72,989	99,842	17,250	190,081	.173	.904
1970	80,885	113,073	20,892	214,850	.185	.900
1975	78,787	122,639	23,227	224,653	.189	.832
1980	74,927	134,194	26,118	235,239	.195	.753
1985	73,160	144,915	28,975	247,049	.200	.705
Alternative I:						
1990	74,484	152,624	31,907	259,014	.209	.697
1995	77,141	159,675	33,942	270,757	.213	.696
2000	79,239	167,544	34,681	281,464	.207	.680
2005	80,205	176,054	35,528	291,787	.202	.657
2010	81,409	182,984	38,022	302,416	.208	.653
2015	83,748	186,347	43,313	313,408	.232	.682
2020	86,889	187,134	49,959	323,982	.267	.731
2025	89,861	186,430	57,271	333,562	.307	.789
2030	92,206	187,224	62,685	342,114	.335	.827
2035	94,130	191,173	64,633	349,936	.338	.830
2040	96,361	196,595	64,446	357,402	.328	.818
2045	99,088	201,839	63,903	364,831	.317	.808
2050	101,956	206,113	64,465	372,533	.313	.807
2055	104,621	210,391	65,792	380,804	.313	.810
2060	107,082	215,466	67,258	389,806	.312	.809
2065	109,576	221,397	68,491	399,463	.309	.804
Alternatives II-A and II-B:						
1990	74,445	152,571	31,912	258,927	.209	.697
1995	76,431	158,966	34,134	269,531	.215	.696
2000	77,275	166,070	35,276	278,621	.212	.678
2005	76,418	173,872	36,620	286,910	.211	.650
2010	75,179	180,176	39,602	294,958	.220	.637
2015	74,738	182,515	45,376	302,629	.249	.658
2020	75,182	181,702	52,541	309,425	.289	.703
2025	75,594	178,853	60,456	314,903	.338	.761
2030	75,458	176,925	66,547	318,930	.376	.803
2035	74,984	177,507	69,162	321,653	.390	.812
2040	74,637	179,118	69,579	323,334	.388	.805
2045	74,604	180,130	69,531	324,265	.386	.800
2050	74,712	179,624	70,454	324,790	.392	.808
2055	74,708	178,515	72,037	325,259	.404	.822
2060	74,542	177,951	73,416	325,909	.413	.831
2065	74,346	178,219	74,189	326,754	.416	.833
Alternative III:						
1990	74,404	152,524	31,916	258,845	.209	.697
1995	75,681	158,379	34,323	268,383	.217	.695
2000	75,225	164,688	35,838	275,751	.218	.674
2005	72,511	171,416	37,629	281,557	.220	.643
2010	68,855	176,922	41,089	286,866	.232	.621
2015	65,780	178,284	47,385	291,448	.266	.635
2020	63,786	176,015	55,140	294,942	.313	.676
2025	62,010	171,207	63,762	296,979	.372	.735
2030	59,893	166,795	70,669	297,357	.424	.783
2035	57,668	164,281	74,174	296,123	.452	.803
2040	55,537	162,357	75,552	293,446	.465	.807
2045	53,660	159,468	76,452	289,581	.479	.816
2050	52,013	154,646	78,219	284,877	.506	.842
2055	50,423	148,820	80,487	279,730	.541	.880
2060	48,810	143,570	82,071	274,451	.572	.912
2065	47,227	139,395	82,548	269,170	.592	.931

[1]Population aged 65 and over, divided by population aged 20-64.

[2]Sum of population aged 65 and over, and population under age 20, divided by population aged 20-64.

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

COVERED POPULATION

The number of covered workers in a year is defined as the number of persons who, at any time during the year, have OASDI taxable earnings. Projections of the numbers of covered workers were made by applying projected coverage rates to the projected Social Security area population. The coverage rates—i.e., the number of covered workers in the year, as a percentage of the population as of July 1—were determined by age and sex using projected labor force participation rates and unemployment rates, and their historical relationships to coverage rates. In addition, the coverage rates were adjusted to reflect the increase in coverage of Federal civilian employment that will result from the 1983 Social Security Amendments and the subsequent opportunity offered to Federal civilian employees, who were hired before 1984, to become covered under the OASDI program.

Labor force participation rates were projected by age and sex, taking into account projections of the percentage of the population that is married, the percentage of the population that is disabled, the number of children in the population, the level of retirement benefits, and the state of the economy. All of these factors vary by alternative. For men, the projected age-adjusted labor force participation rates for the year 2065 for alternatives I, II-A, II-B, and III are 1.9, 2.2, 2.5, and 2.8 percentage points lower, respectively, than the 1989 level of 76.9 percent. For women, the projected age-adjusted labor force participation rates increase for all of the alternatives except alternative III. The projected rates for 2065 are 2.8, 1.5, 1.0, and 0.6 percentage points, respectively, different from the 1989 level of 57.4 percent.

The total age-sex-adjusted unemployment rate averaged 5.8 percent for the 30 years 1959-88 and 7.0 percent for the 10 years 1979-88. The ultimate total age-sex-adjusted unemployment rate is assumed to be 5.0, 5.5, 6.0, and 7.0 percent for alternatives I, II-A, II-B, and III, respectively. For alternatives I, II-A, and II-B, the unemployment rate is assumed to change gradually from its 1989 level of 5.3 percent, reaching its ultimate level by 2000. For alternative III, the unemployment rate is assumed to peak in 1991 and again in 1994, because of assumed recessions, and thereafter to decline gradually, reaching its ultimate level by 2000.

The projected age-adjusted coverage rate for men changes from its 1989 level of 75.2 percent to 73.8, 73.4, 72.8, and 72.0 percent in 2065 on the basis of alternatives I, II-A, II-B, and III, respectively. For women, it increases from its 1989 level of 59.0 percent to 61.3, 60.2, 59.3, and 57.8 percent for alternatives I, II-A, II-B, and III, respectively.

AVERAGE EARNINGS AND INFLATION

Future increases in average earnings and in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W, hereinafter denoted as "CPI") will directly affect the OASDI program. Increases in the CPI directly affect the automatic cost-of-living benefit increases, while inflation in general affects the nominal levels of average earnings, GNP, and taxable payroll. Average earnings in covered employment for each year have a direct effect on the size of the taxable payroll and on the future level of average benefits. In addition, increases in average wages in the U.S. economy directly affect the indexation, under the automatic-adjustment provisions in the law, of the benefit formulas, the contribution and benefit base, the exempt amounts under the retirement earnings test, the amount of earnings required for a quarter of coverage, and under certain circumstances, the automatic cost-of-living benefit increases.

Increases in average earnings were projected in two components—average earnings of wage-and-salary workers, usually referred to as average wages (and shown in table 10 of this report), and average net earnings of self-employed persons. Each of these was subdivided into increases in real average earnings and increases in the CPI. For simplicity, real-earnings increases are expressed in the form of real-earnings differentials—i.e., the percentage increase in average nominal earnings, minus the percentage increase in the CPI.

The assumed ultimate increases in average real earnings are based on analysis of trends in productivity gains and the factors linking productivity gains with increases in average real earnings. For the 30 years 1959-88, annual increases in productivity for the total U.S. economy averaged 1.6 percent, the result of average annual increases of 2.5, 1.4, and 0.9 percent for the 10-year periods 1959-68, 1969-78 and 1979-88, respectively. Meanwhile, the average annual rate of change in average real earnings was an increase of 0.9 percent for the 30 years 1959-88, the result of average annual increases of 2.6, 1.0, and 0.0 percent, respectively, for the aforementioned 10-year periods. The change in the linkage between annual increases in productivity and real earnings averaged 0.7 percent for the 30 years 1959-88, and 0.0, 1.2, and 0.9 percent, respectively, for the aforementioned 10-year periods. The change in the linkage reflects changes in such factors as the average number of hours worked per year, the extent to which workers share in the value of production, and the proportion of employee compensation paid as wages.

The ultimate annual increases in productivity for all sectors—wage-and-salary workers, self-employed persons, and the total economy—are assumed to be 2.2, 1.9, 1.7, and 1.4 percent for alternatives I, II-A, II-B, and III, respectively. The corresponding ultimate annual rates of change in the linkage for wage-and-salary workers are assumed not to change for alternative I and to be declines of 0.2, 0.4, and 0.6 percent for alternatives II-A, II-B, and III, respectively. This linkage is made up of assumed annual decreases of 0.0, 0.1, 0.2, and 0.3 percent in average hours worked per year, and 0.0, 0.1, 0.2, and 0.3 percent annual declines in wages as a share of compensation, for alternatives I, II-A, II-B, and III, respectively. No ultimate change is assumed for the historically stable ratio of employee compensation to GNP. The resulting ultimate real-wage differentials are 2.2, 1.7, 1.3, and 0.8 percent. Ultimate annual declines in the linkage for self-employed persons are smaller because the proportion of reported compensation that is considered earnings remains constant. As a result, ultimate real-earnings differentials for the self-employed are assumed to be higher than for wage-and-salary workers. The corresponding ultimate real-earnings differentials for wage-and-salary workers and self-employed persons, combined, are slightly higher than those assumed for wage-and-salary workers only.

For alternative II-A, the CPI is assumed to increase ultimately at an annual rate of 3.0 percent. For alternative II-B, the CPI is assumed to increase ultimately at an annual rate of 4.0 percent, which is somewhat lower than the average annual increase of 4.9 percent experienced between 1959 and 1989. The ultimate increases in the average annual CPI for alternatives I and III of 2.0 percent and 5.0 percent, respectively, were chosen to include a reasonable range of possible values. Ultimate annual increases in the GNP price deflator are assumed to be the same, for each alternative, as for the CPI.

The ultimate increases in average annual wages in covered employment are assumed to be 4.2, 4.7, 5.3, and 5.8 percent, for alternatives I, II-A, II-B, and III, respectively. These were obtained, for each alternative, by adding the assumed annual percentage increase in the CPI to the real-wage differential. Ultimate increases in average wages and earnings for the U.S. economy are very similar to those assumed for average wages in covered employment.

TAXABLE PAYROLL AND TAXES

The taxable payroll for any period is that amount which, when multiplied by the combined employee-employer tax rate, yields the total amount of taxes paid by employees, employers, and the self-employed for work during the period. The taxable payroll is important not just in estimating OASDI income, but also in determining income and cost rates, and actuarial balances. These terms are defined in the introduction to the section entitled "Actuarial Estimates."

In practice, the taxable payroll is calculated as a weighted average of the earnings on which employees, employers, and self-employed persons make contributions to the OASDI program. The weighting takes into account the lower tax rates, as compared to the combined employee-employer rate, which apply to multiple-employer "excess wages," and which did apply, before 1984, to net earnings from self-employment and, before 1988, to tips. For 1983 and later, taxable payroll also includes deemed wage credits for military service. Estimates of taxable earnings for employees, employers, and the self-employed were developed from corresponding estimates of earnings in the U.S. economy, by means of factors which adjust for various differences in these measures. The factors adjust total U.S. earnings by removing earnings from noncovered employment, adding earnings from various outlying areas which are covered by Social Security but are not included in published "U.S." data, and removing earnings above the taxable earnings base.

For the 1990 report, decreases in the ratio of taxable earnings to earnings in OASDI covered employment since 1987, along with the assumption that this ratio will continue to decline slightly over the next decade, result in a reduction in the projected level of taxable payroll.

Estimates of taxes collected were developed from the corresponding estimates of taxable earnings by applying the employee, employer, or self-employed tax rate, and by taking into account the lag time from the incurrence of tax liability to the collection of taxes.

INSURED POPULATION

There are three types of insured status under the OASDI program: fully insured, currently insured, and disability insured. Fully insured status is required of an aged worker for eligibility to a primary retirement benefit and for the eligibility of that worker's spouse and children to auxiliary benefits. Fully insured status is also required of a deceased worker for the eligibility of the worker's survivors to benefits (with the exception of child survivors and parents of eligible child survivors, in which cases the deceased worker is required to have had either currently insured status or fully insured status). Disability insured status, which is more restrictive than fully insured status, is required of a disabled worker for eligibility to a primary disability benefit and for the eligibility of the worker's spouse and children to auxiliary benefits.

Projections of the percentage of the population that is fully insured were made by age and sex, based on the requirement for fully insured status, past and projected coverage rates, and their historical relationships to fully insured rates. Currently insured status was disregarded for purposes of these estimates, because the number of cases in which eligibility for benefits is based solely on currently insured status is relatively small. Projections of the percentage of fully insured persons who are also disability insured were made by age and sex based on past and projected coverage rates, the requirement for disability insured status, and their historical relationships. Finally, the fully insured and disability insured populations were developed from the projected total population by applying the appropriate percentages.

Under this procedure, the percentage of the Social Security area population aged 62 and over that is fully insured is projected to increase from 76.2 on January 1, 1990, to 90.2, 90.0, 89.8, and 89.4 on January 1, 2061, based on alternatives I, II-A, II-B, and III, respectively. The increase for females is projected to be much greater than the increase for males. Based on alternative II-B, for example, the percentage for males is projected to increase only slightly during this period from 92.5 to 93.4, while that for females is projected to increase more substantially from 64.4 to 86.8. The percentage of fully insured persons under the normal retirement age who are disability insured is projected to change only slightly from 86.5 on January 1, 1990, to 85.8, 85.5, 85.3, and 84.8 on January 1, 2061, for alternatives I, II-A, II-B, and III, respectively.

The fully insured population by age and sex was further subdivided by marital status, by using the variation in labor force participation rates by marital status to estimate the variation in coverage rates by marital status. These coverage rates were then used to estimate the variation in the fully insured rates by marital status.

OLD-AGE AND SURVIVORS INSURANCE BENEFICIARIES

The numbers of OASI beneficiaries were projected for each type of benefit separately, by the sex of the worker on whose earnings the benefits are based, and by the age of the beneficiary. For selected types of benefits, the numbers of beneficiaries were also projected by marital status.

In the short-range period, the numbers of retired-worker beneficiaries were developed by applying award rates to the numbers of persons who are insured but not yet retired, and by applying termination rates to the numbers of persons already receiving retired-worker benefits. In the long range, the numbers of retired-worker beneficiaries who are not converted from disabled-worker beneficiaries were projected as a percentage of the aged fully insured population less those persons entitled to disability or widow(er)'s benefits (i.e., the exposed population). The percentages for ages 70 and over are assumed to be 100, because the retirement earnings test and delayed retirement credit do not apply after age 70. For 1990, the retired-worker beneficiaries as a percentage of the exposed population for ages 65 through 69 are assumed to increase, reflecting the change that is effective then in benefit withholding under the retirement earnings test. The percentages for ages 62 through 69 are assumed to change for two reasons. They were adjusted upward through the year 2000, continuing the trend toward earlier retirement. They were further adjusted in the long-range period, for each year of attainment of age 62, as a function of the ratio of the monthly benefit amount payable at each age of entitlement to the amount payable at age-70 entitlement. This resulted in a gradual downward adjustment as the increases in the delayed retirement credit become effective and, beginning in 2000, during the years in which the normal retirement age is scheduled to increase. The net effect of these two adjustments is to increase the percentages at ages 62 through 69 into the 1990s and then to decrease the percentages. Ultimate percentages are assumed to be reached in 2030. The numbers of retired-worker beneficiaries who are converted from disabled-worker beneficiaries were calculated separately in a manner consistent with the calculation of disabled-worker beneficiaries.

The numbers of aged-spouse beneficiaries were estimated from the population projected by age and sex. The benefits of aged-spouse beneficiaries are based on the earnings records of their husbands or wives, who are referred to as "wage earners." In the short-range period, a regression equation was used to project the number of aged-spouse beneficiaries, as a proportion of the aged female or male population not receiving retired-worker or aged-widow(er) benefits. In the long-range period, aged-spouse beneficiaries were estimated from the population projected by age, sex, and marital status. To the numbers of spouses aged 62 and over in the population, a series of factors were applied, representing the probabilities that the spouse and the wage earner meet all of the conditions of eligibility—i.e., the probabilities that (1) the wage earner is 62 or over, (2) the wage earner is insured, (3) the wage earner is receiving benefits, (4) the spouse is not receiving a benefit for the care of an entitled child, (5) the spouse is not insured, (6) the spouse is not eligible to receive a significant government pension based on earnings in noncovered employment, and (7) a residual factor.

In addition, the same factors were applied to the numbers of divorced persons aged 62 and over in the population, with three differences. First, an additional factor is required to reflect the probability that the person's former wage-earner spouse is still alive (otherwise, the person may be entitled to a divorced widow(er)'s benefit). Second, a factor is required to reflect the probability that the marriage to the wage-earner spouse was at least 10 years in duration. Third, factor (3) was not applied because, effective for January 1985, a divorced person generally need not wait to receive benefits until the former wage-earner spouse is receiving benefits.

The projected numbers of children under age 18, and students aged 18, who are eligible for benefits as children of retired-worker beneficiaries, were based on the projected numbers of children in the population. In the short-range period, a factor was applied, representing the probability that both parents are alive. A regression equation was then used to project the number of children of retired-worker beneficiaries. In the long-range period, entitled children were projected separately by sex of the wage-earner parent. To the numbers of children in the population, factors were applied representing the probabilities that the parent is alive, aged 62 or over, insured, and receiving a retired-worker benefit. Another factor was applied representing the probability that the child is not entitled to a benefit based on the other parent's earnings. For children aged 18, a factor was applied representing the probability that the child is attending a secondary school. The numbers of disabled children aged 18 and over of retired-worker beneficiaries were projected from the adult population in a similar manner, with the inclusion of a factor representing the probability of being disabled since childhood.

In the short-range period, the numbers of young-spouse beneficiaries were projected as a proportion of the projected numbers of child beneficiaries who are either under age 16 or disabled. In the long-range period, young-spouse beneficiaries were projected as a proportion of the projected numbers of child beneficiaries of retired workers, taking into account projected changes in average family size.

The numbers of aged-widow(er) beneficiaries were projected from the population by age and sex. In the short-range period, a regression equation projected the number of aged-widow(er) beneficiaries, as a proportion of the aged female or male population not receiving retired-worker or aged-spouse benefits. In the long-range period, aged-widow(er) beneficiaries were projected from the population by age, sex, and marital status. Four factors were applied to the numbers of widow(er)s in the population aged 60 and over. These factors represent the probabilities that (1) the deceased wage earner was fully insured at death, (2) the widow(er) is not receiving a benefit for the care of an entitled child, (3) the widow(er) is not fully insured, and (4) the widow(er)'s benefits are not withheld because of receipt of a significant government pension based on earnings in noncovered employment. In addition, some insured widow(er)s who had not applied for their retired-worker benefits are assumed to receive widow(er) benefits. Also, the same factors were applied to the numbers of divorced persons aged 60 and over in the population, with additional factors representing the probability that the person's former wage-earner spouse is deceased and that the marriage was at least 10 years in duration.

In the short-range period, the numbers of disabled-widow(er) beneficiaries were estimated as a proportion of the female or male population aged 50-64. In the long-range period, the numbers were projected for each age 50 through 64 as a percentage of the widowed and divorced populations, adjusted for the insured status of the deceased spouse and the prevalence of disability.

The projected numbers of children under age 18, and students aged 18, who are eligible for benefits as survivors of deceased workers, were based on the projected numbers of children in the population whose mothers or fathers are deceased. In the short-range period, a regression equation was used to project the number of minor-child-survivor beneficiaries as a percentage of such orphaned children. In the long-range period, the numbers of child-survivor beneficiaries were projected in a manner analogous to that for child beneficiaries of retired workers, with the factor representing the probability that the parent is aged 62 or over being replaced by a factor that represented the probability that the parent was deceased.

In the short-range period, the numbers of mother-and-father-survivor beneficiaries were projected from the numbers of child-survivor beneficiaries who are either under age 16 or disabled. In the long-range period, mother-and-father-survivor beneficiaries were estimated from the numbers of child-survivor beneficiaries, taking into account projected changes in average family size.

The numbers of parent-survivor beneficiaries were projected based on the historical pattern of the numbers of such beneficiaries.

Table A2 shows the projected numbers of beneficiaries under the OASI program. Included among the beneficiaries who receive retired-worker benefits are some persons who also receive a residual benefit consisting of the excess of an auxiliary benefit over their retired-worker benefit. Estimates of the numbers of such residual payments were made separately for wives and widows.

TABLE A2.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1945-2065

[In thousands]

Calendar year	Retired workers and auxiliaries			Survivors				Total
	Worker	Wife-husband	Child	Widow-widower	Mother-father	Child	Parent	
Past experience:								
1945	518	159	13	94	121	377	6	1,288
1950	1,771	508	46	314	169	653	15	3,477
1955	4,474	1,192	122	701	292	1,154	25	7,961
1960	8,061	2,269	268	1,544	401	1,577	36	14,157
1965	11,101	2,614	461	2,371	472	2,074	35	19,128
1970	13,349	2,668	546	3,227	523	2,688	29	23,030
1975	16,588	2,867	643	3,889	582	2,919	21	27,509
1980	19,562	3,016	639	4,411	562	2,610	15	30,814
1985	22,432	3,069	457	4,863	372	1,917	10	33,120
1986	22,987	3,088	450	4,931	350	1,875	9	33,690
1987	23,440	3,090	440	4,984	329	1,836	8	34,126
1988	23,858	3,086	432	5,029	318	1,810	7	34,539
1989	24,327	3,093	423	5,071	312	1,780	6	35,012
Alternative I:								
1990	24,920	3,101	417	5,125	311	1,764	6	35,645
1995	26,284	3,144	460	5,358	313	1,803	4	37,365
2000	27,239	3,076	492	5,485	296	1,879	3	38,470
2005	28,649	2,831	533	5,453	282	1,916	3	39,668
2010	31,918	2,580	593	5,473	267	1,919	3	42,752
2015	37,301	2,564	665	5,549	252	1,932	3	48,266
2020	43,781	2,676	733	5,674	241	1,962	3	55,071
2025	49,505	2,776	782	5,838	242	2,008	3	61,155
2030	53,697	2,768	825	5,908	244	2,052	3	65,498
2035	55,644	2,683	852	5,890	246	2,081	3	67,399
2040	55,763	2,535	863	5,791	248	2,103	3	67,306
2045	55,748	2,463	882	5,678	250	2,131	3	67,154
2050	56,418	2,463	912	5,559	253	2,166	3	67,775

TABLE A2.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1945-2065 (Cont.)
[In thousands]

Calendar year	Retired workers and auxiliaries: Worker	Retired workers and auxiliaries: Wife-husband	Retired workers and auxiliaries: Child	Survivors: Widow-widower	Survivors: Mother-father	Survivors: Child	Survivors: Parent	Total
Alternative I: (Cont.)								
2055	57,644	2,516	948	5,464	258	2,203	3	69,036
2060	58,935	2,569	979	5,432	262	2,236	3	70,416
2065	60,122	2,614	1,002	5,460	265	2,266	3	71,732
Alternative II-A:								
1990	24,926	3,102	417	5,126	311	1,764	6	35,653
1995	26,451	3,160	458	5,387	315	1,812	4	37,586
2000	27,737	3,148	492	5,505	312	1,887	3	39,084
2005	29,526	2,955	532	5,484	297	1,871	3	40,668
2010	33,162	2,742	585	5,510	277	1,786	3	44,063
2015	38,947	2,753	646	5,584	262	1,720	3	49,916
2020	45,877	2,898	697	5,703	256	1,684	3	57,118
2025	52,073	3,035	727	5,870	257	1,672	3	63,637
2030	56,854	3,071	749	5,966	254	1,663	3	68,561
2035	59,385	3,020	758	6,011	249	1,649	3	71,075
2040	60,025	2,896	749	6,000	242	1,626	3	71,542
2045	60,388	2,847	746	5,976	237	1,603	3	71,800
2050	61,319	2,873	754	5,924	233	1,584	3	72,690
2055	62,661	2,951	768	5,846	229	1,565	3	74,023
2060	63,810	3,011	777	5,783	225	1,543	3	75,151
2065	64,561	3,042	778	5,752	220	1,520	3	75,876
Alternative II-B:								
1990	24,926	3,102	417	5,126	311	1,764	6	35,653
1995	26,450	3,160	458	5,387	315	1,812	4	37,586
2000	27,735	3,147	492	5,505	312	1,886	3	39,081
2005	29,521	2,956	532	5,484	296	1,871	3	40,663
2010	33,149	2,747	585	5,510	276	1,785	3	44,055
2015	38,929	2,759	646	5,585	262	1,718	3	49,903
2020	45,849	2,907	697	5,705	256	1,683	3	57,099
2025	52,034	3,049	727	5,872	257	1,670	3	63,611
2030	56,799	3,091	749	5,970	254	1,661	3	68,526
2035	59,312	3,047	757	6,017	248	1,647	3	71,031
2040	59,934	2,929	748	6,008	242	1,624	3	71,489
2045	60,278	2,887	745	5,987	237	1,601	3	71,738
2050	61,189	2,920	752	5,939	233	1,582	3	72,618
2055	62,513	3,005	767	5,865	229	1,562	3	73,943
2060	63,647	3,069	775	5,805	225	1,541	3	75,065
2065	64,388	3,102	776	5,778	220	1,517	3	75,785
Alternative III:								
1990	24,933	3,103	417	5,128	311	1,763	6	35,660
1995	26,614	3,175	457	5,415	313	1,798	4	37,776
2000	28,195	3,217	491	5,515	329	1,889	3	39,639
2005	30,301	3,079	527	5,508	328	1,891	3	41,636
2010	34,259	2,917	569	5,548	297	1,721	3	45,315
2015	40,455	2,965	616	5,629	261	1,536	3	51,465
2020	47,865	3,156	650	5,746	238	1,402	3	59,061
2025	54,583	3,350	660	5,908	229	1,330	3	66,062
2030	60,068	3,455	661	6,004	219	1,286	3	71,697
2035	63,392	3,471	653	6,076	207	1,249	3	75,051
2040	64,877	3,405	627	6,112	194	1,202	3	76,421
2045	66,018	3,410	606	6,136	182	1,154	3	77,508
2050	67,632	3,492	597	6,110	172	1,107	3	79,112
2055	69,464	3,622	595	6,010	162	1,060	3	80,916
2060	70,758	3,706	589	5,882	152	1,012	3	82,104
2065	71,255	3,730	576	5,765	143	965	3	82,438

Note: The numbers of beneficiaries do not include certain uninsured persons, most of whom both attained age 72 before 1968 and have fewer than 3 quarters of coverage, in which cases the costs are reimbursed by the general fund of the Treasury. The number of such uninsured persons was 10,290 as of December 31, 1989, and is estimated to be fewer than 500 by the turn of the century. Totals do not necessarily equal the sums of rounded components.

DISABILITY INSURANCE BENEFICIARIES

The numbers of DI beneficiaries were projected for each type of benefit separately, by the sex of the worker on whose earnings the benefits are based, and the age of the beneficiary. The numbers of disabled-worker beneficiaries were projected from the estimated numbers of such beneficiaries entitled on December 31, 1989, by adding new entitlements and subtracting terminations. The starting numbers of entitled disabled-worker beneficiaries were estimated by age, sex, and duration of entitlement, from the tabulated number of disabled-worker beneficiaries in current-payment status on December 31, 1987. The numbers of new entitlements during each year were projected by applying assumed disability incidence rates. In the short-range period, an age-adjusted rate was applied to the total age-adjusted disability insured population for each sex. In the long-range period, incidence rates by age and sex were applied to the projected disability insured population (excluding those already entitled to disabled-worker benefits) to obtain new entitlements. The numbers of terminations were projected by applying assumed termination rates to the disabled-worker population. In the short-range period, overall termination rates for each sex were projected based on recent experience and on expected changes in the administration of the DI program. In the long-range period, the numbers of terminations were projected by applying assumed death and recovery rates, by age, sex, and duration of entitlement, to the entitled disabled-worker population, and adding the number of disabled-worker beneficiaries automatically converted to retired-worker beneficiaries at the normal retirement age (currently, age 65).

