APPENDIX C.—CYCLIC ANALYSIS

INTRODUCTION

The main body of this report presents projections of the operations of the Old-Age, Survivors, and Disability Insurance system under four separate sets of assumptions, which are referred to as alternatives I, II-A, II-B, and III. From an economic point of view, all four of these alternative sets are based on trend assumptions; that is, after completing the present economic cycle each one of them immediately moves into a relatively steady growth projection in which there are no economic cycles. There are certain advantages in the adoption of those types of projections. For instance, it frees the projector from the difficult task of having to develop various sets of economic cycles. The significant unpredictability of the timing and amplitude of these cycles could lead to widespread disagreement over the particular sequence chosen, thereby diverting attention from the much more significant average level of the experience over the cycles. Also, it can be argued that, for long-range purposes, the trend projection is just as useful because the cumulative effects of the upswings and downswings in the cycles tend to offset each other, producing a net result not too dissimilar from the average or trend.

Because the OASDI system is projected to operate in the near future with relatively small reserves under the trend assumptions, it is advisable to consider the effect that economic cycles could have on the projected financial conditions of the system. The projected fund balances might not be large enough to protect the system against the effects of a normal downswing in the economy. The purpose of this appendix is not to test whether the present OASDI system could withstand a deep and protracted recession; this could be done using a set of pessimistic assumptions. The purpose is to test how well the system would operate in the near future during a normal economic slowdown under intermediate assumptions, and to test the financial situation of the system in the near future during a normal economic upswing, also under intermediate assumptions.

This type of exercise should provide an indication of the safety margin that needs to be built into the short-range financing of the OASDI system if it is to survive normal economic cycles that revolve about the intermediate assumptions. Obviously, if protection were desired against the more severe conditions of a deep and protracted recession it would be necessary to simulate the operations of the system under some set of pessimistic assumptions, which would undoubtedly indicate the need for more financing. Similarly, the exercise should provide information as to whether a cut in tax rates could be enacted in the near future if the national economy were to operate at a very favorable pace.

DESCRIPTION OF THE PROJECTED ECONOMIC CYCLES

The operations of the OASDI system are projected in this appendix under two different assumed cyclical paths, both of which revolve around the trend path of alternative II-B previously described in the main body of the report. Because the value of the exercise in this appendix consists principally of providing an idea of the safety margin needed in the financing of the system, the two cyclical paths were superimposed on alternative II-B, the less optimistic of the two intermediate sets of assumptions presented in the report.

The projected cyclical paths are limited to the 10-year period 1981-90, because further elongation of this period would not add significant information to that already conveyed by the trend path projection. All three paths (the two cyclical and the trend) result in about the same projected average real GNP during 1981-90. Their difference is in the route they follow from the first quarter of 1981 through the fourth quarter of 1990.

The principal economic assumptions for the paths are shown in Table C1. The two cyclical paths assume that the national economy was at different points in the cycle at the end of the first quarter of 1981. The first path, which is referred to as "cycle-up," assumes that, at the end of the first quarter of 1981, the national economy was in the midst of a long upswing from the trough in the second quarter of 1980 and that it will reach its greatest divergence from the alternative II-B path in the second quarter of 1984. The second cyclical path, which is referred to as "cycle-down," assumes that economic activity will be declining until a low point is reached in the fourth quarter of 1981.

