APPENDIX D.—DETERMINATION AND ANNOUNCEMENT OF AVERAGE OF TOTAL WAGES FOR 1981 AND CONTRIBUTION AND BENEFIT BASE, QUARTER OF COVERAGE AMOUNT, RETIREMENT TEST EXEMPT AMOUNTS, FORMULAS FOR COMPUTING BENEFITS, AND EXTENDED TABLE OF BENEFIT AMOUNTS FOR 1983[1]

Summary

The Secretary has determined—

(1) The average of the total wages for 1981 to be $13,773.10;

(2) The Social Security contribution and benefit base to be $35,700 for remuneration paid in 1983 and self-employment income earned in taxable years beginning in 1983;

(3) The amount of earnings a person must have to be credited with a quarter of coverage in 1983 to be $370; and

(4) The monthly exempt amount under the Social Security retirement test for taxable years ending in calendar year 1983 to be $550 for beneficiaries age 65 and over and $410 for beneficiaries under age 65.

The formulas we use to compute the benefits for a worker and his or her family who first become eligible for benefits in 1983 are also described below.

Finally, a table reflecting the new higher average monthly wage and related benefit amounts made possible by the higher contribution and benefit base is also published. The table will be used primarily to compute the retirement benefits of workers who reached age 62 before 1979.

Supplementary information:

Sections 203(f)(8), 213(d) and 230(a) of the Social Security Act (42 U.S.C. 403(f)(8), 413(d) and 430(a)) require the Secretary of Health and Human Services to publish in the Federal Register on or before November 1, 1982, the contribution and benefit base, the amount of earnings required for a quarter of coverage, and the retirement test exempt amounts, for calendar year 1983. In addition, section 215(a)(1)(D) requires that the Secretary publish by November 1, 1982 the formula for computing a primary insurance amount for workers who first become eligible for benefits or die in 1983, and section 203(a)(2)(C) requires that the Secretary publish by November 1, 1982 the formula for computing a family's maximum benefits for families of workers who first become eligible for old-age benefits or die in 1983.

AVERAGE OF THE TOTAL WAGES FOR 1981

The determination of the average wage figure for 1981 is based on the 1980 average wage figure of $12,513.46 announced in the Federal Register on October 30, 1981 (46 FR 53791) along with the percentage increase in average wages from 1980 to 1981 measured by annual wage data tabulated by the Internal Revenue Service (IRS). The average amounts of wages calculated directly from IRS data were $12,850.89 and $14,144.50 for 1980 and 1981, respectively. To determine an average wage figure for 1981 at a level that is consistent with the series of average wages for 1951-1977 (published December 29, 1978 at 43 FR

[1]This statement, edited for presentation here, was published in the Federal Register for November 10, 1982 (Vol. 47, No. 218, pp. 51003-06).

61016), we multiplied the 1980 average wage figure of $12,513.46 by the percentage increase in average wages from 1980 to 1981 (based on IRS data) as follows (with the result rounded to the nearest cent):

Average wage for 1981 = $12,513.46 x $14,144.50/$12,850.89 = $13,773.10.

Therefore, the average wage for 1981 is determined to be $13,773.10.

CONTRIBUTION AND BENEFIT BASE

General.

The 1983 contribution and benefit base is $35,700.

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 figuring a person's Social Security benefits.

Computation.

Section 230(c) of the Social Security 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 Social Security Act contains a formula for determining the contribution and benefit base. Under the prescribed formula, the contribution and benefit base for 1983 shall be equal to the 1982 base of $32,400 multiplied by the ratio of (1) the average amount, per employee, of total wages for the calendar year 1981 to (2) the average amount of those wages for the calendar year 1980. 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 1980 was previously determined to be $12,513.46. The average wage for calendar year 1981 has been determined to be $13,773.10, as stated herein.

Amount.

The ratio of the average wage for 1981, $13,773.10, compared to that for 1980, $12,513.46, is 1.1006628. Multiplying the 1982 contribution and benefit base of $32,400 by the ratio 1.1006628 produces the amount of $35,661.47 which must then be rounded to $35,700. Accordingly, the contribution and benefit base for 1983 is $35,700.

QUARTER OF COVERAGE AMOUNT

General.

The 1983 amount of earnings required for a quarter of coverage is $370. 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 for which $100 or more of self-employment income were credited, to the individual. 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 Social Security 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). Section 213(d) also provides that this amount shall be redetermined each year and any change published in the Federal Register no later than November 1 of the year preceding the year for which the change is effective.