The disability incidence rates, which declined during 1975-82, increased during 1983-85, and remained steady during 1986-89, are assumed to resume the increasing trend in 1990. In the absence of other factors, the rates would be assumed to increase faster for females than for males during the next decade, reflecting recent experience. However, the addition of male workers afflicted by AIDS becoming disabled-worker beneficiaries makes the projected male and female rates nearly equal. The specific ultimate levels assumed are determined in two stages. First, under an assumption of a constant normal retirement age of 65, the incidence rates are projected to increase through 2010. These levels, for alternatives II-A and II-B, are about 18 percent for males and 20 percent for females higher than the average rates for 1984-86. This produces age-adjusted rates in 2010 of 5.3 per thousand for males and 3.7 per thousand for females, and an age-sex-adjusted rate of 4.6 per thousand. Next, because of the increase in the normal retirement age, further increases are projected in incidence rates at ages over 60. These combined projected increases cause the total gross incidence rate to increase from the current 1988 levels of 4.4 per thousand for males and 3.0 per thousand for females to 7.6 per thousand for males and 5.4 per thousand for females in the year 2026 when the normal retirement age has reached its ultimate level of 67.

For the other alternatives, the disability incidence rates are assumed to follow patterns through time similar to the one for alternatives II-A and II-B. For alternative I, the stage one levels are assumed to be roughly the same as those experienced during the last five years. The 2026 total gross incidence rates are assumed to be 6.5 per thousand for males and 4.4 per thousand for females. For alternative III, the stage one levels are assumed to be higher by about 38 percent for males and 43 percent for females. This level is approximately 80 percent of the rate experienced in 1974, when incidence rates attained their highest level. The 2026 total gross incidence rates are assumed to be 9.0 per thousand for males and 6.5 per thousand for females.

The overall termination rates were projected quarterly in the short-range period. For alternatives II-A and II-B, the rates were projected to increase from the relatively low levels of 1984-89, to levels comparable to the average experienced over the last decade. For alternative III, the termination rates increase more slowly and to lower levels, whereas for alternative I the termination rates increase more quickly and to higher levels.

In the long-range period, the death and recovery rates were projected by age, sex, and duration of entitlement. For all alternatives, the death rates are assumed to decline steadily throughout the 75-year projection period. For alternatives II-A and II-B, they reach levels in 2065 approximately 30 percent lower for males and approximately 20 percent lower for females than those experienced by disabled-worker beneficiaries during 1977-80, the most recent period for which detailed data exist. The recovery rates are assumed to increase from 1989 levels until 1995, when they attain ultimate levels about 15 percent higher than those experienced during the period 1977-80, thereby allowing for the estimated effect of the periodic reviews required by provisions of law first enacted in 1980, and amended in 1983 and 1984.

For alternative I, the death rates in 2065 are assumed to be roughly 20 percent lower for males and approximately 10 percent lower for females than those experienced by disabled-worker beneficiaries during 1977-80, and the recovery rates are assumed to increase to levels 30 percent higher than those of the same period. For alternative III, the death rates in 2065 are assumed to be about 45 percent lower for males and approximately 35 percent lower for females than those experienced during 1977-80, and recovery rates are assumed to be equal to those experienced during 1977-80.

In the short-range period, the projected numbers of children under age 18, students aged 18, and disabled children aged 18 and over, who are eligible for benefits as children of disabled-worker beneficiaries, were projected by applying quarterly award and termination rates. Awards to the three categories of child beneficiaries were based on the numbers of awards to disabled-worker beneficiaries.

In the long-range period, the projected numbers of minor child and student beneficiaries were based on the projected numbers of children in the population by age. To these numbers of children were applied factors representing the probability that either of their parents is insured and disabled. The numbers of disabled children aged 18 and over were projected as a function of the numbers of disabled-worker beneficiaries and the size of the adult population.

In the short-range period, the numbers of young-spouse beneficiaries were projected by applying quarterly award and termination rates, where awards were based on the numbers of awards to child beneficiaries who are either under age 16 or disabled. The numbers of aged-spouse beneficiaries were also projected by applying quarterly award and termination rates, where awards were based on the number of awards to disabled-worker beneficiaries.

In the long-range period, the numbers of young-spouse beneficiaries were projected as a proportion of the projected numbers of child beneficiaries who are either under age 16 or disabled, taking into account projected changes in family size. The numbers of aged-spouse beneficiaries were projected as a proportion of the numbers of disabled-worker beneficiaries, based on recent experience and allowing for projected changes in marriage rates.

Table A3 shows the projected numbers of beneficiaries under the DI program.

TABLE A3.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1960-2065

[In thousands]

Calendar year	Disabled workers	Auxiliaries: Wife-husband	Auxiliaries: Child	Total
Past experience:				
1960	455	77	155	687
1965	988	193	558	1,739
1970	1,493	283	889	2,665
1975	2,489	453	1,411	4,352
1980	2,859	462	1,358	4,678
1985	2,656	306	945	3,907
1986	2,727	301	965	3,993
1987	2,786	291	968	4,045
1988	2,830	281	963	4,074
1989	2,895	271	962	4,129
Alternative I:				
1990	2,933	261	958	4,152
1995	3,047	231	943	4,221
2000	3,542	267	1,045	4,854
2005	4,184	277	1,103	5,565
2010	4,830	286	1,124	6,240
2015	5,176	278	1,139	6,593
2020	5,331	277	1,169	6,776
2025	5,627	300	1,220	7,147
2030	5,530	286	1,264	7,080
2035	5,474	280	1,294	7,048
2040	5,556	275	1,322	7,154
2045	5,824	290	1,358	7,472
2050	6,003	300	1,401	7,705
2055	6,124	310	1,448	7,882
2060	6,220	315	1,492	8,026
2065	6,392	321	1,533	8,247
Alternative II-A:				
1990	2,956	263	965	4,183
1995	3,281	252	1,015	4,548
2000	3,924	308	1,164	5,395
2005	4,758	337	1,248	6,344
2010	5,591	366	1,262	7,219
2015	6,060	374	1,258	7,691
2020	6,271	388	1,260	7,919
2025	6,621	424	1,283	8,328
2030	6,497	411	1,302	8,210
2035	6,414	404	1,310	8,127
2040	6,485	396	1,310	8,191
2045	6,755	413	1,313	8,480
2050	6,882	423	1,319	8,624
2055	6,889	428	1,329	8,647
2060	6,816	424	1,337	8,576
2065	6,830	423	1,342	8,595
Alternative II-B:				
1990	2,956	263	965	4,183
1995	3,281	252	1,014	4,547
2000	3,922	308	1,163	5,393
2005	4,754	337	1,247	6,338
2010	5,583	366	1,260	7,208
2015	6,047	374	1,254	7,675
2020	6,255	388	1,256	7,899
2025	6,601	424	1,279	8,304
2030	6,474	412	1,297	8,183
2035	6,390	404	1,305	8,099
2040	6,459	397	1,305	8,161
2045	6,727	414	1,308	8,449
2050	6,854	424	1,314	8,592
2055	6,860	430	1,324	8,615
2060	6,787	426	1,331	8,544
2065	6,801	425	1,337	8,562

TABLE A3.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1960-2065 (Cont.)

[In thousands]

Calendar year	Disabled workers	Auxiliaries: Wife-husband	Auxiliaries: Child	Total
Alternative III:				
1990	2,977	265	970	4,212
1995	3,538	276	1,094	4,908
2000	4,420	364	1,313	6,098
2005	5,505	422	1,429	7,356
2010	6,568	476	1,424	8,468
2015	7,178	500	1,381	9,060
2020	7,448	525	1,341	9,314
2025	7,858	570	1,324	9,753
2030	7,699	553	1,309	9,561
2035	7,595	538	1,291	9,424
2040	7,660	523	1,259	9,443
2045	7,930	538	1,225	9,693
2050	7,971	543	1,194	9,708
2055	7,800	538	1,167	9,505
2060	7,474	514	1,139	9,128
2065	7,260	498	1,112	8,870

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

AVERAGE BENEFITS

Average benefits were projected by type of benefit based on recent historical averages, projected average Primary Insurance Amounts (PIAs), and projected ratios of average benefits to average PIAs. Average PIAs were calculated from projected distributions of beneficiaries by duration from year of award, average awarded PIAs, and increases thereto since the year of award, because of automatic benefit increases, recomputations to reflect additional covered earnings, and other factors. Average awarded PIAs were calculated from projected earnings histories, which were developed from the actual earnings histories associated with a sample of awards made in 1983.

For several types of benefits—retired-worker, aged-spouse, and aged-widow(er) benefits—the percentage of the PIA that is payable depends on the age at initial entitlement to benefits. Projected ratios of average benefits to average PIAs for these types of benefits were based on projections of age distributions at initial entitlement.

BENEFIT PAYMENTS

For each type of benefit, benefit payments were calculated as the product of a number of beneficiaries and a corresponding average monthly benefit. In the short-range period, benefit payments were calculated on a quarterly basis. In the long-range period, all benefit payments were calculated on an annual basis, using the number of beneficiaries on December 31. These amounts were adjusted to include retroactive payments to newly awarded beneficiaries, and other amounts not reflected in the regular monthly benefit payments.

Lump-sum death payments were calculated as the product of (1) the number of such payments, which was projected on the basis of the assumed death rates, the projected fully insured population, and the estimated percentage of the fully insured population that would qualify for benefits, and (2) the amount of the lump-sum death payment, which is $255.

ADMINISTRATIVE EXPENSES

The projection of administrative expenses through 1998 was based on assumed increases in average wages, increases in the CPI, and increases in the number of beneficiaries. For years after 1998, administrative expenses are assumed to increase with the numbers of beneficiaries and with average earnings in covered employment, taking into account assumed increases in productivity.

RAILROAD RETIREMENT FINANCIAL INTERCHANGE

The effect of the financial interchange with the Railroad Retirement program was evaluated on the basis of trends similar to those used in estimating the cost of OASDI benefits. The resulting effect was annual short-range costs of about $3-4 billion and an average annual long-range cost of 0.03 percent of taxable payroll to the OASDI program.

BENEFITS TO UNINSURED PERSONS

The law provides for special monthly cash payments to certain uninsured persons who attained age 72 before 1968 or who have 3 quarters of coverage for each year after 1966 and before the year of attainment of age 72. The numbers of such uninsured persons were projected based on an extrapolation of the historical survival rate of the members of that group. The benefit payable to these uninsured persons is a fixed amount which increases by the percentage benefit increase applicable to regular OASDI benefits. These payments are made from the OASI Trust Fund, which is then reimbursed from the general fund of the Treasury for the costs (including administrative expenses and interest) associated with providing payments to those persons with fewer than 3 quarters of coverage. The nonreimbursable payments are assumed to be insignificant after 1998. Neither the reimbursable payments nor the associated reimbursements are reflected in the cost rates or the income rates. These amounts are reflected, however, in tables which show trust fund operations.

MILITARY-SERVICE TRANSFERS

As a result of the 1983 amendments, the OASI and DI Trust Funds received lump-sum payments, in May 1983, for the cost (including administrative expenses) of providing additional benefit payments resulting from noncontributory wage credits for military service performed prior to 1957. Adjustments to the payments were made in 1985, and additional adjustments will be made in 1990 and every fifth year thereafter. The adjustments for 1990 were estimated based on the change in interest rates since the determination of the adjustments in 1985. No adjustments after 1990 would be due unless actual interest rates are different from those assumed, or changes are made in the methods used to determine the military-service transfers.

INCOME FROM TAXATION OF BENEFITS

The OASI and DI Trust Funds are credited with the additional income taxes attributable to the partial taxation of OASDI benefit payments. For the short-range period, income to the trust funds from such taxation was estimated by applying the following two factors to total OASI and DI benefit payments: (1) the percentage of benefit payments that is taxable, and (2) the average tax rate applicable to those benefits. For the long-range period, income to the trust funds from such taxation was projected by applying factors representing the ratio of such income to total OASDI benefit payments under varying levels of income thresholds. Because the thresholds are constant in the law, their values in relation to future income and benefit levels decline. These factors were projected based on the results of a model developed by the Office of Tax Analysis, Department of the Treasury, relating OASDI benefit payments to total personal income for a sample of recent tax returns.

APPENDIX B.—SENSITIVITY ANALYSIS

This appendix presents estimates which illustrate the sensitivity of the long-range estimates to changes in selected individual assumptions. The estimates based on the four alternative sets of assumptions (see section VI.E) illustrate variations that result from different combinations of assumptions. In the sensitivity analysis presented in this appendix, alternative II-B is used as the reference point, and one assumption at a time within that alternative is varied. Similar variations in the selected assumptions within the other alternatives would result in similar relative variations in the long-range estimates.

Each table which follows shows the effects of changing the particular assumption under consideration on the OASDI income rates, cost rates, and actuarial balances. Because the income rate varies only slightly with changes in assumptions, it is not considered in the discussion of the tables. The change in each of the actuarial balances is approximately equal to the change in the corresponding cost rate, but in the opposite direction.

TOTAL FERTILITY RATE

Table B1 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II-B with various assumptions about the ultimate total fertility rate. These assumptions are that the ultimate total fertility rate will be 1.6 children per woman (as assumed for alternative III), 1.9 (as assumed for alternatives II-A and II-B), and 2.2 (as assumed for alternative I). The rate is assumed to change gradually from its current level and to reach the various ultimate values in 2014.

TABLE B1.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON ALTERNATIVE II-B WITH VARIOUS FERTILITY ASSUMPTIONS

[As a percentage of taxable payroll]

Calendar years	Ultimate total fertility rate[1]		
	1.6	1.9	2.2
Income rate:			
25-year: 1990-2014	12.99	12.99	12.99
50-year: 1990-2039	13.01	13.01	13.00
75-year: 1990-2064	13.07	13.04	13.02
Average cost rate:			
25-year: 1990-2014	10.80	10.83	10.85
50-year: 1990-2039	12.96	12.83	12.72
75-year: 1990-2064	14.49	13.95	13.44
Balance:			
25-year: 1990-2014	+ 2.19	+ 2.17	+ 2.14
50-year: 1990-2039	+ .06	+ .17	+ .28
75-year: 1990-2064	−1.42	−.91	−.43

[1]The total fertility rate for any year is the average number of children who would be born to a woman in her lifetime if she were to experience the birthrates by age observed in, or assumed for, the selected year, and if she were to survive the entire child-bearing period. The ultimate total fertility rate is assumed to be reached in 2014.

For the 25-year period, the cost rate for the three fertility assumptions varies by only 0.05 percent of taxable payroll. In contrast, the 75-year cost rate varies over a wide range, decreasing from 14.49 to 13.44 percent, as the assumed ultimate total fertility rate increases from 1.6 to 2.2. Similarly, while the 25-year actuarial balance varies by only 0.05 percent of taxable payroll, the 75-year actuarial balance varies over a much wider range—from −1.42 to −0.43 percent.

During the 25-year period, changes in fertility affect the working population only slightly and result in relatively minor changes in the number of child beneficiaries. Hence, the program cost is affected only slightly. For the 75-year long-range period, however, changes in fertility have a relatively greater impact on the labor force than on the beneficiary population. As a result, an increase in fertility significantly reduces the cost rate. Each increase of 0.1 in the ultimate total fertility rate increases the long-range actuarial balance by about 0.16 percent of taxable payroll.

DEATH RATES

Table B2 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II-B with various assumptions about future reductions in death rates. The analysis was developed by varying the percentage decrease assumed to occur during 1990-2064 in the age-sex-adjusted death rate. The decreases assumed for this period are about 18 percent (as assumed for alternative I), 35 percent (as assumed for alternatives II-A and II-B), and 50 percent (as assumed for alternative III).

TABLE B2.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON ALTERNATIVE II-B WITH VARIOUS DEATH-RATE ASSUMPTIONS
[As a percentage of taxable payroll]

Calendar years	Reduction in death rates[1]		
	18 percent	35 percent	50 percent
Income rate:			
25-year: 1990-2014	12.99	12.99	13.00
50-year: 1990-2039	12.99	13.01	13.03
75-year: 1990-2064	13.01	13.04	13.08
Average cost rate:			
25-year: 1990-2014	10.66	10.83	11.00
50-year: 1990-2039	12.40	12.83	13.29
75-year: 1990-2064	13.26	13.95	14.78
Balance:			
25-year: 1990-2014	+ 2.32	+ 2.17	+ 2.00
50-year: 1990-2039	+ .58	+ .17	-.27
75-year: 1990-2064	-.25	-.91	-1.70

[1]The measure of the reduction in death rates is the decrease in the age-sex-adjusted death rate during 1990-2064.

The variation in cost for the 25-year period is less pronounced than the variation for the 75-year period because the decreases in death rates are assumed to occur gradually and because of the specific changes in the age composition of the population that are projected to occur. The 25-year cost rate increases from 10.66 percent (for 18-percent lower ultimate death rates) to 11.00 percent (for 50-percent lower ultimate rates). The long-range cost rate increases from 13.26 to 14.78 percent. The actuarial balance decreases from + 2.32 to + 2.00 percent for the 25-year period, and from -0.25 to -1.70 percent for the 75-year period.

Lower death rates cause both the income (as well as taxable payroll) and the outgo of the OASDI program to be higher than they would otherwise be. The relative increase in outgo, however, exceeds the relative increase in taxable payroll. For any given year, reductions in the death rates for people who have attained the normal retirement age (people whose death rates are the highest) increase the number of retired-worker beneficiaries (and, therefore, the amount of retirement benefits paid) without adding significantly to the number of covered workers (and, therefore, to the taxable payroll). Although reductions for people aged 50 to normal retirement age do result in significant increases to the taxable payroll, those increases are not large enough to offset the sum of the additional retirement benefits mentioned above and the disability benefits paid to additional beneficiaries in this pre-retirement age group. At ages under 50, death rates are so low that even substantial reductions would not result in significant increases in the numbers of covered workers or beneficiaries. Consequently, if death rates for all ages are lowered by about the same relative amount, outgo increases at a rate greater than the rate of growth in payroll, thereby resulting in higher cost rates. Each additional 10-percentage-point reduction in the age-sex-adjusted death rate assumed to occur in 1990-2064, relative to the 35-percent reduction assumed for alternative II-B, decreases the long-range actuarial balance by about 0.40 percent of taxable payroll.

NET IMMIGRATION

Table B3 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II-B with various assumptions about the magnitude of net immigration. These assumptions are that the annual net immigration will be 450,000 persons (as assumed for alternative III), 600,000 persons (as assumed for alternatives II-A and II-B), and 750,000 persons (as assumed for alternative I).

TABLE B3.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON ALTERNATIVE II-B WITH VARIOUS NET-IMMIGRATION ASSUMPTIONS
[As a percentage of taxable payroll]

Calendar years	Net immigration per year		
	450,000	600,000	750,000
Income rate:			
25-year: 1990-2014	13.00	12.99	12.99
50-year: 1990-2039	13.01	13.01	13.00
75-year: 1990-2064	13.05	13.04	13.04
Average cost rate:			
25-year: 1990-2014	10.87	10.83	10.78
50-year: 1990-2039	12.92	12.83	12.75
75-year: 1990-2064	14.05	13.95	13.86
Balance:			
25-year: 1990-2014	+ 2.13	+ 2.17	+ 2.21
50-year: 1990-2039	+ .09	+ .17	+ .25
75-year: 1990-2064	−1.01	−.91	−.82

For all three periods, the cost rate decreases with increasing rates of net immigration. For the 25-year period, the cost rate decreases from 10.87 percent of taxable payroll (for annual net immigration of 450,000 persons) to 10.78 percent (for annual net immigration of 750,000 persons). For the 50-year period, it decreases from 12.92 percent to 12.75 percent, and for the 75-year period, it decreases from 14.05 percent to 13.86 percent. The actuarial balance increases from + 2.13 to + 2.21 percent for the 25-year period, from + 0.09 to + 0.25 for the 50-year period, and from −1.01 to −0.82 percent for the 75-year period.

The cost rate decreases with increasing rates of net immigration because immigration occurs at relatively young ages, thereby increasing the numbers of covered workers earlier than the numbers of beneficiaries. Each additional group of 100,000 immigrants relative to the 600,000 net immigration assumed for alternative II-B, increases the long-range actuarial balance by about 0.06 percent of taxable payroll.

REAL-WAGE DIFFERENTIAL

Table B4 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II-B with various assumptions about the real-wage differential. These assumptions are that the ultimate real-wage differential will be 0.8 percentage point (as assumed for alternative III), 1.3 percentage points (as assumed for alternative II-B), 1.7 percentage points (as assumed for alternative II-A), and 2.2 percentage points (as assumed for alternative I). In each case, the ultimate annual increase in the CPI is assumed to be 4.0 percent (as assumed for alternative II-B), yielding ultimate percentage increases in average annual wages in covered employment of 4.8, 5.3, 5.7, and 6.2 percent, respectively.

TABLE B4.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON ALTERNATIVE II-B WITH VARIOUS REAL-WAGE ASSUMPTIONS

[As a percentage of taxable payroll]

Calendar years	Ultimate percentage increase in wages-CPI[1]			
	4.8-4.0	5.3-4.0	5.7-4.0	6.2-4.0
Income rate:				
25-year: 1990-2014	13.02	12.99	12.97	12.95
50-year: 1990-2039	13.04	13.01	12.98	12.95
75-year: 1990-2064	13.08	13.04	13.01	12.98
Average cost rate:				
25-year: 1990-2014	11.18	10.83	10.55	10.20
50-year: 1990-2039	13.34	12.83	12.44	11.94
75-year: 1990-2064	14.51	13.95	13.51	12.95
Balance:				
25-year: 1990-2014	+ 1.83	+ 2.17	+ 2.43	+ 2.75
50-year: 1990-2039	-.30	+ .17	+ .54	+ 1.00
75-year: 1990-2064	-1.43	-.91	-.49	+ .03

[1]The first value in each pair is the assumed ultimate annual percentage increase in average wages in covered employment. The second value is the assumed ultimate annual percentage increase in the Consumer Price Index. The difference between the two values is the real-wage differential.

For the 25-year period, the cost rate decreases from 11.18 percent (for a real-wage differential of 0.8 percentage point) to 10.20 percent (for a differential of 2.2 percentage points). For the 50-year period, it decreases from 13.34 to 11.94 percent, and for the 75-year period it decreases from 14.51 to 12.95 percent. The actuarial balance increases from + 1.83 to + 2.75 percent for the 25-year period, from -0.30 to + 1.00 for the 50-year period, and from -1.43 to + 0.03 percent for the 75-year period.

The cost rate decreases with increasing real-wage differentials, because the higher real-wage levels increase the taxable payroll, while benefit increases are not affected. Although the initial benefit levels are higher because of the higher wages, these increases are more than offset by the increases in the taxable payroll of future workers. Each 0.5-percentage-point increase in the assumed real-wage differential increases the long-range actuarial balance by about 0.52 percent of taxable payroll.

CONSUMER PRICE INDEX

Table B5 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II-B with various assumptions about the rate of increase for the Consumer Price Index (CPI). These assumptions are that the ultimate annual increase in the CPI will be 2.0 percent (as assumed for alternative I), 3.0 percent (as assumed for alternative II-A), 4.0 percent (as assumed for alternative II-B), 5.0 percent (as assumed for alternative III), and 6.0 percent. In each case, the ultimate real-wage differential is assumed to be 1.3 percentage points (as assumed for alternative II-B), yielding ultimate percentage increases in average annual wages in covered employment of 3.3, 4.3, 5.3, 6.3, and 7.3 percent, respectively.

TABLE B5.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON ALTERNATIVE II-B WITH VARIOUS CPI-INCREASE ASSUMPTIONS

[As a percentage of taxable payroll]

Calendar years	Ultimate percentage increases in wages-CPI[1]				
	3.3-2.0	4.3-3.0	5.3-4.0	6.3-5.0	7.3-6.0
Income rate:					
25-year: 1990-2014	13.00	13.00	12.99	12.99	12.99
50-year: 1990-2039	13.02	13.01	13.01	13.00	12.99
75-year: 1990-2064	13.06	13.05	13.04	13.03	13.02
Average cost rate:					
25-year: 1990-2014	11.06	10.94	10.83	10.71	10.60
50-year: 1990-2039	13.21	13.02	12.83	12.65	12.48
75-year: 1990-2064	14.40	14.17	13.95	13.74	13.54
Balance:					
25-year: 1990-2014	+ 1.94	+ 2.05	+ 2.17	+ 2.28	+ 2.39
50-year: 1990-2039	-.19	-.01	+ .17	+ .35	+ .52
75-year: 1990-2064	-1.33	-1.12	-.91	-.71	-.51

[1]The first value in each pair is the assumed ultimate annual percentage increase in average wages in covered employment. The second value is the assumed ultimate annual percentage increase in the Consumer Price Index.

For all three periods, the cost rate decreases with greater assumed rates of increase in the CPI. For the 25-year period, the cost rate decreases from 11.06 (for CPI increases of 2.0 percent) to 10.60 percent (for CPI increases of 6.0 percent). For the 50-year period, it decreases from 13.21 to 12.48 percent, and for the 75-year period, it decreases from 14.40 to 13.54 percent. The actuarial balance increases from + 1.94 to + 2.39 percent for the 25-year period, from -0.19 to + 0.52 for the 50-year period, and from -1.33 to -0.51 percent for the 75-year period.

The patterns described above result primarily from the time lag between the effects of the CPI changes on taxable payroll and on benefit payments. When assuming a greater rate of increase in the CPI (in conjunction with a constant real-wage differential), the effect on taxable payroll of the implied greater rate of increase in average wages is experienced immediately, while the effect on benefits of the greater rate of increase in the CPI is experienced with a lag of about 1 year. In addition, the effect on benefits of the greater rate of increase in average wages is experienced no sooner than 2 years later. Thus, the higher taxable payrolls have a stronger effect than the higher benefits, thereby resulting in lower cost rates. The effect of each 1.0-percentage-point increase in the rate of change assumed for the CPI is an increase in the long-range actuarial balance of about 0.20 percent of taxable payroll.

REAL-INTEREST RATE

Table B6 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II-B with various assumptions about the annual real-interest rate for special public-debt obligations issuable to the trust funds. These assumptions are that the ultimate annual real-interest rate will be 1.0 percent, 1.5 percent (as assumed for alternative III), 2.0 percent (as assumed for alternative II-B), 2.5 percent (as assumed for alternative II-A), and 3.0 percent (as assumed for alternative I). In each case, the ultimate annual increase in the CPI is assumed to be 4.0 percent (as assumed for alternative II-B), resulting in ultimate annual yields of 5.0, 5.6, 6.1, 6.6, and 7.1 percent, respectively.