TABLE C1.—SELECTED ECONOMIC ASSUMPTIONS IN CYCLE-UP, ALTERNATIVE II-B, AND CYCLE-DOWN, CALENDAR YEARS 1980-1990

Calendar year	Average annual percentage increase in— Real GNP	Average wages in covered employment	Consumer Price Index	Real-wage differential (percent)	Average annual interest rate (percent)	Average annual unemployment rate (percent)
1980	-0.1	8.5	13.5	-5.0	11.0	7.1
Cycle-up:						
1981	2.6	10.6	10.2	.4	12.1	7.5
1982	3.6	9.2	8.9	.3	10.1	7.2
1983	3.9	8.4	7.9	.5	8.8	6.5
1984	3.0	9.0	8.1	.9	8.4	6.1
1985	-.7	8.9	10.1	-1.2	8.7	6.9
1986	2.5	8.6	7.0	1.6	7.9	7.8
1987	4.7	7.7	5.7	2.0	7.2	6.8
1988	4.2	7.1	5.7	1.4	7.0	6.1
1989	3.3	7.8	7.0	.8	7.3	5.4
1990	.5	8.1	8.0	.1	7.6	6.0
Alternative II-B:						
1981	1.1	10.2	11.1	-.9	11.4	7.8
1982	3.7	9.6	9.4	.2	9.9	7.5
1983	3.5	9.7	9.0	.7	9.1	7.2
1984	2.9	8.8	8.2	.6	8.4	7.0
1985	2.9	8.1	7.4	.7	7.9	6.8
1986	2.9	7.3	6.6	.7	7.4	6.6
1987	2.9	6.8	5.8	1.0	7.1	6.4
1988	2.9	6.2	5.0	1.2	6.7	6.2
1989	3.0	5.5	4.2	1.3	6.4	6.0
1990	3.0	5.4	4.0	1.4	6.1	5.9
Cycle-down:						
1981	.8	10.0	11.1	-1.1	12.1	7.9
1982	2.8	9.6	9.6	.0	10.2	8.5
1983	4.3	8.6	8.2	.4	9.0	7.5
1984	4.0	8.6	7.9	.7	8.4	6.9
1985	3.7	8.3	7.5	.8	7.9	6.3
1986	3.3	8.8	8.0	.8	8.1	5.9
1987	.8	8.9	9.2	-.3	8.3	6.1
1988	.7	8.0	7.4	.6	7.7	7.4
1989	5.2	7.6	4.7	2.9	6.8	6.6
1990	5.0	7.3	4.7	2.6	6.5	5.5

In the fourth quarter of 1990, the cycle-up path reaches a cyclical trough where real GNP is 3.9 percent lower than the alternative II-B trend assumptions, and the cycle-down path reaches a cyclical peak where real GNP is 1.8 percent higher than the trend assumptions. Thus, although the average real GNP during the decade is about the same for the two cyclical paths, during the fourth quarter of 1990 there is a 5.7 percent difference between the real GNP assumption in the two paths. Because the two cyclical paths are at different points in the cycle at the end of 1990, point to point comparisons from 1981 to 1990 may be misleading for some of the economic parameters. However, the average level of all of the economic assumptions is about the same.

The annual increase in the CPI was difficult to cycle about the trend assumption without assuming some years of very low price increases. As a result, the average annual increase in the CPI from 1981 through 1990 is about 7.8 percent for the two cyclical paths, while it is only 7.1 percent for the trend assumptions.

In the cycle-up path, the average annual unemployment rate declines from an assumed 7.5 percent in 1981 to 6.1 percent in 1984. As a result of the assumed recession in 1985, unemployment rises to 7.8 percent in 1986, and then declines to 5.4 percent in 1989 during the ensuing recovery. The unemployment rate rises to 6.0 percent in 1990 as the economy dips into the second recession. The annual rate of increase in average wages in covered employment fluctuates between 10.6 percent in 1981 and 7.1 percent in 1988, while the annual rate of increase in the CPI fluctuates between 10.2 percent in 1981 and 5.7 percent in 1987 and 1988. The general trend of both wage and CPI increases, as in the alternative II-B trend assumptions, is downward. The real-wage differential fluctuates between -1.2 percent in 1985 and +2.0 percent in 1987. The annual interest rate is assumed to decline from 12.1 percent in 1981 to 7.0 percent in 1988, and then to increase to 7.6 percent in 1990.

In the cycle-down path, because of the assumed recession in 1981, the average annual unemployment rate rises from 7.1 percent in 1980 to 8.5 percent in 1982, and then drops to 5.9 percent in 1986 during the ensuing recovery. During the next recession, the unemployment rate rises to 7.4 percent in 1988 and then falls to 5.5 percent in 1990. The annual rate of increase in average wages in covered employment fluctuates between 10.0 percent in 1981 and 7.3 percent in 1990, while the annual rate of increase in the CPI fluctuates between 11.1 percent in 1981 and 4.7 percent in 1989 and 1990. As in the alternative II-B trend assumptions, the general trend of both the wage and CPI assumptions is downward during the 1980's. The real-wage differential fluctuates between -1.1 percent in 1981 and 2.9 percent in 1989. The annual interest rate is assumed to decline from 12.1 percent in 1981 to 7.9 percent in 1985, and then to rise to 8.3 percent in 1987 before dropping to 6.5 percent in 1990.