Computation.

Under the prescribed formula, the quarter of coverage amount for 1983 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 year 1981 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 1981 has been determined to be $13,773.10 as stated herein.

Quarter of coverage amount.

The ratio of the average wage for 1981, $13,773.10, compared to that for 1976, $9,226.48, is 1.492779. Multiplying the 1978 quarter of coverage amount of $250 by the ratio of 1.492779 produces the amount of $373.19 which must then be rounded to $370. Accordingly, the quarter of coverage amount for 1983 is $370.

RETIREMENT TEST EXEMPT AMOUNTS

(a) Beneficiaries aged 70 or over.

Beginning with months after December 1982, there is no limit on the amount an individual aged 70 or over may earn and still receive Social Security benefits. The age at which the retirement test ceases to apply is reduced from age 72 to age 70 by Pub. L. 97-35, which amended section 203(c)(1) of the Social Security Act.

(b) Beneficiaries aged 65 through 69.

The retirement test monthly exempt amount for beneficiaries over age 65 is stated in the Social Security Act at section 203(f)(8)(D) for years 1978 through 1982. The stated monthly exempt amount for 1982 is $500. A formula is provided in section 203(f)(8)(B) for computing the exempt amount applicable for years after 1982. Under the formula, the exempt amount for 1983 shall be the 1982 exempt amount multiplied by the ratio of (1) the average amount, per employee, of the total wages for calendar year 1981 to (2) the average amount of those wages for calendar year 1980. 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 1981, $13,773.10 compared to that for 1980, $12,513.46, is 1.1006628.

Exempt amount for beneficiaries aged 65 through 69. Multiplying the 1982 retirement test monthly exempt amount of $500 by the ratio of 1.1006628 produces the amount of $550.33. This must then be rounded to $550. The retirement test monthly exempt amount for beneficiaries ages 65 through 69 is determined to be $550 for 1983. The corresponding annual retirement test exempt amount for these beneficiaries is $6,600.

(c) Beneficiaries under age 65.

Section 203 of the Social Security Act provides that beneficiaries aged 65 and over have a higher retirement test monthly exempt amount than those beneficiaries under age 65. The exempt amount for beneficiaries under age 65 is determined by a formula provided in section 203(f)(8)(B) of the Social Security Act. Under the formula, the monthly exempt amount for beneficiaries under age 65 is $370 for 1982. The formula provides that the exempt amount for 1983 shall be the 1982 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 1981 to (2) the average amount of those wages for calendar year 1980. 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 1981, $13,773.10 compared to that of 1980, $12,513.46 is 1.1006628.

Exempt amount for beneficiaries under age 65. Multiplying the 1982 retirement test monthly exempt amount of $370 by the ratio 1.1006628 produces the amount of $407.25. This must then be rounded to $410. The retirement test monthly exempt amount for beneficiaries under age 65 is determined to be $410 for 1983. The corresponding annual retirement test exempt amount for these beneficiaries is $4,920.

COMPUTING BENEFITS AFTER 1978

The Social Security Amendments of 1977 changed the formula for determining an individual's primary insurance amount after 1978. This basic new formula is based on "wage indexing" and was fully explained with interim regulations published in the Federal Register on December 29, 1978 at 43 FR 60877. It generally applies when a worker after 1978 attains age 62, becomes disabled, or dies before age 62. This formula uses the worker's earnings after they have been adjusted, or "indexed," in proportion to the increase 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" and also adjust the computation formula 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 their working lifetime, we adjust 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 1983, we divide the average of the total wages for 1981, $13,773.10, by the average of the total wages for each year prior to 1981 in which the worker had earnings. We then multiply the actual wages and self-employment income credited for those years by this ratio to obtain the worker's adjusted earnings for that 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 1983.

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 1983 are obtained by multiplying the 1979 amounts by the ratio between the average of the total wages for 1981, $13,773.10, and for 1977, $9,779.44. These results are then rounded to the nearest dollar. For 1983 the ratio is 1.408373. Multiplying the 1979 amounts of $180 and $1,085 by 1.408373 produces the amounts of $253.51 and $1,528.08. These must then be rounded to $254 and $1,528. Accordingly, the portions of the average indexed monthly earnings to be used in 1983 are determined to be the first $254, the amount between $254 and $1,528, and the amount over $1,528.