TABLE B6.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON ALTERNATIVE II-B WITH VARIOUS REAL-INTEREST ASSUMPTIONS
[As a percentage of taxable payroll]

Calendar years	Ultimate annual real-interest rate				
	1.0 percent	1.5 percent	2.0 percent	2.5 percent	3.0 percent
Income rate:					
25-year: 1990-2014	12.97	12.98	12.99	13.00	13.01
50-year: 1990-2039	13.00	13.00	13.01	13.01	13.02
75-year: 1990-2064	13.05	13.04	13.04	13.04	13.04
Average cost rate:					
25-year: 1990-2014	10.84	10.83	10.83	10.82	10.82
50-year: 1990-2039	13.15	12.99	12.83	12.68	12.54
75-year: 1990-2064	14.48	14.22	13.95	13.69	13.44
Balance:					
25-year: 1990-2014	+ 2.13	+ 2.15	+ 2.17	+ 2.18	+ 2.20
50-year: 1990-2039	-.15	+ .01	+ .17	+ .33	+ .48
75-year: 1990-2064	-1.44	-1.18	-.91	-.65	-.40

For the 25-year period, the cost rate decreases slightly with increasing real-interest rates from 10.84 percent (for an ultimate real-interest rate of 1.0 percent) to 10.82 percent (for an ultimate real-interest rate of 3.0 percent). For the 50-year period, it decreases from 13.15 to 12.54 percent, and for the 75-year period, it decreases from 14.48 to 13.44 percent. The actuarial balance increases from + 2.13 to + 2.20 percent for the 25-year period, from -0.15 to + 0.48 percent for the 50-year period, and from -1.44 to -0.40 percent for the 75-year period. Each 0.5-percentage-point increase in the assumed real-interest rate increases the long-range actuarial balance by about 0.26 percent of taxable payroll.

DISABILITY INCIDENCE RATES

Table B7 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II-B with various assumptions concerning future disability incidence rates. These assumptions provide that the total gross annual incidence rates will increase gradually from the 1988 levels of 4.4 per thousand for males and 3.0 per thousand for females to levels, in 2026, of 6.5 per thousand for males and 4.4 per thousand for females (as assumed in alternative I), 7.6 per thousand for males and 5.4 per thousand for females (as assumed in alternatives II-A and II-B), and 9.0 per thousand for males and 6.5 per thousand for females (as assumed in alternative III).

TABLE B7.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON ALTERNATIVE II-B WITH VARIOUS DISABILITY INCIDENCE ASSUMPTIONS
[As a percentage of taxable payroll]

Calendar years	Disability incidence rates based on alternative—		
	I	II-A and II-B	III
Income rate:			
25-year: 1990-2014	12.99	12.99	13.00
50-year: 1990-2039	13.00	13.01	13.01
75-year: 1990-2064	13.04	13.04	13.05
Average cost rate:			
25-year: 1990-2014	10.72	10.83	10.95
50-year: 1990-2039	12.67	12.83	13.02
75-year: 1990-2064	13.77	13.95	14.17
Balance:			
25-year: 1990-2014	+ 2.27	+ 2.17	+ 2.04
50-year: 1990-2039	+ .33	+ .17	-.01
75-year: 1990-2064	-.73	-.91	-1.12

For the 25-year period, the cost rate increases with increasing disability incidence rates from 10.72 percent (for the relatively low rates assumed for alternative I) to 10.95 percent (for the relatively high rates assumed for alternative III). For the 50-year period, it increases from 12.67 to 13.02 percent, and for the 75-year period, it increases from 13.77 to 14.17 percent. The actuarial balance decreases from + 2.27 to + 2.04 percent for the 25-year period, from + 0.33 to –0.01 percent for the 50-year period, and from –0.73 to –1.12 percent for the 75-year period.

DISABILITY TERMINATION RATES

Table B8 shows the estimated OASDI income rates, cost rates, and actuarial balances, on the basis of alternative II-B with various assumptions about future disability termination rates.

For all four alternatives, death-termination rates by age and sex are assumed to decline throughout the 75-year period. At the end of that period, they reach levels that, in comparison to the corresponding annual rates experienced during the base period, 1977-80, are lower by about 20 percent for males and 10 percent for females for alternative I, lower by about 30 percent for males and 20 percent for females for alternatives II-A and II-B, and lower by about 45 percent for males and 35 percent for females for alternative III.

For all four alternatives, ultimate recovery-termination rates by age and sex are assumed to be attained in 1995. For alternative I, they are about 30 percent higher than the corresponding rates experienced during the base period. For alternative III, they are about the same as the base-period rates. For alternatives II-A and II-B, such rates are about 15 percent higher than those experienced in the base period, in order to reflect the effects of the additional periodic reviews that began in 1981.

TABLE B8.—ESTIMATED OASDI INCOME RATES, COST RATES, AND ACTUARIAL BALANCES, BASED ON ALTERNATIVE II-B WITH VARIOUS DISABILITY TERMINATION ASSUMPTIONS

[As a percentage of taxable payroll]

Calendar years	Disability termination rates based on alternative—		
	I	II-A and II-B	III
Income rate:			
25-year: 1990-2014	12.99	12.99	12.99
50-year: 1990-2039	13.01	13.01	13.01
75-year: 1990-2064	13.04	13.04	13.04
Average cost rate:			
25-year: 1990-2014	10.80	10.83	10.86
50-year: 1990-2039	12.80	12.83	12.89
75-year: 1990-2064	13.91	13.95	14.02
Balance:			
25-year: 1990-2014	+ 2.19	+ 2.17	+ 2.13
50-year: 1990-2039	+ .21	+ .17	+ .12
75-year: 1990-2064	–.87	–.91	–.98

For the 25-year period, the cost rate increases with decreasing disability termination rates from 10.80 percent (for the relatively high rates assumed for alternative I) to 10.86 percent (for the relatively low rates assumed for alternative III). For the 50-year period, it increases from 12.80 to 12.89 percent, and for the 75-year period, it increases from 13.91 to 14.02 percent. The actuarial balance decreases from + 2.19 to + 2.13 percent for the 25-year period, from + 0.21 to + 0.12 percent for the 50-year period, and from –0.87 to –0.98 percent for the 75-year period.

APPENDIX C

In 1989 there were two Federal Register notices announcing wage-indexed amounts. The earlier of the two, published on October 31, 1989, announced the 4.7-percent cost-of-living benefit increase which became effective for December 1989. This notice also announced the average of the total wages for 1988 (used for wage indexing purposes) and all wage indexed OASDI program amounts for 1990. The more recent notice, published December 29, 1989, announced new values for the 1990 contribution and benefit base and the 1990 retirement test exempt amounts, as required by Public Law 101-239, the "Omnibus Budget Reconciliation Act of 1989". These new earnings base and exempt amounts supersede those published earlier. All other wage-indexed amounts for 1990, as published in the October 31 notice, were unaffected by the budget reconciliation legislation. Additional information on the effects of this legislation is available in section III of this report.

The two Federal Register notices described above are given next, in the order in which they were published.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Social Security Administration

1990 Cost-of-Living Increase and Other Determinations

AGENCY: Social Security Administration, HHS.

ACTION: Notice.

SUMMARY: The Secretary has determined—(1) A 4.7 percent cost-of-living increase in benefits under title II (section 215(i)) of the Social Security Act (the Act);

(2) An increase in the Federal Supplemental Security Income (SSI) (title XVI) monthly benefit amounts for 1990 to $386 for an eligible individual, $579 for an eligible individual with an eligible spouse, and $193 for an essential person (section 1617 of the Act);

(3) The average of the total wages for 1988 to be $19,334.04;

(4) The Social Security contribution and benefit base to be $50,400 for remuneration paid in 1990 and self-employment income earned in taxable years beginning in 1990;

(5) The amount of earnings a person must have to be credited with a quarter of coverage in 1990 to be $520;

(6) The monthly exempt amounts under the Social Security retirement earnings test for taxable years ending in calendar year 1990 to be $780 for beneficiaries age 65 through 69 and $570 for beneficiaries under age 65;

(7) The "old-law" contribution and benefit base to be $37,500 for 1990.

We also describe the computation of benefits for a worker and the worker's family who first become eligible for benefits in 1990, and the computation of the old-age, survivors, and disability insurance (OASDI) fund ratio used to determine whether the automatic increase in benefits under title II of the Act is affected by the "stabilizer" provision.

Finally, we are publishing a table of OASDI "special minimum" benefit amounts. This table provides the range of primary insurance amounts and the corresponding maximum family benefits under the "special minimum" benefit provision, as revised to reflect the automatic benefit increase. These benefits are payable to certain individuals with long periods of relatively low earnings.

FOR FURTHER INFORMATION CONTACT: Jeffrey L. Kunkel, Office of the Actuary, Social Security Administration, 6401 Security Boulevard, Baltimore, MD 21235, (301) 965–3013.

SUPPLEMENTARY INFORMATION: The Secretary is required by the Act to publish within 45 days after the close of the third calendar quarter of 1989 the benefit increase percentage and the revised table of "special minimum" benefits (section 215(i)(2)(D)). Also, the Secretary is required to publish before November 1 the average of the total wages for 1988 (section 215(i)(2)(C)(iii)) and the OASDI fund ratio for 1989 (section 215(i)(2)(C)(ili)). Finally, the Secretary is required to publish on or before November 1 the contribution and benefit base for 1990 (section 230(a)), the amount of earnings required to be credited with a quarter of coverage in 1990 (section 213(d)(2)), the monthly exempt amounts under the Social Security retirement earnings test for 1990 (section 203(f)(8)(A)), the formula for computing a primary insurance amount for workers who first become eligible for benefits or die in 1990 (section 215(a)(1)(D)), and the formula for computing the maximum amount of benefits payable to the family of a worker who first becomes eligible for old-age benefits or dies in 1990 (section 203(a)(2)(C)).

Cost-of-Living Increases

General

The cost-of-living increase is 4.7 percent for benefits under titles II and XVI of the Act.

Under title II, old-age, survivors, and disability insurance benefis will increase by 4.7 percent beginning with the December 1989 benefits, which are payable on January 3, 1990. The kinds of benefits payable to individuals entitled under this program are old-age, disability, wife's, husband's, child's, widow's, widower's, mother's, father's, and parent's insurance benefits. This increase is based on the authority contained in section 215(i) of the Act (42 U.S.C. 415(i)).

Under title XVI, Federal SSI payment levels will also increase by 4.7 percent effective for payments made for the month of January 1990 but paid on December 29, 1989. This is based on the authority contained in section 1617 of the Act (42 U.S.C. 1382f). The percentage increase effective January 1990 is the same as the title II benefit increase and the annual payment amount is rounded, when not a multiple of $12, to the next lower multiple of $12.

Automatic Benefit Increase Computation

Under section 215(i) of the Act, the third calendar quarter of 1989 is a cost-of-living computation quarter for all the purposes of the Act. The Secretary is therefore required to increase benefits, effective with December 1989, for individuals entitled under section 227 or 228 of the Act, to increase primary insurance amounts of all other individuals entitled under title II of the Act, and to increase maximum benefits payable to a family. For December 1989, the benefit increase is the percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers from the third quarter of 1988 through the third quarter of 1989. Automatic benefit increases may be modified by a "stabilizer" provision under certain adverse financial conditions that are described in the section on the OASDI fund ratio. The December 1989 benefit increase is not affected by this provision.

Section 215(i)(1) of the Act provides that the Consumer Price Index for a cost-of-living computation quarter shall be the arithmetic mean of this index for the 3 months in that quarter. The Department of Labor's Consumer Price Index for Urban Wage Earners and Clerical Workers for each month in the quarter ending September 30, 1988, was: for July 1988, 117.2; for August 1988, 117.7; and for September 1988, 118.5. The arithmetic mean for this calendar quarter is 117.8 (after rounding to the nearest 0.1). The corresponding Consumer Price Index for each month in the quarter ending September 30, 1989, was: for July 1989, 123.2; for August 1989, 123.2; and for September 1989, 123.6. The arithmetic mean for this calendar quarter is 123.3. Thus, because the Consumer Price Index for the calendar quarter ending September 30, 1989, exceeds that for the calendar quarter ending September 30, 1988, by 4.7 percent, a cost-of-living benefit increase of 4.7 percent is effective for benefits under title II of the Act beginning December 1989.

Title II Benefit Amounts

In accordance with section 215(i) of the Act, in the case of insured workers and family members for whom eligibility for benefits (i.e., the worker's attainment of age 62, or disability or death before age 62) occurred before 1990, benefits will increase 4.7 percent beginning with benefits for December 1989 which will be received January 3, 1990. In the case of first eligibility after 1989, the 4.7 percent increase will not apply.

For eligibility after 1978, benefits are generally determined by a benefit formula provided by the Social Security Amendments of 1977 (Pub. L. 95–216), as described later in this notice.

For eligibility before 1979, benefits are determined by means of a benefit table. In accordance with section 215(i)(4) of the Act, the primary insurance amounts and the maximum family benefits shown in this table are revised by (1) increasing by 4.7 percent the corresponding amounts established by the last cost-of-living increase and the last extension of the benefit table made under section 215(i)(4) (to reflect the increase in the contribution and benefit base for 1989); and (2) by extending the table to reflect the higher monthly wage and related benefit amounts now possible under the increased contribution and benefit base for 1990, as described later in this notice. A copy of this table may be obtained by writing to: Social Security Administration, Office of Public Affairs, Office of Public Inquiries, 4100 Annex, Baltimore, MD 21235.

Section 215(i)(2)(D) of the Act also requires that, when the Secretary determines an automatic increase in Social Security benefits, the Secretary shall publish in the **Federal Register** a revision of the range of the primary insurance amounts and corresponding maximum family benefits based on the dollar amount and other porvisions described in section 215(a)(1)(C)(i). These benefits are referred to as "special minimum" benefits and are payable to certain individuals with long periods of relatively low earnings. In accordance with section 215(a)(1)(C)(i), the attached table shows the revised range of primary insurance amounts and corresponding maximum family benefit amounts after the 4.7 percent benefit increase.

Section 227 of the Act provides flat-rate benefits to a worker who became age 72 before 1969 and was not insured under the usual requirements, and to his or her spouse or surviving spouse. Section 228 of the Act provides similar benefits at age 72 for certain uninsured persons. The current monthly benefit amount of $151.90 for an individual under sections 227 and 228 of the Act is increased by 4.7 percent to obtain the new amount of $159.00. The present monthly benefit amount of $76.10 for a spouse under section 227 is increased by 4.7 percent to $79.60.

Title XVI Benefit Amounts

In accordance with section 1617 of the Act, Federal SSI benefit amounts for the aged, blind, and disabled are increased by 4.7 percent effective January 1990. Therefore, the yearly Federal SSI benefit amount of $4,416 for an eligible individual, $6,636 for an eligible individual with an eligible spouse, and $2,208 for an essential person, which became effective January 1989, are increased, effective January 1990, to $4,632, $6,948, and $2,316 respectively after rounding. The corresponding monthly amounts for 1990 are determined by dividing the yearly amounts by 12, giving $386, $579, and $193, respectively. The monthly amount is reduced by subtracting monthly countable income. In the case of an eligible individual with an eligible spouse, the amount payable is further divided equally between the two spouses.

Average of the Total Wages for 1988

The determination of the average wage figure for 1988 is based on the 1987 average wage figure of $18,426.51 announced in the **Federal Register** on October 31, 1988 (53 FR 43932), along with the percentage increase in average wages from 1987 to 1988 measured by annual wage data tabulated by the

Social Security Administration (SSA). The average amounts of wages calculated directly from this data were $17,416.59 and $18,274.38 for 1987 and 1988, respectively. To determine an average wage figure for 1988 at a level that is consistent with the series of average wages for 1951 through 1977 (published December 29, 1978, at 43 FR 61016), we multiplied the 1987 average wage figure of $18,426.51 by the percentage increase in average wages from 1987 to 1988 (based on SSA-tabulated wage data) as follows (with the result rounded to the nearest cent): Average wage for 1988 = $18,426.51 × $18,274.38 ÷ $17,416.59 = $19,334.04. Therefore, the average wage for 1988 is determined to be $19,334.04.

Contribution and Benefit Base

General

The contribution and benefit base is $50,400 for remuneration paid in 1990 and self-employment income earned in taxable years beginning in 1990.

The contribution and benefit base serves two purposes:

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

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

Computation

Section 230(c) of the Act provides a table with the contribution and benefit base for each year 1978, 1979, 1980, and 1981. For years after 1981, section 230(b) of the Act contains a formula for determining the contribution and benefit base. Under the prescribed formula, the contribution and benefit base for 1990 shall be equal to the 1989 base of $48,000 multiplied by the ratio of (1) the average amount, per employee, of total wages for the calendar year 1988 to (2) the average amount of those wages for the calendar year 1987. Section 230(b) further provides that if the amount so determined is not a multiple of $300, it shall be rounded to the nearest multiple of $300.

Average Wages

The average wage for calendar year 1987 was previously determined to be $18,426.51. The average wage for calendar year 1988 has been determined to be $19,334.04 as stated herein.

Amount

The ratio of the average wage for 1988, $19,334.04, compared to that for 1987, $18,426.51, is 1.0492513. Multiplying the 1989 contribution and benefit base of $48,000 by the ratio 1.0492513 produces the amount of $50,364.06, which must then be rounded to $50,400. Accordingly, the contribution and benefit base is determined to be $50,400 for 1990.

Quarter of Coverage Amount

General

The 1990 amount of earnings required for a quarter of coverage is $520. A quarter of coverage is the basic unit for determining whether a worker is insured under the Social Security program. For years before 1978, an individual generally was credited with a quarter of coverage for each quarter in which wages of $50 or more were paid, or an individual was credited with 4 quarters of coverage for every taxable year in which $400 or more of self-employment income was earned. Beginning in 1978, wages generally are no longer reported on a quarterly basis; instead, annual reports are made. With the change to annual reporting, section 352(b) of the Social Security Amendments of 1977 (Pub. L. 95–216) amended section 213(d) of the Act to provide that a quarter of coverage would be credited for each $250 of an individual's total wages and self-employment income for calendar year 1978 (up to a maximum of 4 quarters of coverage for the year). Individuals generally must have self-employment income of at least $400 in a taxable year in order to be credited with any quarters of coverage.

Computation

Under the prescribed formula, the quarter of coverage amount for 1990 shall be equal to the 1978 amount of

$250 multiplied by the ratio of (1) the average amount, per employee, of total wages for calendar 1988 to (2) the average amount of those wages reported for calendar year 1976. The section further provides that if the amount so determined is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Average Wages

The average wage for calendar year 1976 was previously determined to be $9,226.48. This was published in the **Federal Register** on December 29, 1978, at 43 FR 61016. The average wage for calendar year 1988 has been determined to be $19,334.04 as stated herein.

Quarter of Coverage Amount

The ratio of the average wage for 1988, $19,334.04, compared to that for 1976, $9,226.48, is 2.0954947. Multiplying the 1978 quarter of coverage amount of $250 by the ratio of 2.0954947 produces the amount of $523.87, which must then be rounded to $520. Accordingly, the quarter of coverage amount is determined to be $520 for 1990.

Retirement Earnings Test Exempt Amounts

(a) Beneficiaries Aged 70 or Over

Beginning with months after December 1982, there is no limit on the amount an individual 70 or over may earn and still receive Social Security benefits.

(b) Beneficiaries Aged 65 through 69

The retirement earnings test monthly exempt amount for beneficiaries aged 65 through 69 is stated in the Act at section 203(f)(8)(D) for years 1978 through 1982. A formula is provided in section 203(f)(8)(B) for computing the exempt amount applicable for years after 1982. The monthly exempt amount for 1989 was determined by this formula to be $740. Under the formula, the exempt amount for 1990 shall be the 1989 exempt amount multiplied by the ratio of (1) the average amount, per employee, of the total wages for calendar year 1988 to (2) the average amount of those wages for calendar year 1987. The section further provides that if the amount so determined is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Average Wages

Average wages for this purpose are determined in the same way as for the contribution and benefit base. Therefore, the ratio of the average wages for 1988, $19,334.04, compared to that for 1987, $18,426.51, is 1.0492513.

Exempt Amount for Beneficiaries Aged 65 through 69

Multiplying the 1989 retirement earnings test monthly exempt amount of $740 by the ratio of 1.0492513 produces the amount of $776.45. This must then be rounded to $780. The retirement earnings test monthly exempt amount for beneficiaries aged 65 through 69 is determined to be $780 for 1990. The corresponding retirement earnings test annual exempt amount for these beneficiaries is $9,360.

(c) Beneficiaries Under Age 65

Section 203 of the Act provides that beneficiaries under age 65 have a lower retirement earnings test monthly exempt amount than those beneficiaries aged 65 through 69. The exempt amount for beneficiaries under age 65 is determined by a formula provided in section 203(f)(8)(B) of the Act. Under the formula, the monthly exempt amount for beneficiaries under age 65 is $540 for 1989. The formula provides that the exempt amount for 1990 shall be the 1989 exempt amount for beneficiaries under age 65 multiplied by the ratio of (1) the average amount, per employee, of the total wages for calendar year 1988 to (2) the average amount of those wages for calendar year 1987. The section further provides that if the amount so determined is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Average Wages

Average wages for this purpose are determined in the same way as for the contribution and benefit base. Therefore, the ratio of the average wages for 1988, $19,334.04, compared to that of 1987, $18,426.51, is 1.0492513.

Exempt Amount for Beneficiaries Under Age 65

Multiplying the 1989 retirement earnings test monthly exempt amount of $540 by the ratio 1.0492513 produces the amount of $566.60. This must then be rounded to $570. The retirment earnings test monthly exempt amount for beneficiaries under age 65 is thus determined to be $570 for 1990. The corresponding retirement earnings test annual exempt amount for these beneficiaries is $6,840.

Computing Benefits After 1978

General

The Social Security Amendments of 1977 provided a new method for determining an individual's primary insurance amount. This method uses a formula based on "wage indexing" and was fully explained with interim regulations and final regulations published in the **Federal Register** on December 29, 1978, at 43 FR 60877 and July 15, 1982, at 47 FR 30731 respectively. It generally applies when a worker after 1978 attains age 62, becomes disabled, or dies before age 62. The formula uses the worker's earnings after they have been adjusted, or "indexed," in proportion to the increases in average wages of all workers. Using this method, we determine the worker's "average indexed monthly earnings." We then compute the primary insurance amount, using the worker's average indexed monthly earnings. The computation formula is adjusted automatically each year to reflect changes in general wage levels.

Average Indexed Monthly Earnings

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

For example, to compute the average indexed monthly earnings for a worker attaining age 62, becoming disabled, or dying before attaining age 62, in 1990, we divide the average of the total wages for 1988, $19,334.04, by the average of the total wages for each year prior to 1988 in which the worker had earnings. We then multiply the actual wages and self-employment income as defined in section 211(b) of the Act credited for each year by the corresponding ratio to obtain the worker's adjusted earnings for each year. After determining the number of years we must use to compute the primary insurance amount, we pick those years with highest indexed earnings, total those indexed earnings and divide by the total number of months in those years. This figure is rounded down to the next lower dollar amount, and becomes the average indexed monthly earnings figure to be used in computing the worker's primary insurance amount for 1990.

Computing the Primary Insurance Amount

The primary insurance amount is the sum of three separate percentages of portions of the average indexed monthly earnings. In 1979 (the first year the formula was in effect), these portions were the first $180, the amount between $180 and $1,085, and the amount over $1,085. The amounts for 1990 are obtained by multiplying the 1979 amounts by the ratio between the average of the total wages for 1988, $19,334.04, and for 1977, $9,779.44. These results were then rounded to the nearest dollar. For 1990, the ratio is 1.9770089. Multiplying the 1979 amounts of $180 and $1,085 by 1.9770089 produces the amounts of $355.86 and $2,145.05. These must then be rounded to $356 and $2,145. Accordingly, the portions of the average indexed monthly earnings to be used in 1990 are determined to be the first $356, the amount between $356 and $2,145, and the amount over $2,145.

Consequently, for individuals who first become eligible for old-age insurance benefits or disability insurance benefits in 1990, or who die in 1990 before becoming eligible for benefits, we will compute their primary insurance amount by adding the following:

(a) 90 percent of the first $356 of their average indexed monthly earnings, plus

(b) 32 percent of the average indexed monthly earnings over $356 and through $2,145, plus

(c) 15 percent of the average indexed monthly earnings over $2,145.

This amount is then rounded to the next multiple of $.10 if it is not already a multiple of $.10. This formula and the adjustments we have described are contained in section 215(a) of the Act (42 U.S.C. 415(a)).

Maximum Benefits Payable to a Family

General

The 1977 Amendments continued the long established policy of limiting the total monthly benefits which a worker's family may receive based on his or her primary insurance amount. Those amendments also continued the then existing relationship between maximum family benefits and primary insurance amounts but did change the method of computing the maximum amount of benefits which may be paid to a worker's family. The Social Security Disability Amendments of 1980 (Pub. L. 96–265) established a new formula for computing the maximum benefits payable to the family of a disabled worker. This new formula is applied to the family benefits of workers who first become entitled to disability insurance benefits after June 30, 1980, and who first become eligible for these benefits after 1978. The new formula was explained in a final rule published in the FEDERAL REGISTER on May 8, 1981, at 46 FR 25601. For disabled workers initially entitled to disability benefits before July 1980, or whose disability began before 1979, the family maximum payable is computed the same as the old-age and survivor family maximum.

Computing the Old-Age and Survivor Family Maximum

The formula used to compute the family maximum is similar to that used to compute the primary insurance amount. It involves computing the sum of four separate percentages of portions of the worker's primary insurance amount. In 1979, these portions were the first $230, the amount between $230 and $332, the amount between $332 and $433, and the amount over $433. The amounts for 1990 are obtained by multiplying the 1979 amounts by the ration between the average of the total wages for 1988, $19,334.04, and the average for 1977 $9,779.44. This amount is then rounded to the nearest dollar. For 1990, the ratio is 1.9770089. Multiplying the amounts of $230, $332, and $433 by 1.9770089 produces the amounts of $454.71, $656.37, and $856.04. These amounts are then rounded to $455, $656, and $856. Accordingly, the portions of the primary insurance amounts to be used in 1990 are determined to be the first $455, the amount between $455 and $656, the amount between $856 and $856, and the amount over $856.

Consequently, for the family of a worker who becomes age 62 or dies in 1990, the total amount of benefits payable to them will be computed so that it does not exceed:

(a) 150 percent of the first $455 of the worker's primary insurance amount, plus

(b) 272 percent of the worker's primary insurance amount over $455 through $656, plus

(c) 134 percent of the worker's primary insurance amount over $656 through $856, plus

(d) 175 percent of the worker's primary insurance amount over $856.

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

"Old-Law" Contribution and Benefit Base

General

The 1990 "old-law" contribution and benefit base is $37,500. This is the base that would have been effective under the Act without the enactment of the 1977 amendments. The base is computed under section 230(b) of the Act as it read prior to the 1977 amendments.

The "old-law" contribution and benefit base is used by:

(1) the Railroad Retirement program to determine certain tax liabilities and tier II benefits payable under that program to supplement the tier I payments which correspond to basic Social Security benefits,

(2) the Pension Benefit Guaranty Corporation to determine the maximum amount of pension guaranteed under the Employee Retirement Income Security Act (as stated in section 230(d) of the Act), and

(3) Social Security to determine a "year of coverage" in computing the "special minimum" benefit and in computing benefits for persons who are also eligible to receive pensions based on employment not covered under section 210 of the Act.

Computation

The base is computed using the automatic adjustment formula in section 230(b) of the Act as it read prior to the enactment of the 1977 amendments. Under the formula, the "old-law" contribution and benefit base shall be the "old-law" 1989 base multiplied by the ratio of (1) the average amount, per employee, of total wages for the calendar year of 1988 to (2) the average amount of those wages for the calendar year of 1987. If the amount so determined is not a multiple of $300, it shall be rounded to the nearest multiple of $300.