ESTIMATED OPERATIONS AND STATUS OF THE TRUST FUNDS UNDER THE CYCLICAL ECONOMIC ASSUMPTIONS

Estimates of the operations and status of the OASI Trust Fund, the DI Trust Fund, and the OASDI Trust Funds combined during calendar years 1980-90 are shown in Table C2 for three economic paths.

TABLE C2.—ESTIMATED OPERATIONS OF THE OASI, DI, AND COMBINED OASDI TRUST FUNDS DURING CALENDAR YEARS 1980-90 UNDER THREE ECONOMIC PATHS

[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Fund at beginning of year as a percentage of disbursements during year
OASI:					
"Cycle-up":					
1980[1]	$105.8	$107.7	-$1.8	$22.8	23
1981	124.2	127.0	-2.9	20.0	18
1982	133.3	144.5	-11.2	8.8	14
1983	146.2	161.8	-15.6	-6.8	5
1984	161.1	180.2	-19.1	-25.9	-4
1985	181.0	201.6	-20.6	-46.5	-13
1986	194.7	225.7	-31.0	-77.5	-21
1987	213.2	248.2	-35.0	-112.5	-31
1988	231.9	268.8	-36.9	-149.4	-42
1989	253.2	291.3	-38.0	-187.4	-51
1990	293.9	318.8	-24.9	-212.3	-59
Alternative II-B:					
1980[1]	105.8	107.7	-1.8	22.8	23
1981	123.3	127.0	-3.7	19.1	18
1982	132.7	144.8	-12.1	7.0	13
1983	146.3	163.3	-17.0	-10.0	4
1984	160.1	183.3	-23.2	-33.2	-5
1985	181.1	203.8	-22.7	-55.9	-16
1986	196.4	224.7	-28.3	-84.2	-25
1987	211.4	245.6	-34.2	-118.4	-34
1988	225.8	265.9	-40.1	-158.5	-45
1989	239.8	285.3	-45.5	-204.0	-56
1990	274.1	304.3	-30.2	-234.2	-67
"Cycle-down":					
1980[1]	105.8	107.7	-1.8	22.8	23
1981	123.2	127.0	-3.8	19.0	18
1982	130.9	145.6	-14.7	4.4	13
1983	143.7	164.3	-20.6	-16.3	3
1984	157.6	183.3	-25.7	-42.0	-9
1985	178.9	203.3	-24.3	-66.3	-21
1986	196.9	224.4	-27.5	-93.8	-30
1987	214.6	249.3	-34.7	-128.5	-38
1988	227.4	277.5	-50.1	-178.6	-46
1989	247.4	303.1	-55.8	-234.4	-59
1990	291.9	325.2	-33.2	-267.6	-72
DI:					
"Cycle-up":					
1980[1]	13.9	15.9	-2.0	3.6	35
1981	17.1	18.1	-1.0	2.7	20
1982	24.0	19.5	4.4	7.1	14
1983	27.5	20.8	6.6	13.7	34
1984	31.1	22.4	8.7	22.4	61
1985	39.4	24.4	15.1	37.4	92
1986	44.1	26.6	17.5	55.0	141
1987	49.7	28.8	20.9	75.9	191
1988	55.5	30.9	24.5	100.5	245
1989	62.1	33.5	28.6	129.1	300
1990	77.9	36.7	41.1	170.3	351
Alternative II-B:					
1980[1]	13.9	15.9	-2.0	3.6	35
1981	17.0	18.1	-1.1	2.5	20
1982	23.9	19.6	4.3	6.8	13
1983	27.5	21.0	6.5	13.3	32
1984	31.0	22.8	8.2	21.5	58
1985	39.4	24.6	14.9	36.3	87
1986	44.3	26.4	17.9	54.2	138
1987	49.1	28.5	20.6	74.9	191
1988	53.9	30.7	23.3	98.1	244
1989	58.8	32.8	26.0	124.1	299
1990	72.2	35.1	37.2	161.3	354
"Cycle-down":					
1980[1]	13.9	15.9	-2.0	3.6	35
1981	17.0	18.1	-1.1	2.5	20
1982	23.5	19.7	3.9	6.4	13
1983	27.1	21.1	5.9	12.3	30
1984	30.5	22.7	7.8	20.1	54
1985	39.0	24.4	14.6	34.7	82
1986	44.5	26.3	18.2	52.9	132
1987	50.2	28.8	21.4	74.3	184
1988	55.3	31.9	23.4	97.8	233
1989	61.8	34.6	27.2	124.9	283
1990	77.9	37.1	40.8	165.8	337