Consequently, for individuals who first become eligible for old-age insurance benefits or disability insurance benefits in 1983 or who die in 1983 before becoming eligible for benefits, we will compute their primary insurance amount by adding the following:

(a) 90 percent of the first $254 of their average indexed monthly earnings, plus

(b) 32 percent of the average indexed monthly earnings over $254 and through $1,528, plus

(c) 15 percent of the average indexed monthly earnings over $1,528.

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 215(a) of the Social Security Act (42 U.S.C. 415(a)) as amended by Public Law 97-35.

MAXIMUM BENEFITS PAYABLE TO A FAMILY

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 1980 Amendments (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 1983 are obtained by multiplying the 1979 amounts by the ratio between the average of the total wages for 1981, $13,773.10, and the average for 1977, $9,779.44. This amount is then rounded to the nearest dollar. For 1983, the ratio is 1.408373. Multiplying the amounts of $230, $332, and $433 by 1.408373 produces the amounts of $323.93, $467.58, and $609.83. These amounts are then rounded to $324, $468, and $610. Accordingly, the portions of the primary insurance amounts to be used in 1983 are determined to be the first $324, the amount between $324 and $468, the amount between $468 and $610, and the amount over $610.

Consequently, for the family of a worker who becomes age 62 or dies in 1983, the total amount of benefits payable to them will be computed so that it does not exceed:

(a) 150 percent of the first $324 of the worker's primary insurance amount, plus

(b) 272 percent of the worker's primary insurance amount over $324[1] through $468, plus

(c) 134 percent of the worker's primary insurance amount over $468 through $610, plus

(d) 175 percent of the worker's primary insurance amount over $610.

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 Social Security Act (42 U.S.C. 403(a)) as amended by Public Law 97-35.

[1]In the Federal Register announcement, this amount was misprinted as $234.

EXTENSION OF BENEFIT TABLE EFFECTIVE JANUARY 1983

The following is an extension of the Table for Determining Primary Insurance Amount and Maximum Family Benefits provided in section 215(a)(5) of the Social Security Act. This extension reflects the higher average monthly wage and related benefit amounts now possible under the increased contribution and benefit base published by this Notice effective January 1983 in accordance with section 215(i) of the Social Security Act. The extended portion of the benefit table shown here will apply primarily to benefits based on earnings of workers who reached age 62 before 1979.

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

Dated: November 4, 1982.

Richard S. Schweiker,
Secretary of Health and Human Services

(The extended benefit table which was published at the end of the above announcement in the Federal Register is not reproduced here because of its length.)

APPENDIX E.—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 to reflect changes in the general economy. Specific formulas are prescribed by the law 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 1983. Projected values for future years through 1988, based on the two intermediate sets of assumptions (alternatives II-A and II-B), are also shown. These assumptions are described in the section of this report entitled "Economic and Demographic Assumptions" and are shown in tables 10 and 11. The section entitled "Automatic Adjustments," and Appendices C and D, 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 newly 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 provisions. The announcement of the average wage determination for 1981, including a brief description of its derivation, is shown in Appendix D. Appendix D also describes the determinations of other program amounts that are in effect for 1983. Table E1 shows the average amount of total wages as announced for 1951 through 1981, together with projected values for 1982 through 1988 based on the two intermediate sets of assumptions.

TABLE E1.—AVERAGE AMOUNT OF TOTAL WAGES FOR 1951-81 AND PROJECTED FUTURE AMOUNTS FOR 1982-88, UNDER THE TWO INTERMEDIATE SETS OF ASSUMPTIONS

Calendar year	Actual amounts	
1951	$2,799.16	
1952	2,973.32	
1953	3,139.44	
1954	3,155.64	
1955	3,301.44	
1956	3,532.36	
1957	3,641.72	
1958	3,673.80	
1959	3,855.80	
1960	4,007.12	
1961	4,086.76	
1962	4,291.40	
1963	4,396.64	
1964	4,576.32	
1965	4,658.72	
1966	4,938.36	
1967	5,213.44	
1968	5,571.76	
1969	5,893.76	
1970	6,186.24	
1971	6,497.08	
1972	7,133.80	
1973	7,580.16	
1974	8,030.76	
1975	8,630.92	
1976	9,226.48	
1977	9,779.44	
1978	10,556.03	
1979	11,479.46	
1980	12,513.46	
1981	13,773.10	
	Projected future amounts by alternative—	
	II-A	II-B
1982	$14,498.18	$14,498.18
1983	15,134.15	15,166.21
1984	15,760.63	15,741.45
1985	16,519.41	16,596.15
1986	17,358.42	17,527.25
1987	18,257.93	18,520.90
1988	19,180.56	19,524.63

Note: The assumptions underlying the projections are described in the section entitled "Economic and Demographic Assumptions" and are shown in table 10.