Average Wages

The average wage for calendar year 1987 was previously determined to be $18,426.51. The average wage for calendar year 1988 has been determined to be $19,334.04, as stated herein.

Amount

The ratio of the average wage for 1988, $19,334.04, compared to that for 1987, $18,426.51, is 1.0492513. Multiplying the 1989 "old-law" contribution and benefit base amount of $35,700 by the ratio of 1.0492513 produces the amount of $37,458.27 which must then be rounded to $37,500. Accordingly, the "old-law" contribution and benefit base is determined to be $37,500 for 1990.

OASDI Fund Ratio

General

Section 215(i) of the Act was amended by section 112 of Public Law 98–21, the Social Security Amendments of 1983, to include a "stabilizer" provision that can limit the automatic OASDI benefit increase under certain circumstances. 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 equal to the lesser of (1) the increase in average wages or (2) the increase in prices. The threshold level specified for the OASDI fund ratio is 20.0 percent for benefit increases for December of 1989 and later. The amendments also provide for subsequent "catch-up" benefit increases for beneficiaries whose previous benefit increases were affected by this provision. "Catch-up" benefit increases occur only when trust fund assets exceed 32.0 percent of annual expenditures.

Computation

Section 215(i) specifies the computation and application of the OASDI fund ratio. The OASDI fund ratio for 1989 is the ratio of (1) the combined assets of the OASI and DI Trust Funds at the beginning of 1989, including advance tax transfers for

January 1989, to (2) the estimated expenditures of the OASI and DI Trust Funds during 1989, excluding transfer payments between the OASI and DI Trust Funds, and reducing any transfers to the Railroad Retirement Account by any transfers from that account into either trust fund.

Ratio

The combined assets of the OASI and DI Trust Funds at the beginning of 1989 (including advance tax transfers for January 1989) equaled **$134,428** million, and the expenditures are estimated to be $235,674 million. Thus, the OASDI fund ratio for 1989 is 57.0 percent, which exceeds the applicable threshold of 20.0 percent. As a result, the "stabilizer" provision does not affect the benefit increase for December 1989.

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

Dated: October 26, 1989.

Louis W. Sullivan,

Secretary of Health and Human Services.

SPECIAL MINIMUM PRIMARY INSURANCE AMOUNTS AND MAXIMUM FAMILY BENEFITS

Primary insurance amount payable for Dec. 1988	No. of years required minimum earnings level	Primary insurance amount payable for Dec. 1989	Maximum family benefit payable for Dec. 1989
$21.00	11	$21.90	$33.00
41.70	12	43.60	65.70
62.70	13	65.60	98.70
83.50	14	87.40	131.30
104.40	15	109.30	164.00
125.40	16	131.20	197.20
146.30	17	153.10	229.90
167.20	18	175.00	262.70
188.10	19	196.90	295.50
208.80	20	218.60	328.20
230.00	21	240.80	361.30
250.80	22	262.50	394.00
271.90	23	284.60	427.30
292.70	24	306.40	460.00
313.50	25	328.20	492.50
334.60	26	350.30	525.90
355.50	27	372.20	558.60
376.30	28	393.90	591.20
397.10	29	415.70	624.20
418.00	30	437.60	656.80

This material was published in the Federal Register on October 31, 1989, at 54 FR 45801.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Revised Determination of 1990 Contribution and Benefit Bases

AGENCY: Social Security Administration, HHS.

ACTION: Notice.

SUMMARY: The Secretary has determined—

(1) The Social Security contribution and benefit base to be $51,300 for remuneration paid in 1990 and self-employment income earned in taxable years beginning in 1990;

(2) The "old-law" contribution and benefit base to be $38,100 for 1990.

The above determinations are in accordance with the requirements of section 10208 of Public Law 101 239 and supersede those announced in the **Federal Register** on October 31, 1989 (54 FR 45801).

FOR FURTHER INFORMATION CONTACT: Jeffrey L. Kunkel, Office of the Actuary, Social Security Administration, 6401 Security Boulevard, Baltimore, MD 21235, (301) 965–3013.

SUPPLEMENTARY INFORMATION:

Section 230(c) of the Social Security Act (the Act) provides a table with the contribution and benefit base for each year 1978, 1979, 1980, and 1981. For years after 1981, section 230(b) of the Act contains a formula for determining the contribution and benefit base.This formula uses the increase (if any) in the average of the total wages as the basis for determining the new contribution and benefit base. The average of the total wages is also used to index other program amounts, such as the earnings required for a quarter of coverage.

Under current regulations, the average of the total wages is calculated from individuals' wages subject to income tax, as reported on W-2 forms filed by employers. Contributions to certain qualified cash or deferred arrangements are not subject to income tax (but distributions from such arrangements may be taxable). Such contributions are known as deferred compensation amounts and have been treated as wages subject to Social Security taxes since 1984.

Because the deferred compensation amounts are not subject to income taxes, the data used to calculate the average of the total wages understate wages by such amounts. As a result, the annual adjustments in all the wage-indexed program amounts have not reflected the effects that year-to-year changes in deferred compensation amounts have on the average of the total wages. Section 10208 of Public Law 101–239, enacted December 19, 1989, provides for the inclusion of deferred compensation amounts in the determination of the average of the total wages. This permits the effects of year-to-year changes in deferred compensation amounts on the annual increases in the average of the total wages to be reflected in future adjustments of wage-indexed program amounts. These effects will begin with changes in such program amounts from calendar year 1992 to calendar year 1993.

Section 10208 of Public Law 101–239 also provides a transitional rule for computing the average of the total wages used in the formula for determining the contribution and benefit base and the "old-law" contribution and benefit base. The transitional rule is used to determine the bases for 1990, and will be used to determine the bases for 1991 and 1992.

Under the transitional rule, the contribution and benefit base for 1990 will reflect the effect of an additional increase of 2 percentage points in average wages, over and above the previously determined average-wage increase announced earlier this year. This additional increase results in the newly determined contribution and benefit base of $51,300 for 1990.

The transitional rule for 1991 and 1992 provides a smooth transition to the revised measure of the average of the total wages, which takes account of the deferred compensation amounts.

As a result of section 10208 of Public Law 101–239, both the contribution and benefit base and the "old-law" contribution and benefit base for 1990, as published in the **Federal Register** on October 31, 1989, have been superseded, and are revised as shown below.

Average of the Total Wages Under the Transitional Rule

General

For purposes of determining the 1990 contribution and benefit base and the 1990 "old-law" contribution and benefit base, the new statute provides a deemed average of the total wages for 1988.

Computation

The average of the total wages for 1988 is deemed to be equal to the amount announced in the **Federal Register** on October 31, 1989, plus 2 percent of the average wage amount announced for 1987, as provided by the statute under the transitional rule.

Amount

The average wage amount announced for 1988 in the **Federal Register** on October 31, 1989 (54 FR 45801) was $19,334.04. The average wage amount announced for 1987 in the **Federal Register** on October 31, 1988 (53 FR 43932) was $18,426.51. Two percent of $18,426.51 is $368.53, and the sum of this amount and $19,334.04 is $19,702.57. Therefore, the deemed average wage for 1988 for the purposes described above is $19,702.57.

Contribution and Benefit Base

General

The contribution and benefit base is $51,300 for remuneration paid in 1990 and self-employment income earned in taxable years beginning in 1990.

The contribution and benefit base serves two purposes:

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

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

Computation

Section 230(c) of the Act provides a table with the contribution and benefit base for each year 1978, 1979, 1980, and 1981. For years after 1981, section 230(b) of the Act contains a formula for determining the contribution and benefit base. Under the prescribed formula as modified by Public Law 101–239, the contribution and benefit base for 1990 shall be equal to the 1989 base of $48,000 multiplied by the ratio of (1) the deemed average amount, per employee, of total wages for the calendar year 1988 to (2) the average amount of total wages for the calendar year 1987. Section 230(b) further provides that if the amount so determined is not a multiple of $300, it shall be rounded to the nearest multiple of $300.

Average Wages

The average wage for calendar year 1987 was previously determined to be $18,426.51. The deemed average wage for calendar year 1988 has been determined to be $19,702.57 as stated herein.

Amount

The ratio of the deemed average wage for 1988, $19,702.57, compared to that for 1987, $18,426.51, is 1.0692513. Multiplying the 1989 contribution and benefit base of $48,000 by the ratio 1.0692513 produces the amount of $51,324.06, which must then be rounded to $51,300. Accordingly, the contribution and benefit base is determined to be $51,300 for 1990.

"Old-Law" Contribution and Benefit Base

General

The 1990 "old-law" contribution and benefit base is $38,100. This is the base that would have been effective under the Act without the enactment of the 1977 amendments. The base is computed under section 230(b) of the Act as it read prior to the 1977 amendments, and as it has been modified by Public Law 101–239.

The "old-law" contribution and benefit base is used by:

(1) The Railroad Retirement program to determine certain tax liabilities and tier II benefits payable under that program to supplement the tier I payments which correspond to basic Social Security benefits,

(2) The Pension Benefit Guaranty Corporation to determine the maximum amount of pension guaranteed under the Employee Retirement Income Security Act (as stated in section 230(d) of the Act), and

(3) Social Security to determine a "year of coverage" in computing the "special minimum" benefit and in computing benefits for persons who are also eligible to receive pensions based on employment not covered under section 210 of the Act.

Computation

The base is computed using the automatic adjustment formula in section 230(b) of the Act as it read prior to the enactment of the 1977 amendments. Under the formula as modified by Public Law 101–239, the "old-law" contribution and benefit base shall be the "old-law" 1989 base multiplied by the ratio of (1) the deemed average amount, per employee, of total wages for the calendar year of 1988 to (2) the average amount of total wages for the calendar year of 1987. If the amount so determined is not a multiple of $300, it shall be rounded to the nearest multiple of $300.

Average Wages

The average wage for calendar year 1987 was previously determined to be $18,426.51. The deemed average wage for calendar year 1988 has been determined to be $19,702.57 as stated herein.

Amount

The ratio of the deemed average wage for 1988, $19,702.57, compared to that for 1987, $18,426.51, is 1.0692513. Multiplying the 1989 "old-law" contribution and benefit base amount of $35,700 by the ratio of 1.0692513 produces the amount of $38,172.27 which must then be rounded to $38,100. Accordingly, the "old-law" contribution and benefit base is determined to be $38,100 for 1990.

(Catalog of Federal Domestic Assistance Programs Nos. 13.802 Social Security—Disability Insurance; 13.803 Social Security—Retirement Insurance; 13.805 Social Security—Survivor's Insurance.)

Dated: December 22, 1989.

Louis W. Sullivan,
Secretary of Health and Human Services.

This material was published in the Federal Register on December 29, 1989, at 54 FR 53751.

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

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

In this appendix, values are shown for the program amounts which are subject to automatic adjustment, from the time that such adjustments became effective through 1990. Projected values for future years through 1995, based on the two intermediate sets of assumptions (alternatives II-A and II-B), are also shown. Many of these assumptions are described in the subsection of this report entitled "Economic and Demographic Assumptions" and are shown in tables 10 and 11. The subsection entitled "Automatic Adjustments," and Appendix C, provide a more complete description of the program amounts affected by the automatic-adjustment procedures.

Under section 215(b)(3) of the Social Security Act, the average amount of total wages for each year after 1950 is used to index the earnings of most workers first becoming eligible for benefits in 1979 or later. This procedure converts a worker's past earnings to approximately their equivalent values near the time of the worker's retirement or other eligibility, and these values are used to calculate the worker's Average Indexed Monthly Earnings (AIME). The average amount of total wages for each year is also used to adjust most of the program amounts that are subject to the automatic-adjustment provisions. A copy of the notice announcing the average wage for 1988, including a brief description of its derivation, is shown in Appendix C. Table D1 shows the average amount of total wages as announced for each year 1951 through 1988.

TABLE D1.—AVERAGE AMOUNT OF TOTAL WAGES, CALENDAR YEARS 1951-88

Year	Amount	Year	Amount	Year	Amount
1951	$2,799.16	1966	$4,938.36	1981	$13,773.10
1952	2,973.32	1967	5,213.44	1982	14,531.34
1953	3,139.44	1968	5,571.76	1983	15,239.24
1954	3,155.64	1969	5,893.76	1984	16,135.07
1955	3,301.44	1970	6,186.24	1985	16,822.51
1956	3,532.36	1971	6,497.08	1986	17,321.82
1957	3,641.72	1972	7,133.80	1987	18,426.51
1958	3,673.80	1973	7,580.16	1988	19,334.04
1959	3,855.80	1974	8,030.76		
1960	4,007.12	1975	8,630.92		
1961	4,086.76	1976	9,226.48		
1962	4,291.40	1977	9,779.44		
1963	4,396.64	1978	10,556.03		
1964	4,576.32	1979	11,479.46		
1965	4,658.72	1980	12,513.46		

Table D2 shows the estimated average amount of total wages for each year 1989 through 1995, based on the four alternative sets of assumptions.

TABLE D2.—ESTIMATED AVERAGE AMOUNT OF TOTAL WAGES BY ALTERNATIVE, CALENDAR YEARS 1989-95

Calendar year	I	II-A	II-B	III
1989	$20,526.50	$20,492.62	$20,496.71	$20,409.69
1990	21,645.13	21,604.63	21,597.42	21,116.03
1991	22,829.22	22,845.68	22,761.83	22,044.46
1992	24,017.31	24,101.63	23,992.37	23,443.85
1993	25,184.86	25,376.43	25,268.54	24,777.63
1994	26,335.71	26,661.04	26,641.06	25,887.93
1995	27,482.12	27,951.34	28,065.03	27,606.47

The provisions for automatic cost-of-living increases in OASDI benefits were originally enacted in 1972 and first became effective with the benefit increase effective for June 1975. The determination of the benefit increase effective for December 1989 is shown in Appendix C. Table D3 shows the automatic benefit increases determined for each year 1975-89, and the benefit increases for each year 1990-95, on the basis of the two intermediate sets of assumptions.

The law provides for an automatic increase in the contribution and benefit base for the year following a year in which an automatic benefit increase became effective. The base for 1975 was the first one determined on this basis. (Amendments enacted in December 1973 provided that the 11-percent general benefit increase that became effective in 1974 would be considered an automatic cost-of-living benefit increase for purposes of the automatic-adjustment provisions.) The bases for 1979-81 were specified by the 1977 amendments at levels above those which were expected to occur under the automatic-adjustment provisions (and which, in fact, as the experience developed, were above such levels). Starting again in 1982, the bases have been determined automatically on the basis of increases in average wages. The base for 1990 that was originally published in the Federal Register (see the first such notice in Appendix C) was later revised to comply with the "Omnibus Budget Reconciliation Act of 1989". As explained in the second Federal Register notice given in Appendex C, the method used to determine the 1990 base was revised to reflect wages paid into certain deferred compensation plans. Table D3 shows actual past and projected future amounts for the contribution and benefit base.

The law provides for the determination of the contribution and benefit bases that would have been in effect in each year after 1978 under the automatic-adjustment provisions as in effect before the enactment of the 1977 amendments. (The determination of the "old-law" base for 1990 was modified in the same way as the current-law base for 1990, as described above and in Appendix C.) This old-law base is used in determining special-minimum benefits for certain workers who have many years of low earnings in covered employment. Beginning in 1986, the old-law base is also used in the calculation of OASDI benefits for certain workers who are eligible to receive pensions based on noncovered employment. In addition, it is used for certain purposes under the Railroad Retirement program and the Employee Retirement Income Security Act of 1974. Table D3 shows the old-law bases for 1979-90, together with estimated amounts for 1991-95 on the basis of the two intermediate sets of assumptions.

The 1972 amendments specified that the amount of earnings exempted from the withholding of benefits under the retirement earnings test would increase automatically in the year following a year in which an automatic cost-of-living benefit increase became effective. The 1977 amendments modified this procedure by establishing two different exempt amounts—one for those under age 65 and another for those aged 65 and over. The former amounts continued to increase automatically, while the latter amounts were specified for 1978-82, after which they again increase automatically. The exempt amounts are shown in table D3 for 1975-95.

The 1977 amendments specified the amount of earnings required in 1978 to be credited with a "quarter of coverage" and provided for automatic adjustment of this amount for future years. Table D3 shows the amounts for 1978-95.

The 1977 amendments substantially revised the method of computing benefits for most workers first becoming eligible for benefits in 1979 and later. The formula used to compute the Primary Insurance Amount (PIA) for workers who first become eligible for benefits, or who died before becoming eligible, in 1979 is:

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

The amounts separating the individual's AIME into intervals—the "bend points"—are adjusted automatically by the changes in average wages as specified in section 215(a)(1)(B) of the Social Security Act. (A regular-minimum benefit of $122 and a special-minimum benefit varying by "years of coverage" are also provided, although for most workers first becoming eligible for benefits in 1982 and later, the regular-minimum benefit of $122 has been eliminated.) The bend points for 1979-90, and the values projected for 1991-95, are shown in table D3.

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

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

These PIA-interval bend points are adjusted automatically in accordance with section 203(a)(2) of the Act. The maximum-family-benefit bend points for 1979-95 are shown in table D3.

TABLE D3.—OASDI PROGRAM AMOUNTS DETERMINED UNDER THE AUTOMATIC-ADJUSTMENT PROVISIONS, CALENDAR YEARS 1975-90, AND PROJECTED FUTURE AMOUNTS, CALENDAR YEARS 1991-95, ON THE BASIS OF THE INTERMEDIATE SETS OF ASSUMPTIONS

Calendar year	Benefit increase[1] (percent)	Contribution and benefit base[2]	"Old law" contribution and benefit base[3]	Retirement earnings test exempt amount: Under age 65	Retirement earnings test exempt amount: Ages 65 and over[4]	Amount of earnings required for quarter of coverage[5]	AIME "bend points" in PIA formula: First	AIME "bend points" in PIA formula: Second	PIA "bend points" in maximum-family-benefit formula: First	PIA "bend points" in maximum-family-benefit formula: Second	PIA "bend points" in maximum-family-benefit formula: Third
Actual experience:											
1975	8.0	$14,100	([6])	$2,520	$2,520	([7])	([6])	([6])	([6])	([6])	([6])
1976	6.4	15,300	([6])	2,760	2,760	([7])	([6])	([6])	([6])	([6])	([6])
1977	5.9	16,500	([6])	3,000	3,000	([7])	([6])	([6])	([6])	([6])	([6])
1978	6.5	17,700	([6])	3,240	[8]4,000	[9]$250	([6])	([6])	([6])	([6])	([6])
1979	9.9	[8]22,900	$18,900	3,480	[8]4,500	260	[9]$180	[9]$1,085	[9]$230	[9]$332	[9]$433
1980	14.3	[8]25,900	20,400	3,720	[8]5,000	290	194	1,171	248	358	467
1981	11.2	[8]29,700	22,200	4,080	[8]5,500	310	211	1,274	270	390	508
1982	7.4	32,400	24,300	4,440	[8]6,000	340	230	1,388	294	425	554
1983	3.5	35,700	26,700	4,920	6,600	370	254	1,528	324	468	610
1984	3.5	37,800	28,200	5,160	6,960	390	267	1,612	342	493	643
1985	3.1	39,600	29,700	5,400	7,320	410	280	1,691	358	517	675
1986	1.3	42,000	31,500	5,760	7,800	440	297	1,790	379	548	714
1987	4.2	43,800	32,700	6,000	8,160	460	310	1,866	396	571	745
1988	4.0	45,000	33,600	6,120	8,400	470	319	1,922	407	588	767
1989	4.7	48,000	35,700	6,480	8,880	500	339	2,044	433	626	816
1990	([10])	51,300	38,100	6,840	9,360	520	356	2,145	455	656	856
Alternative II-A:											
1991	4.1	54,300	40,500	7,200	9,960	560	377	2,274	482	696	907
1992	3.8	57,300	42,600	7,560	10,560	590	398	2,397	508	733	957
1993	3.6	60,600	45,000	8,040	11,160	620	420	2,535	537	776	1,012
1994	3.3	63,900	47,400	8,520	11,760	650	444	2,674	567	818	1,067
1995	3.0	67,200	49,800	9,000	12,360	690	467	2,815	597	861	1,124
Alternative II-B:											
1991	4.5	54,300	40,500	7,200	9,960	560	377	2,274	482	696	908
1992	4.4	57,300	42,600	7,560	10,440	590	398	2,396	508	733	956
1993	4.3	60,300	45,000	7,920	11,040	620	419	2,525	535	773	1,008
1994	4.2	63,600	47,400	8,400	11,640	650	442	2,662	564	815	1,062
1995	4.0	66,900	49,800	8,880	12,240	680	465	2,803	594	858	1,119

[1]Effective with benefits payable for June in each year 1975-82, and for December in each year after 1982.

[2]The bases for years after 1989 were increased slightly through the effect of a new procedure to determine the base, as required by Public Law 101-239.

[3]Contribution and benefit base that would have been determined automatically under the law in effect prior to enactment of the Social Security Amendments of 1977. The bases for years after 1989 were increased slightly through the effect of a new procedure to determine the base, as required by Public Law 101-239.

[4]In 1955-82, retirement earnings test did not apply at ages 72 and over; beginning in 1983, it does not apply at ages 70 and over.

[5]See Appendix C for a description of quarter-of-coverage requirements prior to 1978.

[6]No provision in law for this amount in this year.

[7]Amount not subject to automatic-adjustment provisions in this year.

[8]Amount specified by Social Security Amendments of 1977.

[9]Amount specified for first year by Social Security Amendments of 1977 amounts for subsequent years subject to automatic-adjustment provisions.

[10]Actual benefit increase for December 1990 has not been determined. Estimates of that increase, based on alternatives II-A and II-B, are 4.0 percent and 4.5 percent, respectively.

APPENDIX E.—ACTUARIAL ESTIMATES FOR THE OASDI AND HI PROGRAMS, COMBINED

In this appendix, long-range actuarial estimates for the OASDI and HI (Hospital Insurance) programs are combined to facilitate analysis of the adequacy of the combined income and assets of these three trust funds relative to their combined expenditures. Long-range estimates are subject to much uncertainty and should not be considered precise forecasts. Instead they should be considered as indicative of the general trend and range of costs that could reasonably be expected to occur.

As with the OASI and DI Trust Funds, income to the HI Trust Fund comes primarily from contributions paid by employees, employers, and self-employed persons. Contribution rates for the OASDI and HI programs are summarized in table E1 for 1966 and later. The combined OASDI and HI contribution rate for employees and their employers is often referred to as the FICA tax, because it is authorized by the Federal Insurance Contributions Act.

TABLE E1.— CONTRIBUTION RATES FOR THE OASDI AND HI PROGRAMS
[In percent]

Calendar years	Employees and employers, each			Self-employed		
	OASDI	HI	Total	OASDI	HI	Total
1966	3.85	0.35	4.20	5.80	0.35	6.15
1967	3.90	.50	4.40	5.90	.50	6.40
1968	3.80	.60	4.40	5.80	.60	6.40
1969-70	4.20	.60	4.80	6.30	.60	6.90
1971-72	4.60	.60	5.20	6.90	.60	7.50
1973	4.85	1.00	5.85	7.00	1.00	8.00
1974-77	4.95	.90	5.85	7.00	.90	7.90
1978	5.05	1.00	6.05	7.10	1.00	8.10
1979-80	5.08	1.05	6.13	7.05	1.05	8.10
1981	5.35	1.30	6.65	8.00	1.30	9.30
1982-83	5.40	1.30	6.70	8.05	1.30	9.35
1984[1]	5.70	1.30	7.00	11.40	2.60	14.00
1985[1]	5.70	1.35	7.05	11.40	2.70	14.10
1986-87[1]	5.70	1.45	7.15	11.40	2.90	14.30
1988-89[1]	6.06	1.45	7.51	12.12	2.90	15.02
1990 and later	6.20	1.45	7.65	12.40	2.90	15.30

[1]See section entitled "Basis for Trust Fund Receipts and Expenditures" for description of tax credits allowed against the combined OASDI and HI taxes on net earnings from self-employment in 1984-89.

The Social Security Act authorized borrowing among the OASI, DI, and HI Trust Funds through the end of 1987. Loans could not be made from a trust fund if its assets were below specified levels, with minimum standards specified for the repayment of interfund loans (including a requirement for the complete repayment of all such loans before 1990). Estimates shown in this appendix for the combined trust funds are theoretical because, under present law, no authority exists for transferring assets from one trust fund to another. The emphasis in this appendix on combined operations should not obscure the financial status of the individual trust funds.

Table E2 shows estimated income rates and cost rates for the OASDI program, the HI program, and the combined OASDI and HI programs for the long-range projection period, based on the four sets of assumptions I, II-A, II-B, and III described earlier in this report. Income rates exclude interest earned on trust-fund assets. Cost rates shown for HI exclude the cost of maintaining the trust fund at a level suitable for a contingency reserve. Table E2 also shows the excess of income rates over cost rates, called balances.

Under all four sets of assumptions, combined OASDI and HI cost rates are projected to rise above current levels, with the sharpest increase occurring during the period 2010-2030. Under the pessimistic set of assumptions, annual deficits are projected to occur before the turn of the century, and to continue throughout the 75-year projection period. Cost rates are projected to rise to over three times their current level by the year 2060. Under intermediate assumptions, annual deficits begin to occur in the second decade of the next century, with cost rates nearly doubling by the year 2060. Under optimistic assumptions, cost rates are projected to increase by about one-quarter, with annual deficits occurring beginning in 2025.

TABLE E2.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES[1] FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1990-2060

[As a percentage of taxable payroll[2]]

Calendar year	OASDI Income rate	OASDI Cost rate	OASDI Balance	HI Income rate	HI Cost rate	HI Balance	TOTAL Income rate	TOTAL Cost rate	TOTAL Balance
Alternative I:									
1990	12.58	10.52	2.06	2.90	2.54	0.36	15.48	13.06	2.42
1991	12.59	10.38	2.22	2.90	2.60	.30	15.49	12.97	2.52
1992	12.60	10.21	2.39	2.90	2.65	.25	15.50	12.86	2.64
1993	12.60	10.05	2.55	2.90	2.71	.19	15.50	12.76	2.74
1994	12.60	9.88	2.72	2.90	2.77	.13	15.50	12.65	2.85
1995	12.60	9.72	2.88	2.90	2.83	.07	15.50	12.55	2.95
1996	12.60	9.58	3.03	2.90	2.88	.02	15.50	12.46	3.04
1997	12.60	9.44	3.16	2.90	2.93	−.03	15.50	12.37	3.13
1998	12.60	9.32	3.28	2.90	2.97	−.07	15.50	12.30	3.20
1999	12.60	9.22	3.38	2.90	3.02	−.12	15.50	12.24	3.26
2000	12.61	9.16	3.45	2.90	3.06	−.16	15.51	12.22	3.29
2005	12.68	9.00	3.67	2.90	3.13	−.23	15.58	12.13	3.44
2010	12.74	9.36	3.38	2.90	3.26	−.36	15.64	12.62	3.02
2015	12.80	10.29	2.50	2.90	3.48	−.59	15.70	13.78	1.92
2020	12.87	11.53	1.34	2.90	3.60	−.70	15.77	15.13	.64
2025	12.92	12.53	.40	2.90	3.81	−.91	15.82	16.34	−.51
2030	12.96	12.97	−.01	2.90	3.99	−1.09	15.86	16.96	−1.11
2035	12.96	12.85	.11	2.90	4.12	−1.22	15.86	16.97	−1.11
2040	12.95	12.42	.53	2.90	4.19	−1.29	15.85	16.61	−.76
2045	12.94	12.07	.87	2.90	4.25	−1.35	15.84	16.32	−.48
2050	12.94	11.91	1.03	2.90	4.30	−1.40	15.84	16.21	−.37
2055	12.94	11.86	1.08	2.90	4.36	−1.46	15.84	16.22	−.38
2060	12.94	11.79	1.15	2.90	4.42	−1.52	15.84	16.21	−.37
Alternative II-A:									
1990	12.59	10.57	2.03	2.90	2.56	.34	15.49	13.12	2.37
1991	12.60	10.51	2.09	2.90	2.65	.25	15.50	13.16	2.33
1992	12.60	10.47	2.13	2.90	2.74	.15	15.50	13.21	2.29
1993	12.61	10.42	2.19	2.90	2.84	.06	15.51	13.26	2.25
1994	12.61	10.36	2.25	2.90	2.94	−.05	15.51	13.31	2.20
1995	12.61	10.30	2.31	2.90	3.05	−.15	15.51	13.35	2.17
1996	12.61	10.22	2.40	2.90	3.15	−.25	15.51	13.37	2.15
1997	12.61	10.15	2.47	2.90	3.24	−.34	15.51	13.39	2.12
1998	12.62	10.09	2.53	2.90	3.34	−.44	15.52	13.43	2.09
1999	12.62	10.05	2.57	2.90	3.44	−.54	15.52	13.49	2.03
2000	12.63	10.04	2.59	2.90	3.51	−.61	15.53	13.55	1.98
2005	12.71	10.06	2.65	2.90	3.87	−.97	15.61	13.93	1.68
2010	12.79	10.57	2.22	2.90	4.35	−1.45	15.69	14.92	.77
2015	12.86	11.74	1.12	2.90	5.06	−2.16	15.76	16.80	−1.04
2020	12.95	13.31	−.36	2.90	5.71	−2.82	15.85	19.03	−3.18
2025	13.02	14.72	−1.69	2.90	6.47	−3.57	15.92	21.19	−5.27
2030	13.08	15.60	−2.52	2.90	7.13	−4.23	15.98	22.73	−6.76
2035	13.10	15.89	−2.79	2.90	7.54	−4.64	16.00	23.43	−7.43
2040	13.11	15.80	−2.69	2.90	7.74	−4.84	16.01	23.54	−7.53
2045	13.11	15.76	−2.65	2.90	7.86	−4.96	16.01	23.62	−7.61
2050	13.12	15.95	−2.83	2.90	7.95	−5.05	16.02	23.90	−7.88
2055	13.14	16.25	−3.11	2.90	8.06	−5.16	16.04	24.30	−8.26
2060	13.15	16.46	−3.31	2.90	8.18	−5.28	16.05	24.64	−8.59

TABLE E2.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES[1] FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1990-2060 (Cont.)

[As a percentage of taxable payroll[2]]

Calendar year	OASDI Income rate	OASDI Cost rate	OASDI Balance	HI Income rate	HI Cost rate	HI Balance	TOTAL Income rate	TOTAL Cost rate	TOTAL Balance
Alternative II-B:									
1990	12.61	10.60	2.01	2.90	2.56	0.34	15.51	13.16	2.35
1991	12.60	10.64	1.96	2.90	2.67	.22	15.50	13.32	2.18
1992	12.61	10.67	1.94	2.90	2.78	.12	15.51	13.44	2.06
1993	12.61	10.69	1.92	2.90	2.90	.00	15.51	13.59	1.93
1994	12.62	10.69	1.93	2.90	3.01	-.11	15.52	13.70	1.82
1995	12.62	10.67	1.95	2.90	3.13	-.23	15.52	13.80	1.72
1996	12.62	10.63	2.00	2.90	3.24	-.34	15.52	13.87	1.65
1997	12.62	10.59	2.03	2.90	3.35	-.45	15.52	13.94	1.58
1998	12.63	10.56	2.06	2.90	3.46	-.56	15.53	14.02	1.50
1999	12.63	10.54	2.09	2.90	3.58	-.68	15.53	14.12	1.41
2000	12.65	10.56	2.09	2.90	3.69	-.79	15.55	14.25	1.30
2005	12.74	10.59	2.14	2.90	4.12	-1.22	15.64	14.71	.92
2010	12.82	11.08	1.74	2.90	4.67	-1.78	15.72	15.75	-.03
2015	12.89	12.25	.64	2.90	5.47	-2.57	15.79	17.73	-1.94
2020	12.98	13.86	-.88	2.90	6.18	-3.28	15.88	20.04	-4.16
2025	13.06	15.33	-2.27	2.90	6.99	-4.09	15.96	22.32	-6.36
2030	13.12	16.28	-3.16	2.90	7.69	-4.79	16.02	23.97	-7.95
2035	13.14	16.62	-3.47	2.90	8.12	-5.22	16.04	24.73	-8.69
2040	13.15	16.55	-3.40	2.90	8.32	-5.42	16.05	24.87	-8.82
2045	13.15	16.52	-3.37	2.90	8.42	-5.52	16.05	24.94	-8.89
2050	13.16	16.70	-3.54	2.90	8.52	-5.62	16.06	25.22	-9.15
2055	13.18	17.00	-3.82	2.90	8.63	-5.73	16.08	25.62	-9.55
2060	13.19	17.23	-4.04	2.90	8.75	-5.85	16.09	25.98	-9.89
Alternative III:									
1990	12.63	10.85	1.78	2.90	2.61	.29	15.53	13.47	2.07
1991	12.61	11.29	1.32	2.90	2.80	.10	15.51	14.09	1.42
1992	12.62	11.32	1.30	2.90	2.94	-.04	15.52	14.26	1.25
1993	12.63	11.58	1.05	2.90	3.11	-.21	15.53	14.68	.85
1994	12.64	12.06	.58	2.90	3.33	-.43	15.54	15.38	.16
1995	12.65	12.01	.64	2.90	3.50	-.60	15.55	15.50	.05
1996	12.65	12.04	.62	2.90	3.69	-.79	15.55	15.72	-.17
1997	12.65	12.06	.59	2.90	3.88	-.98	15.55	15.93	-.38
1998	12.66	12.11	.55	2.90	4.07	-1.17	15.56	16.18	-.62
1999	12.66	12.18	.48	2.90	4.28	-1.38	15.56	16.46	-.90
2000	12.68	12.23	.46	2.90	4.52	-1.62	15.58	16.74	-1.16
2005	12.79	12.31	.48	2.90	5.51	-2.61	15.69	17.82	-2.13
2010	12.89	12.84	.05	2.90	6.85	-3.95	15.79	19.69	-3.90
2015	12.97	14.20	-1.23	2.90	8.81	-5.91	15.87	23.01	-7.14
2020	13.08	16.14	-3.07	2.90	10.86	-7.96	15.98	27.00	-11.02
2025	13.18	18.11	-4.93	2.90	13.15	-10.25	16.08	31.25	-15.17
2030	13.27	19.69	-6.42	2.90	15.12	-12.22	16.17	34.81	-18.64
2035	13.33	20.72	-7.39	2.90	16.39	-13.49	16.23	37.10	-20.87
2040	13.36	21.35	-7.99	2.90	16.88	-13.98	16.26	38.24	-21.97
2045	13.40	22.07	-8.67	2.90	17.10	-14.20	16.30	39.17	-22.87
2050	13.45	23.06	-9.61	2.90	17.29	-14.39	16.35	40.35	-24.00
2055	13.51	24.21	-10.70	2.90	17.54	-14.64	16.41	41.74	-25.34
2060	13.56	25.23	-11.66	2.90	17.80	-14.90	16.46	43.03	-26.56

[1] Cost rates for HI exclude amounts required for trust fund maintenance.

[2] The taxable payroll for HI is somewhat larger than the taxable payroll for OASDI, because HI covers all Federal civilian employees, including those hired before 1984, all State and local government employees hired after April 1, 1986, and railroad employees. This difference is relatively small and does not significantly affect the comparisons.

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

Table E3 summarizes the estimates of OASDI and HI income rates, cost rates, and balances for various time periods, based on all four sets of assumptions. Income rates exclude interest earned on trust-fund assets. Cost rates shown for HI exclude the cost of maintaining the trust fund at a level suitable for a contingency reserve.

Under the pessimistic set of assumptions, the combined OASDI and HI system is projected to show deficits during the next 25, 50, and 75-year periods (including beginning trust fund balances). Deficits are projected to occur during each 25-year subperiod of the 75-year projection period (excluding beginning trust fund balances). Under intermediate assumptions, positive balances are projected to occur during the next 25-year period whether or not beginning trust fund balances are included. Deficits are projected to occur during the 50 and 75-year projection periods (including beginning trust fund balances), and during the last two 25-year subperiods (excluding beginning trust fund balances). Under optimistic assumptions, the combined OASDI and HI system is projected to show positive balances during the 25, 50, and 75-year periods and during the first 25-year subperiod. Small deficits are projected during the second and third 25-year subperiod (excluding beginning trust fund balances).

TABLE E3.—COMPARISON OF SUMMARIZED INCOME RATES AND COST RATES[1] FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1990-2064

[As a percentage of taxable payroll[2]]

Calendar year	OASDI			HI			TOTAL		
	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Alternative I:									
25-year subperiods:[3]									
1990-2014	12.63	9.53	3.10	2.90	3.04	–0.13	15.53	12.57	2.97
2015-2039	12.89	12.23	.66	2.90	3.85	–.94	15.79	16.07	–.28
2040-2064	12.91	11.97	.94	2.90	4.33	–1.42	15.82	16.30	–.48
Valuation ranges:[4]									
25 years: 1990-2014	12.93	9.53	3.40	3.06	3.04	.02	15.99	12.57	3.42
50 years: 1990-2039	12.91	10.80	2.11	2.98	3.42	–.43	15.90	14.22	1.68
75 years: 1990-2064	12.91	11.15	1.76	2.96	3.69	–.73	15.87	14.84	1.04
Alternative II-A:									
25-year subperiods:[3]									
1990-2014	12.66	10.39	2.26	2.90	3.64	–.73	15.56	14.03	1.53
2015-2039	12.99	14.55	–1.56	2.90	6.55	–3.65	15.90	21.11	–5.21
2040-2064	13.10	16.12	–3.02	2.90	7.99	–5.09	16.01	24.11	–8.11
Valuation ranges:[4]									
25 years: 1990-2014	12.37	10.39	2.58	3.06	3.64	–.57	16.04	14.03	2.00
50 years: 1990-2039	12.98	12.29	.69	2.99	4.97	–1.97	15.97	17.25	–1.28
75 years: 1990-2064	13.01	13.32	–.31	2.97	5.78	–2.82	15.98	19.11	–3.13
Alternative II-B:									
25-year subperiods:[3]									
1990-2014	12.67	10.83	1.84	2.90	3.83	–.92	15.57	14.66	0.92
2015-2039	13.02	15.20	–2.18	2.90	7.08	–4.17	15.93	22.28	–6.35
2040-2064	13.14	16.89	–3.75	2.90	8.56	–5.66	16.04	25.45	–9.41
Valuation ranges:[4]									
25 years: 1990-2014	12.99	10.83	2.17	3.07	3.83	–.76	16.06	14.66	1.41
50 years: 1990-2039	13.01	12.83	.17	2.99	5.32	–2.33	16.00	18.15	–2.16
75 years: 1990-2064	13.04	13.95	–.91	2.97	6.22	–3.25	16.01	20.17	–4.16
Alternative III:									
25-year subperiods:[3]									
1990-2014	12.71	12.29	.42	2.91	4.95	–2.05	15.61	17.24	–1.63
2015-2039	13.15	18.24	–5.09	2.90	13.34	–10.43	16.06	31.58	–15.52
2040-2064	13.43	23.48	–10.05	2.90	17.39	–14.48	16.34	40.87	–24.53
Valuation ranges:[4]									
25 years: 1990-2014	13.07	12.29	.77	3.09	4.95	–1.87	16.15	17.24	–1.09
50 years: 1990-2039	13.10	14.93	–1.83	3.00	8.67	–5.67	16.11	23.61	–7.50
75 years: 1990-2064	13.19	17.06	–3.87	2.98	10.84	–7.86	16.17	27.89	–11.73

[1]Cost rates for HI exclude amounts required for trust fund maintenace.

[2]The taxable payroll for HI is somewhat larger than the taxable payroll for OASDI, because HI covers all Federal civilian employees, including those hired before 1984, all State and local government employees hired after April 1, 1986, and railroad employees. This difference is relatively small and does not significantly affect the comparisons.

[3]Income rates do not include beginning trust fund balances.

[4]Income rates include beginning trust fund balances.

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

APPENDIX F.—LONG-RANGE ESTIMATES OF SOCIAL SECURITY TRUST FUND OPERATIONS IN DOLLARS

This appendix presents long-range projections of the operations of the combined OASI and DI Trust Funds and in some cases the HI Trust Fund. It provides the means to track the progress of the funds during the projection period, as well as the potential budgetary impact of the funds' operations. Several economic series, or "indices," are provided to allow current dollars to be adjusted for variations caused by changes in prices, wages, and certain other aspects of economic growth during the projection period.

The selection of a particular index for adjustment reflects the analyst's decision of which aspect of the economy to use as a standard. Table F1 presents five such indices for adjustment, which consider the problem of standardization from different points of view.

One of the most common forms of standardization is based on some measure of change in the prices of consumer goods. One such price index is the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W, hereafter referred to as "CPI"), which is published by the Bureau of Labor Statistics, Department of Labor. This is the index used to determine annual increases in OASDI monthly benefits payable after the year of initial eligibility. The CPI is assumed to increase ultimately at annual rates of 2.0, 3.0, 4.0, and 5.0 percent for alternatives I, II-A, II-B, and III, respectively. Constant-dollar values (adjusted by the CPI-W) are provided in table F2.

Another type of standardization combines the effects of price inflation with real-wage growth. The wage index presented here is the "SSA average wage index," as defined in section 215(i)(1)(G) of the Social Security Act. This index is used to make annual adjustments to many earnings-related quantities embodied in the Social Security Act, such as the contribution and benefit base. The average annual wage is assumed to increase ultimately by 4.2, 4.7, 5.3, and 5.8 percent under alternatives I, II-A, II-B, and III, respectively.

The payroll index adjusts for the effect of changes in the number of workers as well as for the effects of price inflation and real-wage growth. The OASDI taxable payroll consists of all earnings subject to OASDI taxation, adjusted for the lower effective tax rate on multiple-employer "excess wages," and including deemed wage credits for military service. The gross national product index adjusts for the same effects as the taxable payroll index, plus the effect of other changes in the national economy. No explicit assumptions are made about growth in taxable payroll or GNP. These series are derived from the mathematical interactions of other more basic economic and demographic assumptions, as discussed in Appendix A.

Discounting with interest is another way of adjusting current dollars. The series of interest-rate factors included here is based on the average of the assumed annual interest rates for special public-debt obligations issuable to the trust funds. Ultimate nominal interest rates compounded semiannually, are assumed to be approximately 5.0, 5.5, 6.0, and 6.5 percent for alternatives I, II-A, II-B, and III, respectively.

TABLE F1.—SELECTED ECONOMIC VARIABLES BY ALTERNATIVE, CALENDAR YEARS 1990-2065
[GNP and taxable payroll in billions]

Calendar year	Adjusted CPI[1]	SSA average wage index[2]	Taxable payroll[3]	Gross national product	Compound interest-rate factor[4]
Alternative I:					
1990	100.00	$21,645	$2,405	$5,552	1.0000
1991	103.05	22,829	2,572	5,933	1.0767
1992	105.94	24,017	2,741	6,318	1.1486
1993	108.60	25,185	2,911	6,695	1.2187
1994	111.07	26,336	3,081	7,073	1.2864
1995	113.38	27,482	3,252	7,458	1.3513
1996	115.63	28,642	3,425	7,854	1.4136
1997	117.95	29,848	3,604	8,267	1.4787
1998	120.31	31,066	3,793	8,702	1.5496
1999	122.72	32,369	3,992	9,160	1.6271
2000	125.18	33,728	4,194	9,614	1.7094
2005	138.20	41,432	5,365	12,250	2.1880
2010	152.59	50,894	6,770	15,427	2.8004
2015	168.47	62,519	8,435	19,197	3.5844
2020	186.00	76,798	10,437	23,755	4.5877
2025	205.36	94,338	12,920	29,407	5.8720
2030	226.74	115,884	16,114	36,679	7.5158
2035	250.34	142,352	20,237	46,066	9.6197
2040	276.39	174,865	25,442	57,917	12.3125
2045	305.16	214,803	31,961	72,759	15.7592
2050	336.92	263,864	40,150	91,403	20.1707
2055	371.99	324,129	50,523	115,017	25.8172
2060	410.71	398,159	63,696	145,009	33.0442
2065	453.45	489,097	80,326	182,870	42.2944
Alternative II-A:					
1990	100.00	21,605	2,399	5,553	1.0000
1991	104.04	22,846	2,565	5,944	1.0816
1992	108.05	24,102	2,733	6,335	1.1635
1993	111.96	25,376	2,905	6,730	1.2470
1994	115.66	26,661	3,081	7,136	1.3302
1995	119.20	27,951	3,261	7,552	1.4118
1996	122.78	29,279	3,447	7,988	1.4917
1997	126.45	30,697	3,644	8,449	1.5749
1998	130.25	32,131	3,850	8,930	1.6627
1999	134.16	33,658	4,066	9,438	1.7556
2000	138.18	35,240	4,284	9,947	1.8535
2005	160.19	44,337	5,579	12,961	2.4310
2010	185.70	55,783	7,185	16,741	3.1886
2015	215.28	70,183	9,109	21,296	4.1822
2020	249.57	88,301	11,428	26,848	5.4854
2025	289.32	111,097	14,297	33,750	7.1947
2030	335.40	139,777	17,962	42,606	9.4367
2035	388.82	175,860	22,669	54,031	12.3772
2040	450.75	221,259	28,598	68,490	16.2341
2045	522.55	278,378	35,982	86,588	21.2929
2050	605.77	350,242	45,166	109,209	27.9280
2055	702.26	440,658	56,729	137,823	36.6307
2060	814.11	554,415	71,368	174,220	48.0453
2065	943.77	697,539	89,841	220,363	63.0168
Alternative II-B:					
1990	100.00	21,597	2,392	5,555	1.0000
1991	104.48	22,762	2,544	5,919	1.0841
1992	109.15	23,992	2,705	6,307	1.1709
1993	113.88	25,269	2,870	6,703	1.2619
1994	118.64	26,641	3,047	7,134	1.3555
1995	123.42	28,065	3,235	7,593	1.4504
1996	128.36	29,552	3,434	8,079	1.5467
1997	133.50	31,139	3,646	8,595	1.6465
1998	138.84	32,774	3,870	9,143	1.7511
1999	144.38	34,508	4,109	9,723	1.8601
2000	150.16	36,337	4,346	10,298	1.9732
2005	182.69	47,042	5,807	13,836	2.6506
2010	222.27	60,902	7,702	18,487	3.5605
2015	270.43	78,845	10,047	24,317	4.7828
2020	329.02	102,074	12,974	31,702	6.4247
2025	400.30	132,147	16,709	41,220	8.6301
2030	487.03	171,080	21,600	53,799	11.5927

TABLE F1.—SELECTED ECONOMIC VARIABLES BY ALTERNATIVE, CALENDAR YEARS 1990-2065 (Cont.)
[GNP and taxable payroll in billions]

Calendar year	Adjusted CPI[1]	SSA average wage index[2]	Taxable payroll[3]	Gross national product	Compound interest-rate factor[4]
Alternative II-B: (Cont.)					
2035	592.54	$221,483	$28,061	$70,562	15.5723
2040	720.92	286,736	36,437	92,502	20.9180
2045	877.10	371,214	47,190	120,945	28.0988
2050	1,067.13	480,580	60,963	157,740	37.7447
2055	1,298.33	622,168	78,809	205,866	50.7018
2060	1,579.62	805,471	102,044	269,112	68.1069
2065	1,921.84	1,042,777	132,221	352,026	91.4868
Alternative III:					
1990	100.00	21,116	2,340	5,397	1.0000
1991	104.98	22,044	2,418	5,642	1.0869
1992	111.99	23,444	2,587	6,111	1.1856
1993	119.32	24,778	2,757	6,524	1.2982
1994	125.24	25,888	2,866	6,800	1.4181
1995	131.86	27,606	3,078	7,390	1.5386
1996	138.45	29,158	3,287	7,921	1.6572
1997	145.37	30,823	3,507	8,467	1.7811
1998	152.64	32,576	3,736	9,043	1.9085
1999	160.28	34,421	3,976	9,652	2.0397
2000	168.29	36,418	4,220	10,270	2.1739
2005	214.79	48,277	5,729	14,084	2.9889
2010	274.13	63,998	7,749	19,282	4.1095
2015	349.86	84,839	10,284	25,922	5.6502
2020	446.52	112,467	13,467	34,434	7.7685
2025	569.89	149,091	17,528	45,459	10.6811
2030	727.34	197,642	22,823	60,043	14.6856
2035	928.29	262,004	29,751	79,393	20.1915
2040	1,184.76	347,326	38,688	104,719	27.7616
2045	1,512.09	460,432	50,028	137,353	38.1699
2050	1,929.85	610,371	64,380	179,289	52.4805
2055	2,463.03	809,137	82,715	233,647	72.1564
2060	3,143.53	1,072,631	106,337	304,673	99.2091
2065	4,012.02	1,421,932	136,855	397,726	136.4044

[1]The CPI used to adjust OASDI benefits is the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), as defined by the Bureau of Labor Statistics, Department of Labor. The values shown are adjusted by dividing the average of the 12 monthly values of the CPI by the analogous value for 1990, and multiplying the result by 100, thereby initializing the CPI at 100 for 1990.

[2]The "SSA average wage index" is defined in section 215(i)(1)(G) of the Social Security Act; it is used in the calculations of initial benefits and the automatic adjustment of the contribution and benefit base and other wage-indexed program amounts.

[3]Taxable payroll consists of total earnings subject to OASDI contribution rates, adjusted to include deemed wages based on military service and to reflect the lower effective contribution rates (compared to the combined employee-employer rate) which apply to multiple-employer "excess wages."

[4]The compound-interest-rate factor is based on the average of the assumed annual interest rates for special public-debt obligations issuable to the trust funds in the 12 months of the year, under each alternative.

Table F2 shows estimated operations of the combined OASI and DI Trust Funds in constant dollars adjusted by the CPI indexing series discussed above. Items included in the table are: income excluding interest, interest income, total income, total outgo, and assets at the end of the year. Income excluding interest consists of payroll-tax contributions, income from taxation of benefits, and miscellaneous reimbursements from the general fund of the Treasury. Outgo consists of benefit payments, administrative expenses, net transfers from the OASI and DI Trust Funds to the Railroad Retirement program under the financial-interchange provisions, and payments for vocational rehabilitation services for disabled beneficiaries. These estimates are based on the four sets of assumptions I, II-A, II-B, and III described earlier in this report.

TABLE F2.—ESTIMATED OPERATIONS OF THE COMBINED OASI AND DI TRUST FUNDS IN CONSTANT DOLLARS[1] BY ALTERNATIVE, CALENDAR YEARS 1990-2065
[In billions]

Calendar year	Income excluding interest	Interest income	Total income	Outgo	Assets at end of year
Alternative I:					
1990	$300.0	$17.2	$317.2	$253.0	$227.2
1991	313.0	21.8	334.8	259.0	296.2
1992	324.4	26.3	350.7	264.1	374.8
1993	336.6	30.7	367.3	269.4	463.6
1994	348.7	35.2	383.9	274.1	563.1
1995	360.1	39.6	399.7	278.8	672.6
1996	372.3	43.8	416.0	283.6	791.9
1997	383.8	48.1	431.9	288.6	919.7
1998	396.0	53.1	449.1	293.9	1,056.9
1999	408.4	59.1	467.5	299.8	1,203.7
2000	421.2	65.1	486.3	306.9	1,359.6
2005	490.5	106.9	597.4	349.4	2,292.8
2010	563.5	163.0	726.4	415.3	3,461.3
2015	638.7	225.7	864.4	515.4	4,753.5
2020	719.7	287.9	1,007.6	647.0	6,024.0
2025	810.6	346.1	1,156.7	788.1	7,211.1
2030	918.0	402.8	1,320.8	921.7	8,377.7
2035	1,044.6	466.2	1,510.8	1,039.0	9,700.3
2040	1,188.4	546.7	1,735.1	1,142.9	11,391.8
2045	1,351.0	651.2	2,002.3	1,263.8	13,585.1
2050	1,536.8	782.2	2,319.0	1,419.2	16,321.5
2055	1,751.7	940.7	2,692.4	1,611.1	19,627.3
2060	2,000.1	1,131.5	3,131.6	1,828.3	23,606.0
2065	2,284.1	1,362.2	3,646.3	2,071.3	28,420.8
Alternative II-A:					
1990	299.6	17.2	316.7	253.5	226.2
1991	309.1	21.7	330.9	259.1	289.2
1992	317.2	26.2	343.4	264.8	357.1
1993	326.0	30.7	356.7	270.4	430.9
1994	335.0	35.3	370.4	276.1	511.4
1995	343.7	39.8	383.5	281.8	597.9
1996	353.1	43.9	397.0	286.9	690.6
1997	362.2	48.0	410.3	292.4	788.4
1998	371.6	52.4	424.0	298.2	891.2
1999	380.9	57.1	438.1	304.5	998.8
2000	390.2	60.6	450.8	311.3	1,109.3
2005	441.1	88.7	529.8	350.5	1,729.5
2010	493.2	126.2	619.4	409.0	2,437.9
2015	542.3	162.2	704.5	496.8	3,102.0
2020	590.8	187.6	778.4	609.5	3,554.4
2025	641.4	196.9	838.3	727.2	3,700.5
2030	698.0	189.7	887.8	835.4	3,542.6
2035	761.4	170.2	931.5	926.3	3,160.5
2040	828.8	143.3	972.0	1,002.2	2,648.3
2045	899.7	110.2	1,010.0	1,085.5	2,018.4
2050	975.2	67.2	1,042.3	1,189.2	1,190.9
2055	1,058.0	8.1	1,066.1	1,312.4	55.6
2060	([2])	([2])	([2])	([2])	([2])
Alternative II-B:					
1990	299.1	17.2	316.3	253.5	225.7
1991	305.5	21.6	327.1	259.2	283.9
1992	310.8	25.8	336.7	264.3	344.2
1993	316.7	30.1	346.8	269.4	407.2
1994	323.1	34.3	357.4	274.5	473.8
1995	329.3	38.5	367.8	279.6	543.7
1996	336.5	42.4	378.9	284.3	617.4
1997	343.4	46.3	389.7	289.2	694.1
1998	350.6	50.3	400.9	294.4	773.9
1999	357.8	54.3	412.1	299.9	856.3

TABLE F2.—ESTIMATED OPERATIONS OF THE COMBINED OASI AND DI TRUST FUNDS IN CONSTANT DOLLARS[1] BY ALTERNATIVE, CALENDAR YEARS 1990-2065 (Cont.)
[In billions]

Calendar year	Income excluding interest	Interest income	Total income	Outgo	Assets at end of year
Alternative II-B: (Cont.)					
2000	$364.5	$56.5	$421.0	$305.5	$938.9
2005	403.1	77.3	480.4	336.8	1,386.3
2010	442.4	105.3	547.7	383.8	1,872.5
2015	477.0	129.3	606.4	455.3	2,275.0
2020	509.8	140.6	650.4	546.5	2,445.3
2025	543.0	134.2	677.2	639.7	2,306.4
2030	579.5	110.2	689.7	722.0	1,867.6
2035	620.0	72.8	692.8	786.9	1,204.6
2040	661.9	27.0	688.9	836.4	402.1
2045	(2)	(2)	(2)	(2)	(2)
Alternative III:					
1990	293.5	17.0	310.5	254.0	219.5
1991	289.3	20.4	309.7	260.1	258.6
1992	289.7	23.2	312.9	261.5	293.9
1993	290.9	26.2	317.2	267.5	325.5
1994	288.6	29.0	317.5	275.9	351.7
1995	293.5	31.0	324.5	280.2	378.3
1996	299.3	32.7	332.0	285.7	406.6
1997	303.9	34.1	338.0	290.9	434.3
1998	308.4	35.4	343.8	296.3	461.1
1999	312.6	36.3	348.9	302.2	485.8
2000	316.6	34.4	350.9	306.5	507.0
2005	339.6	36.9	376.5	328.3	609.8
2010	362.6	42.2	404.8	362.8	690.1
2015	379.6	39.6	419.2	417.4	631.5
2020	392.7	20.9	413.6	486.8	302.3
2025	(2)	(2)	(2)	(2)	(2)

[1]The adjustment from current to constant dollars is by the CPI indexing series shown in table F1.