The provisions for automatic cost-of-living increases in OASDI benefits were enacted in 1972 and first became effective with the benefit increase for June 1975. The notice announcing the June 1982 benefit increase is shown in Appendix C. As a result of the Social Security Amendments of 1983, automatic benefit increases projected for 1983 and later will be effective for December of each year. Table E2 shows the automatic benefit increases determined for each year 1975-83 and the benefit increases for each year 1984-88 on the basis of the two intermediate sets of assumptions.

TABLE E2.—BENEFIT INCREASE AND OTHER OASDI PROGRAM AMOUNTS DETERMINED UNDER THE AUTOMATIC PROVISIONS FOR 1975-83 AND PROJECTED FUTURE AMOUNTS FOR 1984-88, UNDER THE TWO INTERMEDIATE SETS OF ASSUMPTIONS

Calendar year	Benefit increase[1] (percent)	Contribution and benefit base	"Old-law" contribution and benefit base[2]	Retirement test exempt amount		Amount of earnings required for quarter of coverage[4]	AIME "bend points" in PIA formula		PIA "bend points" in maximum family benefit formula		
				Under age 65	Age 65 and over[3]		First	Second	First	Second	Third
Actual experience:											
1975	8.0	$14,100	([5])	$2,520	$2,520	([6])	([5])	([5])	([5])	([5])	([5])
1976	6.4	15,300	([5])	2,760	2,760	([6])	([5])	([5])	([5])	([5])	([5])
1977	5.9	16,500	([5])	3,000	3,000	([6])	([5])	([5])	([5])	([5])	([5])
1978	6.5	17,700	([5])	3,240	[7]4,000	[8]$250	([5])	([5])	([5])	([5])	([5])
1979	9.9	[7]22,900	$18,900	3,480	[7]4,500	260	[8]$180	[8]$1,085	[8]$230	[8]$332	[8]$433
1980	14.3	[7]25,900	20,400	3,720	[7]5,000	290	194	1,171	248	358	467
1981	11.2	[7]29,700	22,200	4,080	[7]5,500	310	211	1,274	270	390	508
1982	7.4	32,400	24,300	4,440	[7]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
Projected future experience:											
Alternative II-A:											
1984	3.7	37,500	28,200	5,160	6,960	390	267	1,609	341	492	642
1985	4.0	39,000	29,400	5,400	7,320	410	279	1,679	356	514	670
1986	3.5	40,500	30,600	5,640	7,680	430	290	1,749	371	535	698
1987	3.2	42,300	32,100	5,880	8,040	450	304	1,833	389	561	731
1988	3.0	44,400	33,600	6,120	8,400	470	319	1,926	408	589	769
Alternative II-B:											
1984	4.6	37,500	28,200	5,160	6,960	390	267	1,609	341	492	642
1985	5.3	39,300	29,400	5,400	7,320	410	279	1,683	357	515	672
1986	4.7	40,800	30,600	5,640	7,560	430	290	1,746	370	534	697
1987	4.4	42,900	32,400	6,000	7,920	450	305	1,841	390	563	735
1988	4.1	45,300	34,200	6,360	8,400	470	323	1,945	412	595	776

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

[2]Contribution and benefit base that would have been determined automatically under the law in effect prior to the Social Security Amendments of 1977.

[3]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.

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

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

[6]Amount not subject to automatic provisions in this year.

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

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

Note: The assumptions underlying the projections are described in the section entitled "Economic and Demographic Assumptions" and are shown in table 10.

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 provisions.) The bases for 1979-81 were specified by the 1977 amendments at levels above those which were expected to occur under the automatic provisions (and which, in fact, as the experience developed, were above such levels). Starting again in 1982, the bases are determined automatically on the basis of increases in average wages. Table E2 shows past and projected future amounts for the contribution and benefit base.

As described in the section "Automatic Adjustments," the Social Security Act also provides for the determination of the contribution and benefit base that would have been in effect in each year after 1978 under the law as in effect prior to the enactment of the 1977 amendments. Table E2 presents such amounts as determined for 1979-83, together with projections for 1984-88 under the two intermediate sets of assumptions.