[2]The combined OASI and DI Trust Funds are estimated to become exhausted during this year.

Table F3 shows estimated operations of the combined OASI and DI Trust Funds in current dollars—that is in dollars unadjusted for inflation. Items included in the table are: income excluding interest, interest income, total income, total outgo, and assets at the end of the year. These estimates, based on the four sets of economic and demographic assumptions I, II-A, II-B, and III described earlier in this report, are presented to facilitate independent analysis.

TABLE F3.—ESTIMATED OPERATIONS OF THE COMBINED OASI AND DI TRUST FUNDS IN CURRENT DOLLARS BY ALTERNATIVE, CALENDAR YEARS 1990-2065
[In billions]

Calendar year	Income excluding interest	Interest income	Total income	Outgo	Assets at end of year
Alternative I:					
1990	$300.0	$17.2	$317.2	$253.0	$227.2
1991	322.5	22.5	345.0	266.9	305.2
1992	343.7	27.9	371.6	279.7	397.1
1993	365.6	33.3	398.9	292.5	503.4
1994	387.3	39.1	426.4	304.4	625.5
1995	408.3	44.9	453.1	316.0	762.6
1996	430.5	50.6	481.1	327.9	915.7
1997	452.7	56.7	509.5	340.4	1,084.8
1998	476.4	63.9	540.3	353.6	1,271.5
1999	501.2	72.5	573.7	368.0	1,477.3

TABLE F3.—ESTIMATED OPERATIONS OF THE COMBINED OASI AND DI TRUST FUNDS IN CURRENT DOLLARS BY ALTERNATIVE, CALENDAR YEARS 1990-2065 (Cont.)

[In billions]

Calendar year	Income excluding interest	Interest income	Total income	Outgo	Assets at end of year
Alternative I: (Cont.)					
2000	$527.2	$81.5	$608.8	$384.2	$1,701.9
2005	677.9	147.8	825.6	482.9	3,168.7
2010	859.8	248.7	1,108.5	633.6	5,281.6
2015	1,076.1	380.2	1,456.3	868.3	8,008.2
2020	1,338.7	535.6	1,874.3	1,203.4	11,204.9
2025	1,664.6	710.8	2,375.4	1,618.5	14,808.9
2030	2,081.4	913.3	2,994.7	2,089.8	18,995.6
2035	2,615.2	1,167.0	3,782.2	2,601.1	24,283.5
2040	3,284.8	1,510.9	4,795.7	3,159.0	31,486.2
2045	4,122.8	1,987.3	6,110.1	3,856.8	41,456.3
2050	5,177.8	2,635.4	7,813.2	4,781.6	54,990.7
2055	6,516.0	3,499.4	10,015.4	5,993.0	73,011.4
2060	8,214.7	4,646.9	12,861.6	7,509.1	96,951.3
2065	10,357.4	6,176.9	16,534.4	9,392.5	128,874.9
Alternative II-A:					
1990	299.6	17.2	316.7	253.5	226.2
1991	321.6	22.6	344.2	269.5	300.9
1992	342.8	28.3	371.1	286.1	385.8
1993	365.0	34.4	399.3	302.7	482.4
1994	387.5	40.9	428.4	319.3	591.5
1995	409.7	47.4	457.1	335.8	712.7
1996	433.6	53.9	487.5	352.2	848.0
1997	458.1	60.7	518.8	369.8	997.0
1998	484.0	68.3	552.3	388.5	1,160.9
1999	511.0	76.7	587.7	408.5	1,340.0
2000	539.3	83.7	623.0	430.2	1,532.8
2005	706.6	142.1	848.7	561.5	2,770.5
2010	915.9	234.4	1,150.3	759.6	4,527.2
2015	1,167.4	349.2	1,516.6	1,069.6	6,678.0
2020	1,474.5	468.2	1,942.7	1,521.1	8,870.7
2025	1,855.7	569.6	2,425.4	2,104.0	10,706.4
2030	2,341.2	636.4	2,977.5	2,801.8	11,881.9
2035	2,960.3	661.7	3,622.0	3,601.6	12,288.6
2040	3,735.7	645.8	4,381.5	4,517.5	11,937.3
2045	4,701.5	576.0	5,277.5	5,672.2	10,547.0
2050	5,907.3	406.8	6,314.1	7,203.9	7,214.4
2055	7,429.6	56.9	7,486.5	9,216.6	390.5
2060	(1)	(1)	(1)	(1)	(1)
Alternative II-B:					
1990	299.1	17.2	316.3	253.5	225.7
1991	319.2	22.6	341.7	270.8	296.7
1992	339.3	28.2	367.5	288.5	375.7
1993	360.7	34.2	394.9	306.8	463.8
1994	383.3	40.7	424.0	325.6	562.1
1995	406.5	47.5	453.9	345.1	671.0
1996	431.9	54.4	486.4	364.9	792.5
1997	458.5	61.8	520.3	386.1	926.6
1998	486.7	69.8	556.6	408.7	1,074.5
1999	516.6	78.4	595.0	433.1	1,236.4
2000	547.4	84.9	632.2	458.8	1,409.9
2005	736.5	141.2	877.7	615.3	2,532.6
2010	983.3	234.2	1,217.5	853.0	4,162.1
2015	1,290.1	349.8	1,639.9	1,231.2	6,152.3
2020	1,677.4	462.6	2,140.0	1,798.2	8,045.6
2025	2,173.7	537.1	2,710.8	2,560.7	9,232.5
2030	2,822.3	536.7	3,359.0	3,516.4	9,095.9
2035	3,673.9	431.3	4,105.3	4,662.7	7,137.7
2040	4,771.9	194.3	4,966.3	6,029.7	2,898.7
2045	(1)	(1)	(1)	(1)	(1)
Alternative III:					
1990	293.5	17.0	310.5	254.0	219.5
1991	303.7	21.5	325.1	273.1	271.5
1992	324.5	26.0	350.4	292.8	329.1
1993	347.2	31.3	378.5	319.2	388.4
1994	361.4	36.3	397.7	345.6	440.5

TABLE F3.—ESTIMATED OPERATIONS OF THE COMBINED OASI AND DI TRUST FUNDS IN CURRENT DOLLARS BY ALTERNATIVE, CALENDAR YEARS 1990-2065 (Cont.)
[In billions]

Calendar year	Income excluding interest	Interest income	Total income	Outgo	Assets at end of year
Alternative III: (Cont.)					
1995	$387.0	$40.9	$427.9	$369.5	$498.8
1996	414.3	45.3	459.7	395.6	562.9
1997	441.7	49.6	491.4	422.9	631.3
1998	470.8	54.0	524.8	452.3	703.8
1999	501.0	58.2	559.2	484.4	778.5
2000	532.7	57.8	590.6	515.9	853.3
2005	729.3	79.3	808.7	705.1	1,309.7
2010	994.1	115.7	1,109.7	994.6	1,891.8
2015	1,327.9	138.6	1,466.5	1,460.4	2,209.3
2020	1,753.4	93.3	1,846.7	2,173.9	1,350.0
2025	[1]	[1]	[1]	[1]	[1]

[1]The combined OASI and DI Trust Funds are estimated to become exhausted during this year.

Table F4 shows estimated income excluding interest and total outgo of the combined OASI and DI Trust Funds, of the HI Trust Fund, and of the combined OASI, DI, and HI Trust Funds, based on the four sets of assumptions I, II-A, II-B, and III described earlier in this report. For OASDI, income excluding interest consists of payroll-tax contributions, proceeds from taxation of benefits, and miscellaneous reimbursements from the general fund of the Treasury. Outgo consists of benefit payments, administrative expenses, net transfers from the trust funds to the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries. For HI, income excluding interest consists of contributions (including contributions from railroad employment) and payments from the general fund of the Treasury for contributions on deemed wage credits for military service. Total outgo consists of outlays (benefits and administrative expenses) for insured beneficiaries. Both the HI income and outgo are on an incurred basis.

Table F4 also shows the excess of income excluding interest over outgo, called the balance. The balance approximately reflects the potential impact of trust-fund operations on the Federal budget. Interest income is excluded because it is an intragovernmental transfer within the Federal budget, and therefore does not directly affect the total Federal budget balance. Other types of income, because they are components of total government receipts, have a direct effect on the total budget balance.

TABLE F4.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE IN CURRENT DOLLARS BY ALTERNATIVE, CALENDAR YEARS 1989-2060
[In billions]

	OASDI			HI			TOTAL		
Calendar year	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance
Alternative I:									
1990	$300.0	$253.0	$47.0	$72.8	$63.8	$9.0	$372.8	$316.7	$56.0
1991	322.5	266.9	55.6	77.9	69.8	8.1	400.4	336.7	63.7
1992	343.7	279.7	63.9	82.9	75.9	7.1	426.6	355.6	71.0
1993	365.6	292.5	73.1	88.1	82.4	5.7	453.6	374.9	78.7
1994	387.3	304.4	83.0	93.2	89.1	4.1	480.5	393.5	87.0

TABLE F4.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE IN CURRENT DOLLARS BY ALTERNATIVE, CALENDAR YEARS 1989-2060 (Cont.)
[In billions]

	OASDI			HI			TOTAL		
Calendar year	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance
Alternative I: (Cont.)									
1995	$408.3	$316.0	$92.2	$98.3	$96.1	$2.2	$506.6	$412.1	$94.5
1996	430.4	327.9	102.5	103.5	103.0	.6	534.0	430.9	103.1
1997	452.7	340.4	112.4	108.9	110.0	–1.0	561.6	450.3	111.3
1998	476.4	353.6	122.8	114.5	117.4	–2.8	590.9	471.0	119.9
1999	501.2	368.0	133.3	120.5	125.4	–4.8	621.7	493.4	128.3
2000	527.2	384.2	143.1	126.6	133.8	–7.1	653.9	517.9	135.9
2005	677.9	482.9	194.9	162.2	175.2	–12.9	840.1	658.1	181.9
2010	859.8	633.6	226.1	205.2	230.5	–25.2	1,065.0	864.1	200.9
2015	1,076.1	868.3	207.8	255.3	306.7	–51.4	1,331.3	1,175.0	156.3
2020	1,338.7	1,203.4	135.3	315.8	391.8	–75.9	1,654.5	1,595.2	59.3
2025	1,664.6	1,618.5	46.1	390.9	513.3	–122.3	2,055.5	2,131.8	–76.2
2030	2,081.4	2,089.8	–8.3	487.5	671.4	–183.8	2,568.9	2,761.2	–192.2
2035	2,615.2	2,601.1	14.1	612.2	869.8	–257.5	3,227.4	3,470.9	–243.4
2040	3,284.8	3,159.0	125.8	769.7	1,113.2	–343.4	4,054.5	4,272.2	–217.6
2045	4,122.8	3,856.8	266.1	966.9	1,416.7	–449.7	5,089.8	5,273.5	–183.6
2050	5,177.8	4,781.6	396.3	1,214.7	1,799.4	–584.6	6,392.5	6,581.0	–188.4
2055	6,516.0	5,993.0	523.0	1,528.5	2,296.4	–767.8	8,044.5	8,289.4	–244.8
2060	8,214.7	7,509.1	705.5	1,927.0	2,938.4	–1,011.3	10,141.7	10,447.5	–305.7
Alternative II-A:									
1990	299.5	253.5	46.0	72.6	64.0	8.6	372.2	317.5	54.6
1991	321.6	269.5	52.1	77.6	71.0	6.6	399.2	340.6	58.7
1992	342.8	286.1	56.7	82.7	78.3	4.4	425.5	364.4	61.1
1993	364.9	302.7	62.2	87.9	86.2	1.8	452.9	388.9	64.0
1994	387.5	319.3	68.2	93.2	94.7	–1.3	480.7	414.0	66.7
1995	409.7	335.8	73.8	98.6	103.7	–4.9	508.3	439.5	68.8
1996	433.5	352.2	81.3	104.2	113.2	–8.8	537.8	465.4	72.4
1997	458.1	369.8	88.3	110.1	123.2	–13.0	568.2	493.0	75.2
1998	484.0	388.5	95.6	116.3	133.9	–17.5	600.3	522.4	77.9
1999	511.0	408.5	102.5	122.8	145.7	–22.8	633.8	554.2	79.6
2000	539.3	430.2	109.1	129.3	156.6	–27.2	668.6	586.8	81.8
2005	706.6	561.5	145.1	168.6	224.9	–56.1	875.2	786.3	88.9
2010	915.9	759.6	156.3	217.7	326.7	–108.8	1,133.6	1,086.3	47.4
2015	1,167.4	1,069.6	97.8	275.6	480.7	–205.0	1,443.0	1,550.3	–107.2
2020	1,474.5	1,521.1	–46.5	345.7	681.3	–335.5	1,820.2	2,202.4	–382.0
2025	1,855.7	2,104.0	–248.2	432.5	965.3	–532.8	2,288.2	3,069.3	–781.0
2030	2,341.2	2,801.8	–460.5	543.3	1,336.6	–793.2	2,884.5	4,138.4	–1,253.8
2035	2,960.3	3,601.6	–641.1	685.7	1,783.4	–1,097.6	3,646.1	5,385.0	–1,738.8
2040	3,735.7	4,517.5	–781.7	865.1	2,308.6	–1,443.4	4,600.8	6,826.0	–2,225.1
2045	4,701.5	5,672.2	–970.6	1,088.4	2,949.3	–1,860.8	5,789.9	8,621.5	–2,831.5
2050	5,907.3	7,203.9	–1,296.5	1,366.2	3,746.8	–2,380.5	7,273.5	10,950.7	–3,677.0
2055	7,429.6	9,216.6	–1,786.9	1,716.0	4,768.0	–3,052.0	9,145.6	13,984.6	–4,838.9
2060	9,356.9	11,750.6	–2,393.6	2,158.8	6,085.6	–3,926.7	11,515.7	17,836.1	–6,320.3
Alternative II-B:									
1990	299.1	253.5	45.5	72.4	64.0	8.4	371.5	317.5	54.0
1991	319.1	270.8	48.4	77.0	71.1	6.0	396.2	341.8	54.4
1992	339.3	288.5	50.8	81.9	78.5	3.4	421.2	366.9	54.2
1993	360.7	306.8	53.9	86.9	86.7	.1	447.6	393.6	54.0
1994	383.3	325.6	57.6	92.2	95.8	–3.5	475.5	421.4	54.1
1995	406.5	345.1	61.4	97.9	105.7	–7.7	504.3	450.8	53.6
1996	431.9	364.9	67.0	103.9	116.2	–12.2	535.8	481.0	54.8
1997	458.5	386.1	72.4	110.2	127.4	–17.0	568.7	513.5	55.2
1998	486.7	408.7	78.0	117.0	139.5	–22.5	603.7	548.3	55.4
1999	516.6	433.1	83.5	124.1	153.0	–28.8	640.7	586.1	54.6
2000	547.4	458.8	88.6	131.3	167.2	–35.8	678.7	626.0	52.7
2005	736.5	615.3	121.2	175.7	249.6	–73.8	912.2	864.9	47.4
2010	983.3	853.0	130.3	233.6	376.6	–142.9	1,216.9	1,229.6	–12.6
2015	1,290.1	1,231.2	58.8	304.3	574.2	–269.8	1,594.4	1,805.4	–210.9
2020	1,677.4	1,798.2	–120.7	392.9	837.5	–444.5	2,070.3	2,635.7	–565.3
2025	2,173.7	2,560.7	–386.9	505.9	1,220.1	–714.1	2,679.6	3,780.8	–1,101.1
2030	2,822.3	3,516.4	–694.0	654.0	1,734.0	–1,079.9	3,476.3	5,250.4	–1,774.0
2035	3,673.9	4,662.7	–988.7	849.6	2,377.8	–1,528.0	4,523.6	7,040.5	–2,516.8
2040	4,771.9	6,029.7	–1,257.7	1,103.2	3,163.9	–2,060.6	5,875.1	9,193.6	–3,318.4
2045	6,181.2	7,794.5	–1,613.1	1,428.7	4,147.2	–2,718.4	7,610.0	11,941.7	–4,331.6
2050	7,992.5	10,180.4	–2,187.7	1,845.7	5,419.9	–3,574.1	9,838.2	15,600.3	–5,762.0
2055	10,345.8	13,396.2	–3,050.3	2,385.9	7,096.8	–4,710.8	12,731.7	20,493.0	–7,761.2
2060	13,410.2	17,580.5	–4,170.1	3,089.3	9,320.1	–6,230.7	16,499.5	26,900.5	–10,400.9

TABLE F4.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE IN CURRENT DOLLARS BY ALTERNATIVE, CALENDAR YEARS 1989-2060 (Cont.)
[In billions]

Calendar year	OASDI Income excluding interest	OASDI Outgo	OASDI Balance	HI Income excluding interest	HI Outgo	HI Balance	TOTAL Income excluding interest	TOTAL Outgo	TOTAL Balance
Alternative III:									
1990	$293.5	$254.0	$39.4	$70.9	$63.8	$7.1	$364.4	$317.9	$46.5
1991	303.7	273.1	30.6	73.3	70.8	2.6	377.0	343.8	33.1
1992	324.5	292.8	31.6	78.4	79.6	–1.1	402.8	372.4	30.4
1993	347.2	319.2	27.9	83.6	89.5	–5.9	430.7	408.8	21.9
1994	361.4	345.6	15.8	86.9	99.7	–12.6	448.3	445.3	3.1
1995	387.0	369.5	17.4	93.3	112.4	–19.1	480.2	482.0	–1.6
1996	414.3	395.6	18.7	99.5	126.5	–26.8	513.9	522.1	–8.1
1997	441.7	422.9	18.8	106.1	141.8	–35.6	547.9	564.8	–16.8
1998	470.8	452.3	18.5	113.0	158.7	–45.6	583.8	611.0	–27.1
1999	501.0	484.4	16.6	120.2	177.3	–57.1	621.2	661.7	–40.5
2000	532.7	515.9	16.8	127.6	198.6	–70.9	660.3	714.5	–54.1
2005	729.3	705.1	24.2	173.4	329.5	–156.0	902.7	1,034.6	–131.8
2010	994.1	994.6	–.4	235.1	555.5	–320.3	1,229.2	1,550.1	–320.8
2015	1,327.9	1,460.4	–132.3	311.5	946.6	–635.0	1,639.4	2,407.0	–767.4
2020	1,753.4	2,173.9	–420.4	407.9	1,526.9	–1,119.0	2,161.3	3,700.8	–1,539.4
2025	2,300.4	3,174.1	–873.6	530.8	2,405.9	–1,875.0	2,831.2	5,580.0	–2,748.7
2030	3,015.3	4,493.6	–1,478.2	691.1	3,603.4	–2,912.2	3,706.5	8,097.1	–4,390.5
2035	3,948.3	6,163.5	–2,215.1	900.9	5,090.1	–4,189.1	4,849.3	11,253.7	–6,404.3
2040	5,148.7	8,261.0	–3,112.2	1,171.5	6,819.6	–5,648.0	6,320.2	15,080.6	–8,760.3
2045	6,676.5	11,040.0	–4,363.5	1,514.8	8,933.6	–7,418.7	8,191.3	19,973.6	–11,782.3
2050	8,624.3	14,844.5	–6,220.1	1,949.3	11,623.2	–9,673.8	10,573.6	26,467.7	–15,894.0
2055	11,128.6	20,024.8	–8,896.1	2,504.4	15,142.7	–12,638.3	13,632.9	35,167.5	–21,534.4
2060	14,362.9	26,824.3	–12,461.3	3,219.4	19,760.7	–16,541.2	17,582.3	46,585.0	–29,002.6

Table F5 shows estimated income excluding interest, total outgo, and the excess of income excluding interest over total outgo (balance) of the combined OASI and DI Trust Funds, of the HI Trust Fund, and of the combined OASI, DI, and HI Trust Funds, annually for alternatives II-A and II-B.

TABLE F5.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE IN CURRENT DOLLARS FOR ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1990-2064
[In billions]

Calendar year	OASDI Income excluding interest	OASDI Outgo	OASDI Balance	HI Income excluding interest	HI Outgo	HI Balance	TOTAL Income excluding interest	TOTAL Outgo	TOTAL Balance
Alternative II-A:									
1990	$299.5	$253.5	$46.0	$72.6	$64.0	$8.6	$372.2	$317.5	$54.6
1991	321.6	269.5	52.1	77.6	71.0	6.6	399.2	340.6	58.7
1992	342.8	286.1	56.7	82.7	78.3	4.4	425.5	364.4	61.1
1993	364.9	302.7	62.2	87.9	86.2	1.8	452.9	388.9	64.0
1994	387.5	319.3	68.2	93.2	94.7	–1.3	480.7	414.0	66.7
1995	409.7	335.8	73.8	98.6	103.7	–4.9	508.3	439.5	68.8
1996	433.5	352.2	81.3	104.2	113.2	–8.8	537.8	465.4	72.4
1997	458.1	369.8	88.3	110.1	123.2	–13.0	568.2	493.0	75.2
1998	484.0	388.5	95.6	116.3	133.9	–17.5	600.3	522.4	77.9
1999	511.0	408.5	102.5	122.8	145.7	–22.8	633.8	554.2	79.6
2000	539.3	430.2	109.1	129.3	156.6	–27.2	668.6	586.8	81.8
2001	569.2	453.0	116.3	136.3	168.4	–32.0	705.5	621.4	84.2
2002	600.9	477.1	123.8	143.8	181.3	–37.4	744.6	658.3	86.3
2003	634.2	503.0	131.2	151.6	194.8	–43.1	785.8	697.9	88.0
2004	669.4	531.1	138.4	159.9	209.3	–49.3	829.3	740.3	89.0
2005	706.6	561.5	145.1	168.6	224.9	–56.1	875.2	786.3	88.9
2006	745.4	594.1	151.2	177.8	242.2	–64.3	923.1	836.3	86.8
2007	785.3	629.3	156.0	187.2	261.0	–73.7	972.5	890.3	82.2
2008	827.0	668.6	158.4	197.0	282.5	–85.4	1,024.0	951.1	72.9
2009	870.7	712.3	158.3	207.3	304.6	–97.2	1,077.9	1,016.9	61.0

TABLE F5.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE IN CURRENT DOLLARS FOR ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1990-2064 (Cont.)
[In billions]

Calendar year	OASDI: Income excluding interest	OASDI: Outgo	OASDI: Balance	HI: Income excluding interest	HI: Outgo	HI: Balance	TOTAL: Income excluding interest	TOTAL: Outgo	TOTAL: Balance
Alternative II-A: (Cont.)									
2010	$915.9	$759.6	$156.3	$217.7	$326.7	–$108.8	$1,133.6	$1,086.3	$47.4
2011	962.9	811.1	151.8	228.6	351.3	–122.6	1,191.5	1,162.4	29.0
2012	1,011.0	867.6	143.3	239.6	380.3	–140.5	1,250.6	1,247.9	2.7
2013	1,060.9	929.7	131.2	251.1	412.1	–160.9	1,312.0	1,341.8	–29.7
2014	1,113.2	997.0	116.2	263.1	449.2	–186.0	1,376.3	1,446.2	–69.8
2015	1,167.4	1,069.6	97.8	275.6	480.7	–205.0	1,443.0	1,550.3	–107.2
2016	1,224.0	1,148.5	75.5	288.6	514.9	–226.2	1,512.6	1,663.3	–150.7
2017	1,282.6	1,233.1	49.5	302.0	552.0	–249.9	1,584.5	1,785.1	–200.4
2018	1,343.7	1,323.4	20.3	315.9	592.3	–276.3	1,659.6	1,915.7	–256.0
2019	1,407.7	1,419.5	–11.7	330.5	635.6	–305.0	1,738.2	2,055.1	–316.8
2020	1,474.5	1,521.1	–46.5	345.7	681.3	–335.5	1,820.2	2,202.4	–382.0
2021	1,544.1	1,627.5	–83.4	361.5	730.3	–368.7	1,905.6	2,357.8	–452.1
2022	1,616.6	1,738.5	–121.8	378.1	784.4	–406.3	1,994.7	2,523.0	–528.2
2023	1,692.5	1,855.0	–162.4	395.3	841.6	–446.2	2,087.8	2,696.7	–608.8
2024	1,772.3	1,976.7	–204.3	413.5	902.3	–488.7	2,185.8	2,879.0	–693.1
2025	1,855.7	2,104.0	–248.2	432.5	965.3	–532.8	2,288.2	3,069.3	–781.0
2026	1,943.5	2,236.0	–292.3	452.5	1,033.0	–580.3	2,396.0	3,268.9	–872.8
2027	2,035.5	2,371.7	–336.1	473.5	1,104.5	–630.9	2,508.9	3,476.1	–967.1
2028	2,132.6	2,511.7	–379.0	495.6	1,179.6	–683.9	2,628.3	3,691.3	–1,062.9
2029	2,234.5	2,655.0	–420.4	518.9	1,257.4	–738.4	2,753.4	3,912.4	–1,158.9
2030	2,341.2	2,801.8	–460.5	543.3	1,336.6	–793.2	2,884.5	4,138.4	–1,253.8
2031	2,453.3	2,954.1	–500.7	569.0	1,418.3	–849.1	3,022.3	4,372.4	–1,350.0
2032	2,571.4	3,111.1	–539.6	596.2	1,503.2	–906.9	3,167.6	4,614.2	–1,446.5
2033	2,695.5	3,271.6	–576.1	624.7	1,591.9	–967.1	3,320.2	4,863.5	–1,543.2
2034	2,825.2	3,435.4	–610.1	654.6	1,685.6	–1,031.0	3,479.8	5,121.0	–1,641.1
2035	2,960.3	3,601.6	–641.1	685.7	1,783.4	–1,097.6	3,646.1	5,385.0	–1,738.8
2036	3,101.3	3,771.4	–669.9	718.3	1,885.0	–1,166.5	3,819.7	5,656.3	–1,836.6
2037	3,249.2	3,947.6	–698.2	752.5	1,986.9	–1,234.3	4,001.7	5,934.4	–1,932.6
2038	3,404.5	4,130.3	–725.7	788.4	2,090.2	–1,301.6	4,193.0	6,220.5	–2,027.4
2039	3,566.8	4,319.7	–752.8	826.0	2,196.5	–1,370.5	4,392.7	6,516.2	–2,123.4
2040	3,735.7	4,517.5	–781.7	865.1	2,308.6	–1,443.4	4,600.8	6,826.0	–2,225.1
2041	3,911.9	4,724.2	–812.2	905.9	2,426.1	–1,520.2	4,817.8	7,150.4	–2,332.5
2042	4,096.0	4,942.4	–846.3	948.5	2,547.4	–1,598.9	5,044.4	7,489.8	–2,445.3
2043	4,289.3	5,172.9	–883.5	993.2	2,675.1	–1,681.8	5,282.5	7,848.1	–2,565.4
2044	4,490.8	5,415.8	–924.9	1,039.8	2,808.8	–1,768.9	5,530.5	8,224.5	–2,693.9
2045	4,701.5	5,672.2	–970.6	1,088.4	2,949.3	–1,860.8	5,789.9	8,621.5	–2,831.5
2046	4,921.5	5,943.3	–1,021.6	1,139.2	3,096.8	–1,957.4	6,060.8	9,040.0	–2,979.2
2047	5,151.5	6,230.6	–1,079.0	1,192.3	3,248.8	–2,056.4	6,343.8	9,479.4	–3,135.5
2048	5,392.7	6,536.8	–1,144.0	1,247.8	3,407.9	–2,160.0	6,640.5	9,944.7	–3,304.1
2049	5,644.1	6,861.4	–1,217.3	1,305.7	3,571.7	–2,265.9	6,949.7	10,433.2	–3,483.3
2050	5,907.3	7,203.9	–1,296.5	1,366.2	3,746.8	–2,380.5	7,273.5	10,950.7	–3,677.0
2051	6,183.2	7,567.0	–1,383.8	1,429.6	3,930.0	–2,500.3	7,612.8	11,497.1	–3,884.1
2052	6,472.9	7,949.4	–1,476.3	1,496.2	4,122.9	–2,626.6	7,969.2	12,072.3	–4,103.0
2053	6,777.1	8,350.9	–1,573.7	1,566.1	4,325.2	–2,759.0	8,343.2	12,676.1	–4,332.8
2054	7,095.8	8,774.1	–1,678.1	1,639.3	4,540.9	–2,901.5	8,735.1	13,315.0	–4,579.7
2055	7,429.6	9,216.6	–1,786.9	1,716.0	4,768.0	–3,052.0	9,145.6	13,984.6	–4,838.9
2056	7,780.1	9,679.9	–1,899.7	1,796.5	5,006.6	–3,210.0	9,576.6	14,686.6	–5,109.8
2057	8,147.5	10,164.5	–2,016.9	1,880.9	5,256.7	–3,375.7	10,028.4	15,421.2	–5,392.7
2058	8,531.7	10,669.7	–2,137.9	1,969.2	5,519.8	–3,550.5	10,500.9	16,189.5	–5,688.5
2059	8,934.9	11,199.3	–2,264.3	2,061.8	5,795.8	–3,733.9	10,996.7	16,995.1	–5,998.2
2060	9,356.9	11,750.6	–2,393.6	2,158.8	6,085.6	–3,926.7	11,515.7	17,836.1	–6,320.3
2061	9,798.7	12,322.9	–2,524.1	2,260.4	6,390.0	–4,129.4	12,059.1	18,712.9	–6,653.6
2062	10,261.7	12,924.7	–2,662.9	2,366.9	6,708.9	–4,341.9	12,628.6	19,633.6	–7,004.9
2063	10,746.7	13,553.8	–2,807.0	2,478.4	7,050.8	–4,572.2	13,225.2	20,604.6	–7,379.3
2064	11,254.4	14,209.3	–2,954.9	2,595.3	7,410.8	–4,815.5	13,849.7	21,620.2	–7,770.4
Alternative II-B:									
1990	299.1	253.5	45.5	72.4	64.0	8.4	371.5	317.5	54.0
1991	319.1	270.8	48.4	77.0	71.1	6.0	396.2	341.8	54.4
1992	339.3	288.5	50.8	81.9	78.5	3.4	421.2	366.9	54.2
1993	360.7	306.8	53.9	86.9	86.7	.1	447.6	393.6	54.0
1994	383.3	325.6	57.6	92.2	95.8	–3.5	475.5	421.4	54.1
1995	406.5	345.1	61.4	97.9	105.7	–7.7	504.3	450.8	53.6
1996	431.9	364.9	67.0	103.9	116.2	–12.2	535.8	481.0	54.8
1997	458.5	386.1	72.4	110.2	127.4	–17.0	568.7	513.5	55.2
1998	486.7	408.7	78.0	117.0	139.5	–22.5	603.7	548.3	55.4
1999	516.6	433.1	83.5	124.1	153.0	–28.8	640.7	586.1	54.6

TABLE F5.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE IN CURRENT DOLLARS FOR ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1990-2064 (Cont.)
[In billions]

Calendar year	OASDI Income excluding interest	OASDI Outgo	OASDI Balance	HI Income excluding interest	HI Outgo	HI Balance	TOTAL Income excluding interest	TOTAL Outgo	TOTAL Balance
Alternative II-B: (Cont.)									
2000	$547.4	$458.8	$88.6	$131.3	$167.2	–$35.8	$678.7	$626.0	$52.7
2001	580.7	485.9	94.9	139.1	181.4	–42.1	719.8	667.2	52.6
2002	616.2	514.6	101.6	147.5	196.5	–49.0	763.6	711.1	52.5
2003	653.8	545.5	108.3	156.3	212.9	–56.5	810.1	758.4	51.7
2004	693.6	578.9	114.7	165.6	230.4	–64.6	859.3	809.3	50.0
2005	736.5	615.3	121.2	175.7	249.6	–73.8	912.2	864.9	47.4
2006	781.6	654.3	127.2	186.4	270.7	–84.3	967.9	925.1	42.9
2007	828.5	696.6	131.8	197.4	294.3	–96.8	1,025.8	990.9	34.9
2008	877.7	743.8	133.9	209.0	320.9	–111.8	1,086.6	1,064.6	22.0
2009	929.4	796.1	133.3	221.1	348.6	–127.4	1,150.4	1,144.6	5.8
2010	983.3	853.0	130.3	233.6	376.6	–142.9	1,216.9	1,229.6	–12.6
2011	1,039.7	915.4	124.3	246.7	408.4	–161.6	1,286.4	1,323.8	–37.3
2012	1,098.1	984.0	114.1	260.1	445.1	–184.9	1,358.2	1,429.2	–70.8
2013	1,158.9	1,059.5	99.4	274.0	486.0	–211.9	1,432.9	1,545.5	–112.5
2014	1,223.0	1,141.9	81.1	288.8	533.6	–244.7	1,511.8	1,675.5	–163.6
2015	1,290.1	1,231.2	58.8	304.3	574.2	–269.8	1,594.4	1,805.4	–210.9
2016	1,360.5	1,328.8	31.7	320.5	618.4	–297.8	1,681.0	1,947.2	–266.1
2017	1,433.9	1,434.1	–.1	337.3	667.2	–329.8	1,771.2	2,101.3	–330.1
2018	1,511.0	1,547.3	–36.2	354.9	719.9	–364.9	1,865.8	2,267.2	–401.2
2019	1,592.1	1,668.7	–76.5	373.4	776.8	–403.3	1,965.5	2,445.5	–479.9
2020	1,677.4	1,798.2	–120.7	392.9	837.5	–444.5	2,070.3	2,635.7	–565.3
2021	1,767.0	1,934.9	–167.8	413.3	903.5	–490.1	2,180.2	2,838.4	–658.1
2022	1,860.8	2,079.0	–218.0	434.7	975.9	–541.1	2,295.5	3,054.9	–759.3
2023	1,959.5	2,231.2	–271.6	457.1	1,053.0	–595.8	2,416.7	3,284.2	–867.4
2024	2,063.8	2,391.4	–327.5	480.9	1,134.1	–653.1	2,544.7	3,525.6	–980.7
2025	2,173.7	2,560.7	–386.9	505.9	1,220.1	–714.1	2,679.6	3,780.8	–1,101.1
2026	2,289.8	2,737.7	–447.8	532.4	1,313.0	–780.5	2,822.2	4,050.7	–1,228.4
2027	2,411.6	2,921.7	–510.0	560.1	1,411.4	–851.1	2,971.8	4,333.1	–1,361.2
2028	2,541.3	3,113.2	–571.8	589.8	1,514.5	–924.6	3,131.1	4,627.7	–1,496.5
2029	2,678.2	3,311.5	–633.3	621.0	1,621.9	–1,000.8	3,299.2	4,933.4	–1,634.2
2030	2,822.3	3,516.4	–694.0	654.0	1,734.0	–1,079.9	3,476.3	5,250.4	–1,774.0
2031	2,974.6	3,730.4	–755.7	688.9	1,850.0	–1,161.0	3,663.5	5,580.4	–1,916.8
2032	3,136.1	3,953.5	–817.3	725.9	1,972.2	–1,246.2	3,862.0	5,925.7	–2,063.6
2033	3,306.6	4,183.6	–876.9	765.1	2,100.2	–1,335.1	4,071.7	6,283.9	–2,212.1
2034	3,485.9	4,419.9	–933.8	806.2	2,234.9	–1,428.5	4,292.3	6,654.8	–2,362.4
2035	3,673.9	4,662.7	–988.7	849.6	2,377.8	–1,528.0	4,523.6	7,040.5	–2,516.8
2036	3,871.2	4,913.5	–1,042.1	895.1	2,525.2	–1,629.9	4,766.4	7,438.6	–2,672.2
2037	4,079.2	5,174.1	–1,094.8	943.1	2,676.8	–1,733.6	5,022.3	7,851.0	–2,828.5
2038	4,298.8	5,446.5	–1,147.6	993.9	2,832.2	–1,838.2	5,292.7	8,278.7	–2,985.9
2039	4,529.8	5,731.2	–1,201.3	1,047.2	2,993.3	–1,945.9	5,577.0	8,724.5	–3,147.4
2040	4,771.9	6,029.7	–1,257.7	1,103.2	3,163.9	–2,060.6	5,875.1	9,193.6	–3,318.4
2041	5,026.1	6,343.4	–1,317.3	1,161.9	3,341.1	–2,179.1	6,188.0	9,684.6	–3,496.5
2042	5,292.8	6,675.6	–1,382.7	1,223.6	3,528.5	–2,304.8	6,516.4	10,204.1	–3,687.6
2043	5,574.9	7,027.5	–1,452.6	1,288.7	3,722.2	–2,433.4	6,863.6	10,749.7	–3,886.1
2044	5,870.4	7,400.0	–1,529.5	1,357.0	3,927.2	–2,570.2	7,227.3	11,327.2	–4,099.8
2045	6,181.2	7,794.5	–1,613.1	1,428.7	4,147.2	–2,718.4	7,610.0	11,941.7	–4,331.6
2046	6,507.7	8,213.2	–1,705.4	1,504.0	4,379.2	–2,875.1	8,011.7	12,592.5	–4,580.6
2047	6,851.4	8,659.3	–1,807.8	1,583.2	4,620.2	–3,036.9	8,434.5	13,279.5	–4,844.8
2048	7,213.0	9,135.7	–1,922.6	1,666.4	4,874.0	–3,207.5	8,879.4	14,009.7	–5,130.2
2049	7,592.5	9,641.9	–2,049.3	1,753.7	5,137.2	–3,383.4	9,346.2	14,779.1	–5,432.8
2050	7,992.5	10,180.4	–2,187.7	1,845.7	5,419.9	–3,574.1	9,838.2	15,600.3	–5,762.0
2051	8,414.2	10,755.8	–2,341.5	1,942.5	5,718.3	–3,775.7	10,356.7	16,474.1	–6,117.3
2052	8,859.5	11,362.5	–2,502.9	2,044.7	6,032.7	–3,987.9	10,904.3	17,395.2	–6,490.8
2053	9,329.0	12,002.3	–2,673.3	2,152.6	6,364.1	–4,211.5	11,481.5	18,366.5	–6,884.8
2054	9,824.3	12,681.7	–2,857.3	2,266.2	6,720.5	–4,454.2	12,090.5	19,402.3	–7,311.6
2055	10,345.8	13,396.2	–3,050.3	2,385.9	7,096.8	–4,710.8	12,731.7	20,493.0	–7,761.2
2056	10,896.1	14,149.6	–3,253.4	2,512.2	7,494.2	–4,981.9	13,408.3	21,643.8	–8,235.4
2057	11,476.5	14,944.5	–3,467.9	2,645.4	7,914.3	–5,268.8	14,121.9	22,858.8	–8,736.8
2058	12,087.4	15,778.4	–3,690.9	2,785.6	8,357.8	–5,572.1	14,873.0	24,136.2	–9,263.1
2059	12,731.7	16,657.4	–3,925.6	2,933.5	8,825.8	–5,892.2	15,665.2	25,483.2	–9,817.9
2060	13,410.2	17,580.5	–4,170.1	3,089.3	9,320.1	–6,230.7	16,499.5	26,900.5	–10,400.9
2061	14,125.0	18,548.5	–4,423.4	3,253.5	9,841.2	–6,587.6	17,378.5	28,389.6	–11,011.1
2062	14,878.1	19,567.6	–4,689.5	3,426.4	10,392.7	–6,966.2	18,304.5	29,960.3	–11,655.8
2063	15,671.5	20,639.6	–4,968.0	3,608.7	10,974.2	–7,365.4	19,280.2	31,613.8	–12,333.4
2064	16,507.1	21,765.3	–5,258.1	3,800.7	11,599.9	–7,799.2	20,307.8	33,365.2	–13,057.3

Table F6 shows estimated future benefit amounts payable to persons retiring at the normal retirement age and to persons retiring at age 65 for various pre-retirement earnings levels, based on Alternative II-B assumptions. The benefit amount is shown in current dollars, constant dollars (adjusted by the CPI indexing series shown in table F1), and as a percentage of earnings in the year before retirement. The normal retirement age is currently 65, and is scheduled to increase to age 66 during the period 2000-2005 (at a rate of 2 months per year as workers attain age 62), and to age 67 during the period 2017-2022 (also by 2 months per year as workers attain age 62). The pre-retirement earnings levels shown are: low (earnings at 45 percent of the projected SSA average wage index), average (earnings at the amount of the projected SSA average wage index), and maximum (earnings at the amount of the projected SSA contribution and benefit base).

TABLE F6.—ESTIMATED BENEFIT AMOUNT PAYABLE TO RETIRED WORKERS WITH VARIOUS PRE-RETIREMENT EARNINGS LEVELS BASED ON ALTERNATIVE II-B ASSUMPTIONS, CALENDAR YEARS 1990-2065

	CURRENT DOLLARS			CONSTANT DOLLARS[1]			PERCENT OF EARNINGS		
Calendar year	Low[2]	Average	Maximum[3]	Low[2]	Average	Maximum[3]	Low[2]	Average	Maximum[3]
Normal retirement:									
1990	$5,251	$8,648	$11,700	$5,251	$8,648	$11,700	56.9	42.2	24.4
1995	6,726	11,111	15,446	5,450	9,002	12,515	56.1	41.7	24.4
2000	8,663	14,309	20,672	5,769	9,529	13,767	55.8	41.5	25.1
2005	11,119	18,398	27,527	6,086	10,071	15,067	55.3	41.2	25.9
2010	14,398	23,819	36,712	6,477	10,716	16,517	55.3	41.2	26.7
2015	18,646	30,847	48,472	6,895	11,407	17,924	55.3	41.2	27.2
2020	24,136	39,926	63,034	7,336	12,135	19,158	55.3	41.2	27.3
2025	31,030	51,427	81,070	7,752	12,847	20,252	54.9	41.0	27.1
2030	40,177	66,586	104,992	8,250	13,672	21,558	55.0	41.0	27.1
2035	52,018	86,200	135,908	8,779	14,547	22,937	55.0	41.0	27.1
2040	67,340	111,601	175,974	9,341	15,480	24,410	55.0	41.0	27.1
2045	87,181	144,478	227,845	9,940	16,472	25,977	55.0	41.0	27.1
2050	112,864	187,044	294,992	10,576	17,528	27,644	55.0	41.0	27.1
2055	146,125	242,154	381,930	11,255	18,651	29,417	55.0	41.0	27.1
2060	189,174	313,500	494,472	11,976	19,847	31,303	55.0	41.0	27.1
2065	244,912	405,870	640,166	12,744	21,119	33,310	55.0	41.0	27.1
Age-65 retirement:									
1990	5,251	8,648	11,700	5,251	8,648	11,700	56.9	42.2	24.4
1995	6,726	11,111	15,446	5,450	9,002	12,515	56.1	41.7	24.4
2000	8,663	14,309	20,672	5,769	9,529	13,767	55.8	41.5	25.1
2005	10,840	17,903	26,826	5,934	9,799	14,684	53.9	40.1	25.3
2010	13,550	22,379	34,544	6,096	10,068	15,542	52.1	38.7	25.1
2015	17,542	28,976	45,612	6,487	10,715	16,867	52.1	38.7	25.6
2020	22,437	37,064	58,614	6,819	11,265	17,815	51.4	38.2	25.4
2025	27,301	45,094	71,368	6,820	11,265	17,829	48.3	35.9	23.9
2030	35,344	58,382	92,408	7,257	11,988	18,974	48.3	35.9	23.9
2035	45,761	75,586	119,630	7,723	12,756	20,189	48.3	35.9	23.9
2040	59,249	97,854	154,896	8,219	13,574	21,486	48.4	35.9	23.9
2045	76,704	126,688	200,551	8,745	14,444	22,865	48.4	35.9	23.9
2050	99,301	164,011	259,668	9,305	15,369	24,333	48.4	35.9	23.9
2055	128,560	212,333	336,185	9,902	16,354	25,894	48.4	35.9	23.9
2060	166,435	274,894	435,253	10,536	17,403	27,554	48.4	35.9	23.9
2065	215,466	355,874	563,484	11,211	18,517	29,320	48.4	35.9	23.9

[1] The adjustment from current to constant dollars is by the CPI indexing series shown in table F1.

[2] Earnings equal to 45 percent of average.

[3] Earnings equal to the SSA contribution and benefit base.

APPENDIX G.—LONG-RANGE ESTIMATES OF SOCIAL SECURITY TRUST FUND OPERATIONS AS A PERCENTAGE OF THE GROSS NATIONAL PRODUCT

This appendix presents long-range projections of the operations of the combined Old-Age and Survivors Insurance and Disability Insurance (OASI and DI) Trust Funds and of the Hospital Insurance (HI) Trust Fund expressed as a percentage of the gross national product (GNP). While expressing these fund operations as a percentage of taxable payroll is the most useful approach for assessing the financial status of the programs, (see table 26 and Appendix E), analyzing them as a percentage of GNP provides an additional perspective on these fund operations in relation to the total value of goods and services produced by the U.S. economy.

Table G1 shows estimated income excluding interest, total outgo, and the resulting balance of the combined OASI and DI Trust Funds, of the HI Trust Fund, and of the combined OASI, DI, and HI Trust Funds, expressed as percentages of GNP on the basis of each of the four alternative sets of assumptions. The estimated GNP on which these percentages are based is also shown in Table G1. For OASDI, income excluding interest consists of payroll-tax contributions, proceeds from taxation of benefits, and various reimbursements from the general fund of the Treasury. Total outgo consists of benefit payments, administrative expenses, net transfers from the Trust Funds to the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries. For HI, income excluding interest consists of contributions (including contributions from railroad employment) and payments from the general fund of the Treasury for contributions on deemed wage credits for military service. Total outgo consists of outlays (benefits and administrative expenses) for insured beneficiaries. Both the HI income and outgo are on an incurred basis.

For the next 15 years, the OASDI balance (income excluding interest less outgo) as a percentage of GNP is projected to increase on the basis of alternatives I, II-A, and II-B, and to decline on the basis of alternative III. The projected HI balance as a percentage of GNP, however, decreases through 2005 under all four alternatives. The combined OASDI and HI balance as a percentage of GNP is projected, for the next 15 years, to increase under alternative I, to decline slightly under alternative II-A, to decline under alternative II-B, and to decline substantially under alternative III. Between 2005 and about 2030, under all four alternatives, both the OASDI and HI balances as percentages of GNP are projected to decline substantially because of the baby-boom generation's reaching retirement age. By 2030, balances are projected to become permanently negative in each case except for the OASDI program under alternative I. After 2030, both the HI and OASDI balances as percentages of GNP are projected to change slightly or to stabilize, except for OASDI under alternative III, for which the balance as a percentage of GNP is projected to continue decreasing.

The combined OASDI and HI balances as percentages of GNP, based on the four alternatives, differ by a relatively large amount around the end of the long-range period (about 9.3 percentage points between alternatives I and III in 2060), while differing by a much smaller amount at the end of the medium-range period (3.8 percentage points in 2015). In addition, the long-range balance as a percentage of GNP varies by a relatively large amount (from 0.44 percent, based on alternative I, to -4.68 percent, based on alternative III), while the medium-range balance varies by a smaller amount (from 1.50 to -0.48 percent). Summarized rates are calculated on the level-financing basis including the trust fund balances on January 1, 1990. (See section VI for explanation.)

TABLE G1.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE AS A PERCENTAGE OF GNP BY ALTERNATIVE, CALENDAR YEARS 1990-2064

	Percentage of GNP									
	OASDI			HI			TOTAL			
Calendar year	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	GNP in dollars (billions)
Alternative I:										
1990	5.40	4.56	0.85	1.31	1.15	0.16	6.71	5.70	1.01	$5,552
1991	5.44	4.50	.94	1.31	1.18	.14	6.75	5.68	1.07	5,933
1992	5.44	4.43	1.01	1.31	1.20	.11	6.75	5.63	1.12	6,318
1993	5.46	4.37	1.09	1.32	1.23	.08	6.78	5.60	1.18	6,695
1994	5.48	4.30	1.17	1.32	1.26	.06	6.79	5.56	1.23	7,073
1995	5.47	4.24	1.24	1.32	1.29	.03	6.79	5.53	1.27	7,458
1996	5.48	4.18	1.31	1.32	1.31	.01	6.80	5.49	1.31	7,854
1997	5.48	4.12	1.36	1.32	1.33	-.01	6.79	5.45	1.35	8,267
1998	5.47	4.06	1.41	1.32	1.35	-.03	6.79	5.41	1.38	8,702
1999	5.47	4.02	1.45	1.32	1.37	-.05	6.79	5.39	1.40	9,160
2000	5.48	4.00	1.49	1.32	1.39	-.07	6.80	5.39	1.41	9,614
2005	5.53	3.94	1.59	1.32	1.43	-.11	6.86	5.37	1.49	12,250
2010	5.57	4.11	1.47	1.33	1.49	-.16	6.90	5.60	1.30	15,427
2015	5.61	4.52	1.08	1.33	1.60	-.27	6.94	6.12	.81	19,197
2020	5.64	5.07	.57	1.33	1.65	-.32	6.97	6.72	.25	23,755
2025	5.66	5.50	.16	1.33	1.75	-.42	6.99	7.25	-.26	29,407
2030	5.67	5.70	-.02	1.33	1.83	-.50	7.00	7.53	-.52	36,679
2035	5.68	5.65	.03	1.33	1.89	-.56	7.01	7.53	-.53	46,066
2040	5.67	5.45	.22	1.33	1.92	-.59	7.00	7.38	-.38	57,917
2045	5.67	5.30	.37	1.33	1.95	-.62	7.00	7.25	-.25	72,759
2050	5.66	5.23	.43	1.33	1.97	-.64	6.99	7.20	-.21	91,403
2055	5.67	5.21	.45	1.33	2.00	-.67	6.99	7.21	-.21	115,017
2060	5.66	5.18	.49	1.33	2.03	-.70	6.99	7.20	-.21	145,009
Summarized rates:[1]										
25-year: 1990-2014	5.65	4.16	1.49	1.39	1.38	.01	7.04	5.55	1.50	---
50-year: 1990-2039	5.66	4.73	.93	1.36	1.56	-.20	7.02	6.29	.73	---
75-year: 1990-2064	5.66	4.89	.77	1.35	1.69	-.33	7.01	6.57	.44	---
Alternative II-A:										
1990	5.39	4.57	.83	1.31	1.15	.16	6.70	5.72	.98	5,553
1991	5.41	4.53	.88	1.31	1.20	.11	6.72	5.73	.99	5,944
1992	5.41	4.52	.89	1.31	1.24	.07	6.72	5.75	.96	6,335
1993	5.42	4.50	.93	1.31	1.28	.03	6.73	5.78	.95	6,730
1994	5.43	4.47	.96	1.31	1.33	-.02	6.74	5.80	.94	7,136
1995	5.42	4.45	.98	1.31	1.37	-.07	6.73	5.82	.91	7,552
1996	5.43	4.41	1.02	1.31	1.42	-.11	6.73	5.83	.91	7,988
1997	5.42	4.38	1.04	1.30	1.46	-.15	6.72	5.83	.89	8,449
1998	5.42	4.35	1.07	1.30	1.50	-.20	6.72	5.85	.87	8,930
1999	5.41	4.33	1.09	1.30	1.54	-.24	6.72	5.87	.84	9,438
2000	5.42	4.32	1.10	1.30	1.57	-.27	6.72	5.90	.82	9,947
2005	5.45	4.33	1.12	1.30	1.73	-.43	6.75	6.07	.69	12,961
2010	5.47	4.54	.93	1.30	1.95	-.65	6.77	6.49	.28	16,741
2015	5.48	5.02	.46	1.29	2.26	-.96	6.78	7.28	-.50	21,296
2020	5.49	5.67	-.17	1.29	2.54	-1.25	6.78	8.20	-1.42	26,848
2025	5.50	6.23	-.74	1.28	2.86	-1.58	6.78	9.09	-2.31	33,750
2030	5.49	6.58	-1.08	1.28	3.14	-1.86	6.77	9.71	-2.94	42,606
2035	5.48	6.67	-1.19	1.27	3.30	-2.03	6.75	9.97	-3.22	54,031
2040	5.45	6.60	-1.14	1.26	3.37	-2.11	6.72	9.97	-3.25	68,490
2045	5.43	6.55	-1.12	1.26	3.41	-2.15	6.69	9.96	-3.27	86,588
2050	5.41	6.60	-1.19	1.25	3.43	-2.18	6.66	10.03	-3.37	109,209
2055	5.39	6.69	-1.30	1.25	3.46	-2.21	6.64	10.15	-3.51	137,823
2060	5.37	6.74	-1.37	1.24	3.49	-2.25	6.61	10.24	-3.63	174,220
Summarized rates:[1]										
25-year: 1990-2014	5.58	4.47	1.11	1.38	1.63	-.26	6.96	6.11	.85	---
50-year: 1990-2039	5.54	5.25	.30	1.33	2.21	-.88	6.88	7.46	-.58	---
75-year: 1990-2064	5.51	5.64	-.13	1.31	2.55	-1.24	6.82	8.19	-1.37	---

TABLE G1.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE AS A PERCENTAGE OF GNP BY ALTERNATIVE, CALENDAR YEARS 1990-2064 (Cont.)