The 1972 amendments also 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 different exempt amounts for those under age 65 and for those aged 65 and over. The former amounts continue to increase automatically, while the latter amounts were specified for 1978-82, after which they again increase automatically. The announcement of the exempt amounts for 1983 is shown in Appendix D, and table E2 shows the amounts for 1975-88.

The 1977 amendments specified the amount of earnings to be used in 1978 to credit a "quarter of coverage" and provided for automatic adjustment of this amount for future years. Appendix D describes the determination of the amount for 1983, and table E2 shows the amounts for 1978-88.

As mentioned previously, 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 a worker newly 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 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 determination of the bend points for the 1983 PIA formula is described in Appendix D. The bend points for 1979-83, and the amounts projected for 1984-88, are shown in table E2.

A similar formula is used to compute the maximum amount of total 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 persons newly 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). Appendix D contains the announcement of the 1983 family maximum formula bend points, and the amounts for 1975-88 are shown in table E2.

APPENDIX F.—ACTUARIAL COST PROJECTIONS OF THE OASI, DI, AND HI PROGRAMS, COMBINED

In this appendix, cost projections for the OASI, DI, and Hospital Insurance Trust Funds are summarized to facilitate analysis of the adequacy of the combined income and assets of these three trust funds relative to their combined expenditures. These projections represent the combination of projections shown in this report and in the similar report for the HI Trust Fund.

Public Law 97-123 granted limited authority for borrowing among the OASI, DI, and HI Trust Funds; this authority expired on December 31, 1982. As described earlier in this report, the Social Security Amendments of 1983 reauthorized interfund borrowing through the end of 1987. In addition, the current provisions of the law (1) prohibit new loans from a trust fund if the fund's assets are below specified levels and (2) set forth minimum standards for the repayment of interfund loans (including a requirement for the complete repayment of all such loans before 1990). Throughout this report and the concurrent HI Annual Report, the effects of these new provisions are included in the estimated trust fund operations. The projections shown in this appendix for the combined trust funds are theoretical after 1987 since, under present law, no authority exists beyond 1987 for transferring assets from one trust fund to another except to repay prior loans. Thus the emphasis in this appendix on combined operations should not obscure the financial status of the individual trust funds.

Table F1 shows estimated assets of the combined funds as a percentage of combined annual expenditures for calendar years 1983-92, based on the four alternative sets of assumptions used in this report. Under all four alternative sets of assumptions used in this report and the concurrent HI Annual Report, it is estimated that no further interfund loans would be necessary during 1983-87. In addition, the estimates indicate that all loans made to the OASI Trust Fund in calendar year 1982 could be repaid before the deadline established in the law. In tables 12-14 of this report, estimated amounts of repayments under each set of alternative assumptions are shown through 1987 (projections in that part of the report are presented for 1983-87 only). The estimates extended through 1992 indicate that, except under alternative III, the total loan of $12.4 billion made from the HI Trust Fund to the OASI Trust Fund in calendar year 1982 could be repaid by the end of 1988 using the minimum standard in the law for repayment of such loans. Under alternative III, the minimum standard would need to be exceeded to ensure the repayment of funds owed to HI before that fund would be depleted in 1988. Under alternative I, the $5.1 billion loan from the DI Trust Fund to the OASI Trust Fund is assumed to be repaid in 1988. Under the other three alternatives, the loan from DI is assumed to be repaid in 1989.

As shown in table F1, under alternatives I, II-A, and II-B the assets of the OASI and DI Trust Funds would grow as a percentage of outgo throughout the period shown. Under alternative III, significant growth would not occur until 1988 and later. Under alternative I, assets of the HI Trust Fund would grow through about 1987, relative to HI expenditures, before beginning to decline. Under the remaining alternative sets of assumptions, the assets of the HI Trust Fund are projected to begin declining in 1984, leading to exhaustion of the trust fund in 1991, 1990, and 1988 under alternatives II-A, II-B, and III, respectively. Table F1 indicates that the combined assets of the OASI, DI, and HI Trust Funds would be sufficient to meet their combined obligations through the end of 1992, under the four alternatives. In particular, this suggests that a reallocation of tax rates among the OASI, DI, and HI programs, or the extension of authority for interfund borrowing beyond 1987, could be sufficient to prevent the HI Trust Fund's short-range financing problems, at least through 1992. Under adverse economic conditions, however, such as those assumed in alternative III, the margin for safety would be small during this period.

TABLE F1.—PROJECTED ASSETS[1] OF THE OASI, DI, AND HI TRUST FUNDS, SEPARATE AND COMBINED, AT BEGINNING OF YEAR AS A PERCENTAGE OF ANNUAL EXPENDITURES DURING YEAR UNDER THE FOUR ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1983-92

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
Alternative I:					
1983	15	15	15	20	16
1984	21	38	22	26	23
1985	22	35	23	25	23
1986	26	35	27	27	27
1987	28	40	29	46	33
1988	37	50	38	48	40
1989	53	94	57	47	54
1990	73	113	77	45	69
1991	99	152	104	42	89
1992	126	188	131	37	108
Alternative II-A:					
1983	15	15	15	20	16
1984	20	38	22	25	23
1985	21	33	22	22	22
1986	24	31	25	20	23
1987	25	32	25	27	26
1988	26	36	27	34	29
1989	39	48	40	27	36
1990	51	84	54	17	45
1991	69	109	72	5	55
1992	88	135	92	([2])	66
Alternative II-B:					
1983	15	15	15	20	16
1984	20	38	22	25	23
1985	20	32	21	21	21
1986	22	29	23	18	22
1987	23	28	23	18	22
1988	23	30	24	18	23
1989	28	38	29	21	27
1990	35	69	38	9	31
1991	47	89	51	([2])	37
1992	59	111	64	([2])	42

TABLE F1.—PROJECTED ASSETS[1] OF THE OASI, DI, AND HI TRUST FUNDS, SEPARATE AND COMBINED, AT BEGINNING OF YEAR AS A PERCENTAGE OF ANNUAL EXPENDITURES DURING YEAR UNDER THE FOUR ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1983-92 (Cont.)

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
Alternative III:					
1983	15	15	15	20	16
1984	19	37	21	24	22
1985	17	29	18	17	18
1986	18	25	19	9	17
1987	21	24	21	3	17
1988	18	24	19	8	16
1989	26	30	27	(2)	18
1990	34	56	36	(2)	19
1991	42	70	45	(2)	20
1992	48	83	51	(2)	17

[1]Beginning in 1984, assets of the OASI and DI Trust Funds, but not of the HI Trust Fund, include advance tax transfers for January. Assets are defined slightly differently for the OASDI and HI programs because of their different cash flows. These differences do not affect the interpretation of the estimates shown in this table.

[2]Assets are projected to be negative, and are projected not to recover before the end of the long-range projection period.

Note: The assumptions underlying the projections are described in the section entitled "Economic and Demographic Assumptions" of this report and in Appendix A of the HI Annual Report. The combined OASDI and HI Trust Fund ratios are theoretical in years after the HI Trust Fund is depleted. See text for further details and estimated depletion years for the HI Trust Fund under the alternative sets of assumptions.

Table F2 shows projected cost rates for the OASI, DI, and HI programs during the period 1983-2007 under alternatives II-A and II-B. This table also shows a comparison of total cost rates and total income rates for the three trust funds combined. As previously discussed, cost rates represent program expenditures as a percentage of effective taxable payroll. The total income rate represents the employee-employer tax rate for the combined OASI, DI, and HI Trust Funds plus the OASDI income rate attributable to income from the taxation of OASDI benefits, as described earlier in this report. The definition of effective taxable payroll is slightly different for OASDI as compared to HI, due primarily to the different coverage provisions for Federal civilian workers under the two programs. This difference does not materially affect the comparisons. It should also be noted that the cost rates shown exclude any cost associated with rebuilding the HI Trust Fund to a level suitable as a contingency reserve, or the cost of maintaining such a level once reached. Table 8 of the HI Annual Report presents these additional costs.