	Percentage of GNP									
	OASDI			HI			TOTAL			
Calendar year	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	GNP in dollars (billions)
Alternative II-B:										
1990	5.38	4.56	0.82	1.30	1.15	0.15	6.69	5.72	0.97	$5,555
1991	5.39	4.57	.82	1.30	1.20	.10	6.69	5.78	.92	5,919
1992	5.38	4.57	.81	1.30	1.24	.05	6.68	5.82	.86	6,307
1993	5.38	4.58	.80	1.30	1.29	.00	6.68	5.87	.81	6,703
1994	5.37	4.56	.81	1.29	1.34	−.05	6.66	5.91	.76	7,134
1995	5.35	4.54	.81	1.29	1.39	−.10	6.64	5.94	.71	7,593
1996	5.35	4.52	.83	1.29	1.44	−.15	6.63	5.95	.68	8,079
1997	5.33	4.49	.84	1.28	1.48	−.20	6.62	5.97	.64	8,595
1998	5.32	4.47	.85	1.28	1.53	−.25	6.60	6.00	.61	9,143
1999	5.31	4.45	.86	1.28	1.57	−.30	6.59	6.03	.56	9,723
2000	5.31	4.45	.86	1.28	1.62	−.35	6.59	6.08	.51	10,298
2005	5.32	4.45	.88	1.27	1.80	−.53	6.59	6.25	.34	13,836
2010	5.32	4.61	.70	1.26	2.04	−.77	6.58	6.65	−.07	18,487
2015	5.31	5.06	.24	1.25	2.36	−1.11	6.56	7.42	−.87	24,317
2020	5.29	5.67	−.38	1.24	2.64	−1.40	6.53	8.31	−1.78	31,702
2025	5.27	6.21	−.94	1.23	2.96	−1.73	6.50	9.17	−2.67	41,220
2030	5.25	6.54	−1.29	1.22	3.22	−2.01	6.46	9.76	−3.30	53,799
2035	5.21	6.61	−1.40	1.20	3.37	−2.17	6.41	9.98	−3.57	70,562
2040	5.16	6.52	−1.36	1.19	3.42	−2.23	6.35	9.94	−3.59	92,502
2045	5.11	6.44	−1.33	1.18	3.43	−2.25	6.29	9.87	−3.58	120,945
2050	5.07	6.45	−1.39	1.17	3.44	−2.27	6.24	9.89	−3.65	157,740
2055	5.03	6.51	−1.48	1.16	3.45	−2.29	6.18	9.95	−3.77	205,866
2060	4.98	6.53	−1.55	1.15	3.46	−2.32	6.13	10.00	−3.86	269,112
Summarized rates:[1]										
25-year: 1990-2014	5.48	4.57	.91	1.35	1.69	−.33	6.83	6.25	.58	---
50-year: 1990-2039	5.38	5.31	.07	1.29	2.30	−1.00	6.67	7.60	−.93	---
75-year: 1990-2064	5.29	5.66	−.37	1.26	2.63	−1.37	6.54	8.29	−1.74	---
Alternative III:										
1990	5.44	4.71	.73	1.31	1.18	.13	6.75	5.89	.86	5,397
1991	5.38	4.84	.54	1.30	1.25	.05	6.68	6.09	.59	5,642
1992	5.31	4.79	.52	1.28	1.30	−.02	6.59	6.09	.50	6,111
1993	5.32	4.89	.43	1.28	1.37	−.09	6.60	6.27	.34	6,524
1994	5.32	5.08	.23	1.28	1.47	−.19	6.59	6.55	.05	6,800
1995	5.24	5.00	.24	1.26	1.52	−.26	6.50	6.52	−.02	7,390
1996	5.23	4.99	.24	1.26	1.60	−.34	6.49	6.59	−.10	7,921
1997	5.22	5.00	.22	1.25	1.68	−.42	6.47	6.67	−.20	8,467
1998	5.21	5.00	.20	1.25	1.76	−.51	6.46	6.76	−.30	9,043
1999	5.19	5.02	.17	1.25	1.84	−.59	6.44	6.86	−.42	9,652
2000	5.19	5.02	.16	1.24	1.93	−.69	6.43	6.96	−.53	10,270
2005	5.18	5.01	.17	1.23	2.34	−1.11	6.41	7.35	−.94	14,084
2010	5.16	5.16	.00	1.22	2.88	−1.66	6.37	8.04	−1.66	19,282
2015	5.12	5.63	−.51	1.20	3.65	−2.45	6.32	9.29	−2.96	25,922
2020	5.09	6.31	−1.22	1.18	4.43	−3.25	6.28	10.75	−4.47	34,434
2025	5.06	6.98	−1.92	1.17	5.29	−4.12	6.23	12.27	−6.05	45,459
2030	5.02	7.48	−2.46	1.15	6.00	−4.85	6.17	13.49	−7.31	60,043
2035	4.97	7.76	−2.79	1.13	6.41	−5.28	6.11	14.17	−8.07	79,393
2040	4.92	7.89	−2.97	1.12	6.51	−5.39	6.04	14.40	−8.37	104,719
2045	4.86	8.04	−3.18	1.10	6.50	−5.40	5.96	14.54	−8.58	137,353
2050	4.81	8.28	−3.47	1.09	6.48	−5.40	5.90	14.76	−8.87	179,289
2055	4.76	8.57	−3.81	1.07	6.48	−5.41	5.83	15.05	−9.22	233,647
2060	4.71	8.80	−4.09	1.06	6.49	−5.43	5.77	15.29	−9.52	304,673
Summarized rates:[1]										
25-year: 1990-2014	5.37	5.06	.32	1.33	2.13	−.80	6.70	7.18	−.48	---
50-year: 1990-2039	5.22	5.95	−.73	1.25	3.61	−2.36	6.48	9.57	−3.09	---
75-year: 1990-2064	5.11	6.61	−1.50	1.21	4.39	−3.18	6.32	11.00	−4.68	---

[1]Summarized rates are calculated on the level-financing basis including the value of the trust funds on January 1, 1990. (See section VI for explanation.)

The difference between trust fund operations expressed as percentages of taxable payroll and those expressed as percentages of GNP can be seen by analyzing the estimated ratios of taxable payroll to GNP, which are presented in table G2. The cost as a percentage of GNP is approximately equal to the cost as a percentage of taxable payroll multiplied by the ratio of taxable payroll to GNP.

Projections of GNP for the first several years were based on assumed quarterly changes in real GNP and the GNP price deflator. Thereafter, projections of GNP were based on the projected increases in U.S. employment and labor productivity. Productivity projections are consistent with assumed changes in the level of average earnings, the ratio of earnings to worker compensation, the ratio of worker compensation to GNP, and average hours worked per year (see Appendix A).

Projections of taxable payroll, which are described in detail in Appendix A, were based on the projected increases in covered employment and average taxable earnings. Therefore, the projected increases in taxable payroll differ from projected increases in GNP primarily to the extent that average taxable earnings are assumed to increase more slowly than is productivity and to the extent that coverage of U.S. employment changes.

TABLE G2.—RATIO OF TAXABLE PAYROLL TO GNP BY ALTERNATIVE, CALENDAR YEARS 1990-2065

Calendar year	I	II-A	II-B	III
1990	0.433	0.432	0.431	0.434
1991	.434	.431	.430	.429
1992	.434	.431	.429	.423
1993	.435	.432	.428	.423
1994	.436	.432	.427	.421
1995	.436	.432	.426	.417
1996	.436	.432	.425	.415
1997	.436	.431	.424	.414
1998	.436	.431	.423	.413
1999	.436	.431	.423	.412
2000	.436	.431	.422	.411
2005	.438	.430	.420	.407
2010	.439	.429	.417	.402
2015	.439	.428	.413	.397
2020	.439	.426	.409	.391
2025	.439	.424	.405	.386
2030	.439	.422	.401	.380
2035	.439	.420	.398	.375
2040	.439	.418	.394	.369
2045	.439	.416	.390	.364
2050	.439	.414	.386	.359
2055	.439	.412	.383	.354
2060	.439	.410	.379	.349
2065	.439	.408	.376	.344

The long-range trend in the ratio of taxable payroll to GNP reflects the assumed trend in the ratio of wages to total employee compensation—i.e., wages plus fringe benefits. The ratio of wages to total employee compensation declined at average annual rates of 0.34 percent for the 30 years 1959-88, and 0.29, 0.66, and 0.08 percent for the 10-year periods 1959-68, 1969-78, and 1979-88, respectively. This ratio is assumed to stop its historical decline for alternative I, but to continue to decline ultimately by about 0.1, 0.2, and 0.3 percent per year for alternatives II-A, II-B, and III, respectively.

Through 2015, however, the tendency toward decreases in the ratio of taxable payroll to GNP, discussed above, is at least partially offset by the gradually expanding OASDI coverage of Federal civilian employment resulting from the 1983 amendments. For alternative I, the ratio of taxable payroll to GNP is projected to rise slightly between 1990 and 2010, thereafter remaining about the same. For alternative II-A, the ratio of taxable payroll to GNP is projected to remain about the same until the year 2000, and then to decrease for the remainder of the long-range period. For alternatives II-B and III, the ratio of taxable payroll to GNP is projected to decrease throughout the long-range period.

Table G3 presents estimates of income excluding interest, outgo, and balance expressed as a percentage of GNP for the OASI and DI Trust Funds, the HI

Trust Fund, and the combined OASI, DI, and HI Trust Funds, as well as the actual dollar amount of GNP, for single calendar years based on assumption sets II-A and II-B.

TABLE G3.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE AS A PERCENTAGE OF GNP FOR ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1990-2065

	Percentage of GNP									
	OASDI			HI			TOTAL			
Calendar year	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	GNP in dollars (billions)
Alternative II-A:										
1990	5.39	4.57	0.83	1.31	1.15	0.16	6.70	5.72	0.98	$5,553
1991	5.41	4.53	.88	1.31	1.20	.11	6.72	5.73	.99	5,944
1992	5.41	4.52	.89	1.31	1.24	.07	6.72	5.75	.96	6,335
1993	5.42	4.50	.92	1.31	1.28	.03	6.73	5.78	.95	6,730
1994	5.43	4.47	.96	1.31	1.33	–.02	6.74	5.80	.93	7,136
1995	5.42	4.45	.98	1.31	1.37	–.07	6.73	5.82	.91	7,552
1996	5.43	4.41	1.02	1.31	1.42	–.11	6.73	5.83	.91	7,988
1997	5.42	4.38	1.04	1.30	1.46	–.15	6.72	5.83	.89	8,449
1998	5.42	4.35	1.07	1.30	1.50	–.20	6.72	5.85	.87	8,930
1999	5.41	4.33	1.09	1.30	1.54	–.24	6.72	5.87	.84	9,438
2000	5.42	4.32	1.10	1.30	1.57	–.27	6.72	5.90	.82	9,947
2001	5.43	4.32	1.11	1.30	1.61	–.31	6.73	5.93	.80	10,485
2002	5.43	4.32	1.12	1.30	1.64	–.34	6.74	5.95	.78	11,056
2003	5.44	4.32	1.13	1.30	1.67	–.37	6.74	5.99	.75	11,657
2004	5.45	4.32	1.13	1.30	1.70	–.40	6.75	6.02	.72	12,291
2005	5.45	4.33	1.12	1.30	1.73	–.43	6.75	6.07	.69	12,961
2006	5.46	4.35	1.11	1.30	1.77	–.47	6.76	6.12	.64	13,662
2007	5.46	4.38	1.08	1.30	1.81	–.51	6.76	6.19	.57	14,384
2008	5.46	4.42	1.05	1.30	1.87	–.57	6.77	6.28	.48	15,135
2009	5.47	4.47	.99	1.30	1.91	–.61	6.77	6.39	.38	15,920
2010	5.47	4.54	.93	1.30	1.95	–.65	6.77	6.49	.28	16,741
2011	5.47	4.61	.86	1.30	2.00	–.70	6.77	6.61	.17	17,593
2012	5.48	4.70	.78	1.30	2.06	–.76	6.77	6.76	.01	18,462
2013	5.48	4.80	.68	1.30	2.13	–.83	6.78	6.93	–.15	19,362
2014	5.48	4.91	.57	1.30	2.21	–.92	6.78	7.12	–.34	20,312
2015	5.48	5.02	.46	1.29	2.26	–.96	6.78	7.28	–.50	21,296
2016	5.48	5.15	.34	1.29	2.31	–1.01	6.78	7.45	–.68	22,321
2017	5.49	5.27	.21	1.29	2.36	–1.07	6.78	7.63	–.86	23,380
2018	5.49	5.41	.08	1.29	2.42	–1.13	6.78	7.82	–1.05	24,485
2019	5.49	5.54	–.05	1.29	2.48	–1.19	6.78	8.01	–1.24	25,640
2020	5.49	5.67	–.17	1.29	2.54	–1.25	6.78	8.20	–1.42	26,848
2021	5.49	5.79	–.30	1.29	2.60	–1.31	6.78	8.39	–1.61	28,104
2022	5.50	5.91	–.41	1.29	2.67	–1.38	6.78	8.58	–1.80	29,417
2023	5.50	6.02	–.53	1.28	2.73	–1.45	6.78	8.76	–1.98	30,790
2024	5.50	6.13	–.63	1.28	2.80	–1.52	6.78	8.93	–2.15	32,236
2025	5.50	6.23	–.74	1.28	2.86	–1.58	6.78	9.09	–2.31	33,750
2026	5.50	6.33	–.83	1.28	2.92	–1.64	6.78	9.25	–2.47	35,346
2027	5.50	6.41	–.91	1.28	2.98	–1.70	6.78	9.39	–2.61	37,019
2028	5.50	6.48	–.98	1.28	3.04	–1.76	6.78	9.52	–2.74	38,791
2029	5.50	6.53	–1.03	1.28	3.09	–1.82	6.77	9.62	–2.85	40,652
2030	5.49	6.58	–1.08	1.28	3.14	–1.86	6.77	9.71	–2.94	42,606
2031	5.49	6.61	–1.12	1.27	3.18	–1.90	6.77	9.79	–3.02	44,664
2032	5.49	6.64	–1.15	1.27	3.21	–1.94	6.76	9.85	–3.09	46,838
2033	5.49	6.66	–1.17	1.27	3.24	–1.97	6.76	9.90	–3.14	49,126
2034	5.48	6.67	–1.18	1.27	3.27	–2.00	6.75	9.94	–3.19	51,525
2035	5.48	6.67	–1.19	1.27	3.30	–2.03	6.75	9.97	–3.22	54,031
2036	5.47	6.66	–1.18	1.27	3.33	–2.06	6.74	9.98	–3.24	56,652
2037	5.47	6.65	–1.18	1.27	3.34	–2.08	6.74	9.99	–3.25	59,405
2038	5.46	6.63	–1.16	1.27	3.35	–2.09	6.73	9.98	–3.25	62,302
2039	5.46	6.61	–1.15	1.26	3.36	–2.10	6.72	9.97	–3.25	65,331

TABLE G3.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE AS A PERCENTAGE OF GNP FOR ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1990-2065 (Cont.)

	Percentage of GNP									
	OASDI			HI			TOTAL			
Calendar year	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	Income excluding interest	Outgo	Balance	GNP in dollars (billions)
Alternative II-A: (Cont.)										
2040	5.45	6.60	-1.14	1.26	3.37	-2.11	6.72	9.97	-3.25	$68,490
2041	5.45	6.58	-1.13	1.26	3.38	-2.12	6.71	9.96	-3.25	71,787
2042	5.44	6.57	-1.12	1.26	3.39	-2.13	6.70	9.96	-3.25	75,235
2043	5.44	6.56	-1.12	1.26	3.39	-2.13	6.70	9.95	-3.25	78,859
2044	5.43	6.55	-1.12	1.26	3.40	-2.14	6.69	9.95	-3.26	82,635
2045	5.43	6.55	-1.12	1.26	3.41	-2.15	6.69	9.96	-3.27	86,588
2046	5.43	6.55	-1.13	1.26	3.41	-2.16	6.68	9.97	-3.28	90,716
2047	5.42	6.56	-1.14	1.25	3.42	-2.16	6.68	9.98	-3.30	95,031
2048	5.42	6.57	-1.15	1.25	3.42	-2.17	6.67	9.99	-3.32	99,554
2049	5.41	6.58	-1.17	1.25	3.43	-2.17	6.67	10.01	-3.34	104,269
2050	5.41	6.60	-1.19	1.25	3.43	-2.18	6.66	10.03	-3.37	109,209
2051	5.41	6.62	-1.21	1.25	3.44	-2.19	6.66	10.05	-3.40	114,387
2052	5.40	6.63	-1.23	1.25	3.44	-2.19	6.65	10.07	-3.42	119,829
2053	5.40	6.65	-1.25	1.25	3.45	-2.20	6.65	10.10	-3.45	125,545
2054	5.39	6.67	-1.28	1.25	3.45	-2.21	6.64	10.12	-3.48	131,540
2055	5.39	6.69	-1.30	1.25	3.46	-2.21	6.64	10.15	-3.51	137,823
2056	5.39	6.70	-1.32	1.24	3.47	-2.22	6.63	10.17	-3.54	144,428
2057	5.38	6.72	-1.33	1.24	3.47	-2.23	6.63	10.19	-3.56	151,356
2058	5.38	6.73	-1.35	1.24	3.48	-2.24	6.62	10.21	-3.59	158,613
2059	5.37	6.74	-1.36	1.24	3.49	-2.25	6.62	10.22	-3.61	166,233
2060	5.37	6.74	-1.37	1.24	3.49	-2.25	6.61	10.24	-3.63	174,220
2061	5.37	6.75	-1.38	1.24	3.50	-2.26	6.60	10.25	-3.64	182,596
2062	5.36	6.75	-1.39	1.24	3.51	-2.27	6.60	10.26	-3.66	191,381
2063	5.36	6.76	-1.40	1.24	3.51	-2.28	6.59	10.27	-3.68	200,592
2064	5.35	6.76	-1.41	1.23	3.52	-2.29	6.59	10.28	-3.70	210,248
2065	5.35	6.76	-1.41	1.23	3.53	-2.30	6.58	10.29	-3.71	220,363
Alternative II-B:										
1990	5.38	4.56	.82	1.30	1.15	.15	6.69	5.72	.97	5,555
1991	5.39	4.57	.82	1.30	1.20	.10	6.69	5.78	.92	5,919
1992	5.38	4.57	.81	1.30	1.24	.05	6.68	5.82	.86	6,307
1993	5.38	4.58	.80	1.30	1.29	.00	6.68	5.87	.81	6,703
1994	5.37	4.56	.81	1.29	1.34	-.05	6.66	5.91	.76	7,134
1995	5.35	4.54	.81	1.29	1.39	-.10	6.64	5.94	.71	7,593
1996	5.35	4.52	.83	1.29	1.44	-.15	6.63	5.95	.68	8,079
1997	5.33	4.49	.84	1.28	1.48	-.20	6.62	5.97	.64	8,595
1998	5.32	4.47	.85	1.28	1.53	-.25	6.60	6.00	.61	9,143
1999	5.31	4.45	.86	1.28	1.57	-.30	6.59	6.03	.56	9,723
2000	5.31	4.45	.86	1.28	1.62	-.35	6.59	6.08	.51	10,298
2001	5.32	4.45	.87	1.27	1.66	-.39	6.59	6.11	.48	10,920
2002	5.32	4.44	.88	1.27	1.70	-.42	6.59	6.14	.45	11,583
2003	5.32	4.44	.88	1.27	1.73	-.46	6.59	6.17	.42	12,286
2004	5.32	4.44	.88	1.27	1.77	-.50	6.59	6.21	.38	13,032
2005	5.32	4.45	.88	1.27	1.80	-.53	6.59	6.25	.34	13,836
2006	5.32	4.46	.87	1.27	1.84	-.57	6.59	6.30	.29	14,684
2007	5.32	4.48	.85	1.27	1.89	-.62	6.59	6.37	.22	15,566
2008	5.32	4.51	.81	1.27	1.95	-.68	6.59	6.46	.13	16,491
2009	5.32	4.56	.76	1.27	2.00	-.73	6.59	6.55	.03	17,463
2010	5.32	4.61	.70	1.26	2.04	-.77	6.58	6.65	-.07	18,487
2011	5.32	4.68	.64	1.26	2.09	-.83	6.58	6.77	-.19	19,558
2012	5.31	4.76	.55	1.26	2.15	-.90	6.57	6.92	-.34	20,664
2013	5.31	4.86	.46	1.26	2.23	-.97	6.57	7.08	-.52	21,815
2014	5.31	4.96	.35	1.25	2.32	-1.06	6.56	7.27	-.71	23,037
2015	5.31	5.06	.24	1.25	2.36	-1.11	6.56	7.42	-.87	24,317
2016	5.30	5.18	.12	1.25	2.41	-1.16	6.55	7.59	-1.04	25,660
2017	5.30	5.30	.00	1.25	2.47	-1.22	6.55	7.77	-1.22	27,058
2018	5.30	5.42	-.13	1.24	2.52	-1.28	6.54	7.95	-1.41	28,527
2019	5.29	5.55	-.25	1.24	2.58	-1.34	6.54	8.13	-1.60	30,074
2020	5.29	5.67	-.38	1.24	2.64	-1.40	6.53	8.31	-1.78	31,702
2021	5.29	5.79	-.50	1.24	2.70	-1.47	6.52	8.49	-1.97	33,414
2022	5.28	5.90	-.62	1.23	2.77	-1.54	6.52	8.68	-2.16	35,211
2023	5.28	6.01	-.73	1.23	2.84	-1.61	6.51	8.85	-2.34	37,103
2024	5.28	6.12	-.84	1.23	2.90	-1.67	6.51	9.02	-2.51	39,107
2025	5.27	6.21	-.94	1.23	2.96	-1.73	6.50	9.17	-2.67	41,220
2026	5.27	6.30	-1.03	1.22	3.02	-1.80	6.49	9.32	-2.83	43,461
2027	5.26	6.38	-1.11	1.22	3.08	-1.86	6.49	9.46	-2.97	45,815
2028	5.26	6.44	-1.18	1.22	3.13	-1.91	6.48	9.58	-3.10	48,329
2029	5.25	6.49	-1.24	1.22	3.18	-1.96	6.47	9.68	-3.21	50,989

TABLE G3.—ESTIMATED OASDI AND HI INCOME EXCLUDING INTEREST, OUTGO, AND BALANCE AS A PERCENTAGE OF GNP FOR ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1990-2065 (Cont.)

	Percentage of GNP									
	OASDI			HI			TOTAL			
Calendar year	Income excluding interest	Outgo	Bal-ance	Income excluding interest	Outgo	Bal-ance	Income excluding interest	Outgo	Bal-ance	GNP in dollars (billions)
Alternative II-B: (Cont.)										
2030	5.25	6.54	−1.29	1.22	3.22	−2.01	6.46	9.76	−3.30	$53,799
2031	5.24	6.57	−1.33	1.21	3.26	−2.05	6.45	9.83	−3.38	56,777
2032	5.23	6.60	−1.36	1.21	3.29	−2.08	6.44	9.89	−3.44	59,942
2033	5.22	6.61	−1.39	1.21	3.32	−2.11	6.43	9.93	−3.49	63,298
2034	5.22	6.61	−1.40	1.21	3.34	−2.14	6.42	9.96	−3.53	66,839
2035	5.21	6.61	−1.40	1.20	3.37	−2.17	6.41	9.98	−3.57	70,562
2036	5.20	6.60	−1.40	1.20	3.39	−2.19	6.40	9.99	−3.59	74,483
2037	5.19	6.58	−1.39	1.20	3.40	−2.20	6.39	9.98	−3.60	78,628
2038	5.18	6.56	−1.38	1.20	3.41	−2.21	6.38	9.97	−3.60	83,016
2039	5.17	6.54	−1.37	1.19	3.42	−2.22	6.36	9.95	−3.59	87,641
2040	5.16	6.52	−1.36	1.19	3.42	−2.23	6.35	9.94	−3.59	92,502
2041	5.15	6.50	−1.35	1.19	3.42	−2.23	6.34	9.92	−3.58	97,612
2042	5.14	6.48	−1.34	1.19	3.43	−2.24	6.33	9.91	−3.58	102,987
2043	5.13	6.47	−1.34	1.19	3.42	−2.24	6.32	9.89	−3.58	108,680
2044	5.12	6.45	−1.33	1.18	3.43	−2.24	6.30	9.88	−3.58	114,652
2045	5.11	6.44	−1.33	1.18	3.43	−2.25	6.29	9.87	−3.58	120,945
2046	5.10	6.44	−1.34	1.18	3.43	−2.25	6.28	9.87	−3.59	127,562
2047	5.09	6.44	−1.34	1.18	3.43	−2.26	6.27	9.87	−3.60	134,535
2048	5.08	6.44	−1.36	1.17	3.44	−2.26	6.26	9.87	−3.62	141,879
2049	5.08	6.45	−1.37	1.17	3.43	−2.26	6.25	9.88	−3.63	149,596
2050	5.07	6.45	−1.39	1.17	3.44	−2.27	6.24	9.89	−3.65	157,740
2051	5.06	6.47	−1.41	1.17	3.44	−2.27	6.23	9.90	−3.68	166,332
2052	5.05	6.48	−1.43	1.17	3.44	−2.27	6.22	9.92	−3.70	175,423
2053	5.04	6.49	−1.44	1.16	3.44	−2.28	6.21	9.93	−3.72	185,024
2054	5.03	6.50	−1.46	1.16	3.44	−2.28	6.19	9.94	−3.75	195,166
2055	5.03	6.51	−1.48	1.16	3.45	−2.29	6.18	9.95	−3.77	205,866
2056	5.02	6.52	−1.50	1.16	3.45	−2.29	6.17	9.97	−3.79	217,178
2057	5.01	6.52	−1.51	1.15	3.45	−2.30	6.16	9.98	−3.81	229,129
2058	5.00	6.53	−1.53	1.15	3.46	−2.31	6.15	9.98	−3.83	241,733
2059	4.99	6.53	−1.54	1.15	3.46	−2.31	6.14	9.99	−3.85	255,054
2060	4.98	6.53	−1.55	1.15	3.46	−2.32	6.13	10.00	−3.86	269,112
2061	4.97	6.53	−1.56	1.15	3.47	−2.32	6.12	10.00	−3.88	283,954
2062	4.97	6.53	−1.57	1.14	3.47	−2.33	6.11	10.00	−3.89	299,620
2063	4.96	6.53	−1.57	1.14	3.47	−2.33	6.10	10.00	−3.90	316,162
2064	4.95	6.52	−1.58	1.14	3.48	−2.34	6.09	10.00	−3.91	333,617
2065	4.94	6.52	−1.58	1.14	3.48	−2.34	6.08	10.00	−3.92	352,026

APPENDIX H.—STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the techniques and methodology used herein to evaluate the financial and actuarial status of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds are generally accepted within the actuarial profession; and (2) the assumptions used and the resulting actuarial estimates are, in the aggregate, reasonable for the purpose of evaluating the financial and actuarial status of the trust funds, taking into consideration the experience and expectations of the program.

As indicated in the report, the income rate for the OASDI program over the next 75 years (including the beginning trust fund balances) is equal to 93.5 percent of the cost rate, based on the alternative II-B assumptions. Traditionally, the program has been considered to be in "close actuarial balance" when the long-range income rate (including the beginning trust fund balances) is between 95 percent and 105 percent of the long-range cost rate. A statement on whether or not the OASDI program was in close actuarial balance was included in each annual report from the late 1950's through 1988. Because the income rate (including beginning trust fund balances) is only 93.5 percent of the cost rate, based on the alternative II-B assumptions in this report, the OASDI program is not in close actuarial balance.

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