TABLE F2.—COMPARISON OF ESTIMATED COST RATES AND TOTAL INCOME RATES FOR THE OASI, DI, AND HI PROGRAMS, UNDER ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1983-2007

[As a percentage of taxable payroll[1]]

Calendar year	Cost rate				Total income rate	Balance[3]
	OASI	DI	HI[2]	Total		
Alternative II-A:						
1983	10.28	1.21	[4]2.70	14.19	13.97	-0.22
1984	10.24	1.13	2.75	14.13	14.17	.04
1985	10.15	1.08	2.85	14.09	14.28	.19
1986	10.16	1.05	2.95	14.15	14.50	.35
1987	10.08	1.02	3.04	14.14	14.52	.38
1988	9.98	.99	3.15	14.13	15.26	1.14
1989	9.84	.97	3.24	14.05	15.28	1.23
1990	9.74	.97	3.36	14.06	15.59	1.53
1991	9.64	.96	3.48	14.08	15.62	1.53
1992	9.55	.96	3.59	14.10	15.65	1.55
1993	9.34	.95	3.70	13.99	15.66	1.67
1994	9.18	.94	3.81	13.93	15.66	1.73
1995	9.03	.93	3.93	13.88	15.67	1.78
1996	8.87	.92	4.03	13.83	15.66	1.84
1997	8.73	.92	4.13	13.77	15.66	1.89

TABLE F2.—COMPARISON OF ESTIMATED COST RATES AND TOTAL INCOME RATES FOR THE OASI, DI, AND HI PROGRAMS, UNDER ALTERNATIVES II-A AND II-B, CALENDAR YEARS 1983-2007 (Cont.)

[As a percentage of taxable payroll[1]]

Calendar year	Cost rate OASI	DI	HI[2]	Total	Total income rate	Balance[3]
Alternative II-A: (Cont.)						
1998	8.60	.93	4.22	13.76	15.66	1.90
1999	8.47	.95	4.31	13.74	15.66	1.92
2000	8.35	.97	4.40	13.72	15.66	1.93
2001	8.25	1.00	4.50	13.74	15.66	1.91
2002	8.17	1.02	4.59	13.78	15.66	1.87
2003	8.11	1.06	4.68	13.85	15.66	1.81
2004	8.06	1.09	4.78	13.93	15.66	1.73
2005	8.02	1.13	4.88	14.03	15.66	1.63
2006	8.02	1.16	4.99	14.17	15.66	1.49
2007	8.04	1.20	5.11	14.35	15.67	1.32
25-year average: 1983-2007	9.08	1.02	3.89	13.98	15.35	1.37
Alternative II-B:						
1983	10.28	1.21	[4]2.70	14.19	13.97	-.22
1984	10.30	1.14	2.77	14.22	14.17	-.05
1985	10.24	1.09	2.88	14.22	14.28	.07
1986	10.34	1.07	2.99	14.40	14.50	.11
1987	10.35	1.04	3.10	14.49	14.53	.04
1988	10.35	1.02	3.22	14.60	15.27	.68
1989	10.29	1.01	3.33	14.64	15.30	.66
1990	10.26	1.01	3.46	14.73	15.61	.88
1991	10.18	1.00	3.57	14.76	15.64	.88
1992	10.10	1.00	3.68	14.77	15.67	.90
1993	9.94	.99	3.80	14.72	15.68	.96
1994	9.81	.98	3.92	14.71	15.69	.97
1995	9.68	.97	4.05	14.70	15.69	.99
1996	9.54	.97	4.17	14.67	15.69	1.02
1997	9.40	.96	4.27	14.64	15.69	1.05
1998	9.29	.98	4.38	14.65	15.69	1.04
1999	9.17	1.00	4.48	14.65	15.68	1.04
2000	9.06	1.02	4.58	14.66	15.68	1.03
2001	8.96	1.05	4.69	14.70	15.68	.99
2002	8.88	1.07	4.79	14.75	15.68	.94
2003	8.81	1.11	4.90	14.82	15.69	.86
2004	8.75	1.14	5.01	14.91	15.69	.78
2005	8.72	1.18	5.13	15.03	15.69	.66
2006	8.71	1.22	5.25	15.18	15.69	.52
2007	8.73	1.26	5.39	15.37	15.70	.33
25-year average: 1983-2007	9.61	1.06	4.02	14.69	15.37	.68

[1]Effective taxable payroll is slightly different for OASDI as compared to HI, due primarily to different coverage provisions for Federal civilian employees under the respective programs. The difference does not materially affect the comparison.

[2]Cost rates exclude amounts required for trust fund building and maintenance.

[3]The balance is the total income rate minus the OASDHI cost rate. Positive balances are surpluses, and negative balances are deficits.

[4]Differs from the corresponding figure in the 1983 HI Annual Report as a result of an adjustment to treat the 1983 lump-sum transfer for deemed military service wage credits on a consistent basis with the OASDI estimates.

The pattern of projected OASI and DI cost rates for the balance of this century has already been discussed in this report. The HI costs as a percentage of taxable payroll are projected to continue increasing throughout this period under both alternatives II-A and II-B, for reasons described in the HI Annual Report. Under alternative II-A, total OASDI and HI costs would remain at roughly their current level of about 14.19 percent of taxable payroll, through this decade, and would then decline slightly, reaching 13.72 percent in the year 2000, before rising to 14.35 percent in the year 2007. Under alternative II-B, combined cost rates would increase gradually in 1983-92, decline slightly for several years, and then continue increasing, reaching 15.37 percent in the year 2007.

Under both alternatives, total cost rates for OASDI and HI combined would be less than the combined total income rates after 1984. On average, over the 25-year period, total OASDHI income would exceed total OASDHI costs by 1.37 percent and 0.68 percent of taxable payroll, respectively, under alternatives II-A and II-B.

Table F3 presents corresponding cost and income rate comparisons under alternative II-B for the next 75 years, along with averages for the three 25-year periods comprising the long-range projection period.

TABLE F3.—COMPARISON OF ESTIMATED COST RATES AND TOTAL INCOME RATES FOR THE OASI, DI, AND HI PROGRAMS UNDER ALTERNATIVE II-B, CALENDAR YEARS 1983-2057

[As a percentage of taxable payroll[1]]

Calendar year	Cost rate				Total income rate	Balance[3]
	OASI	DI	HI[2]	Total		
1983	10.28	1.21	[4]2.70	14.19	13.97	-0.22
1985	10.24	1.09	2.88	14.22	14.28	.07
1990	10.26	1.01	3.46	14.73	15.61	.88
1995	9.68	.97	4.05	14.70	15.69	.99
2000	9.06	1.02	4.58	14.66	15.68	1.03
2005	8.72	1.18	5.13	15.03	15.69	.66
2010	8.95	1.37	5.61	15.92	15.72	-.20
2015	9.93	1.49	6.22	17.65	15.78	-1.87
2020	11.21	1.55	7.00	19.77	15.86	-3.91
2025	12.40	1.56	7.89	21.85	15.92	-5.92
2030	13.22	1.51	8.65	23.38	15.98	-7.40
2035	13.62	1.53	9.10	24.26	16.02	-8.24
2040	13.60	1.57	9.29	24.47	16.04	-8.43
2045	13.56	1.61	9.32	24.49	16.06	-8.43
2050	13.66	1.61	9.35	24.62	16.06	-8.55
2055	13.79	1.60	9.37	24.77	16.07	-8.69
25-year averages:						
1983-2007	9.61	1.06	4.02	14.69	15.37	.68
2008-2032	11.14	1.49	7.08	19.71	15.85	-3.86
2033-2057	13.65	1.58	9.29	24.52	16.05	-8.47
75-year average:						
1983-2057	11.46	1.38	[4]6.79	19.64	15.76	-3.88

[1]Effective taxable payroll is slightly different for OASDI as compared to HI, due primarily to different coverage provisions for Federal civilian employees under the respective programs. The difference does not materially affect the comparisons.

[2]HI cost rates exclude amounts required for trust fund building and maintenance.

[3]The balance is the total income rate minus the OASDHI cost rate. Positive balances are surpluses, and negative balances are deficits.

[4]Differs from the corresponding figure in the 1983 HI Annual Report as a result of an adjustment to treat the 1983 lump-sum transfer for deemed military service wage credits on a consistent basis with the OASDI estimates.

A description of the trend in long-range OASDI cost rates has already been given in this report. HI cost rates are projected to increase substantially under the alternative II-B assumptions, from their current level of about 2.70 percent to over 9.30 percent by the end of the long-range projection period. Combined OASDI and HI cost rates would also increase substantially after the turn of the century, reaching about 24.80 percent of taxable payroll by the year 2055 under the intermediate II-B assumptions. Beginning in about 2010, combined cost rates would exceed combined total income rates, with the difference growing over time. Over the 75-year period, the combined actuarial deficit would average 3.88 percent of taxable payroll under the alternative II-B assumptions.

As noted previously, in this report and in the HI Annual Report, long-range projections such as these are subject to considerable uncertainty and should be interpreted carefully. It seems clear, however, that even under reasonably normal economic and demographic conditions, the total cost of the Social Security program would be significantly in excess of scheduled income.

APPENDIX G.—STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the techniques and methodology used herein in evaluating the 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 cost 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.

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