TABLE C2.—ESTIMATED OPERATIONS OF THE OASI, DI, AND COMBINED OASDI TRUST FUNDS DURING CALENDAR YEARS 1980-90 UNDER THREE ECONOMIC PATHS (Cont.)

[Amounts in billions]

Calendar year	Income	Disbursements	Net increase in fund	Fund at end of year	Fund at beginning of year as a percentage of disbursements during year
OASDI:					
"Cycle-up":					
1980[1]	119.7	123.6	-3.8	26.5	25
1981	141.2	145.1	-3.8	22.6	18
1982	157.3	164.0	-6.7	15.9	14
1983	173.7	182.6	-8.9	7.0	9
1984	192.2	202.6	-10.4	-3.5	3
1985	220.4	226.0	-5.6	-9.0	-2
1986	238.8	252.2	-13.5	-22.5	-4
1987	262.9	277.0	-14.1	-36.5	-8
1988	287.4	299.8	-12.3	-48.9	-12
1989	315.4	324.8	-9.4	-58.3	-15
1990	371.8	355.6	16.3	-42.0	-16
Alternative II-B:					
1980[1]	119.7	123.6	-3.8	26.5	25
1981	140.2	145.1	-4.8	21.6	18
1982	156.6	164.4	-7.8	13.8	13
1983	173.8	184.4	-10.6	3.2	7
1984	191.1	206.0	-15.0	-11.7	2
1985	220.6	228.4	-7.9	-19.6	-5
1986	240.7	251.1	-10.4	-30.0	-8
1987	260.4	274.0	-13.6	-43.6	-11
1988	279.7	296.5	-16.8	-60.4	-15
1989	298.6	318.1	-19.5	-79.9	-19
1990	346.3	339.4	7.0	-73.0	-24
"Cycle-down":					
1980[1]	119.7	123.6	-3.8	26.5	25
1981	140.2	145.1	-4.9	21.6	18
1982	154.4	165.2	-10.8	10.8	13
1983	170.7	185.4	-14.7	-3.9	6
1984	188.2	206.1	-17.9	-21.8	-2
1985	218.0	227.7	-9.7	-31.6	-10
1986	241.5	250.7	-9.3	-40.9	-13
1987	264.8	278.1	-13.3	-54.2	-15
1988	282.7	309.4	-26.6	-80.8	-18
1989	309.2	337.8	-28.6	-109.4	-24
1990	369.8	362.2	7.6	-101.8	-30

[1]Actual experience.

A more detailed analysis of the general trend underlying these estimates, and in particular the assumptions used in alternative II-B, is contained in section VI in the body of this report. This appendix highlights the deviation that could occur from the alternative II-B trend path as a result of cyclical patterns that are typical to the U.S. economy.

A comparison of the estimates under alternative II-B and the cycle-up path shows that the favorable effects on the trust funds of a long period of expansion can offset the unfavorable effects of a subsequent recession. For example, the cycle-up path assumes that the economy operates at a level of real GNP that is higher and generally growing faster from the first quarter of 1981 through the second quarter of 1984. The fund ratios fall less rapidly under the cycle-up path than under alternative II-B, so that at the beginning of 1986, the fund ratios are about 4 percentage points higher in each instance than under alternative II-B. As a result of the assumed 1985 recession, the fund ratios fall more quickly than under alternative II-B, but generally remain slightly higher than those under that estimate.

A comparison of the estimates under alternative II-B and the cycle-down path shows that the effects of a recession on the trust fund last for several years after the recession ends. For example, in the cycle-down path, a trough is reached in the fourth quarter of 1981, but real GNP is projected to increase faster than under alternative II-B from the first quarter of 1982 through the second quarter of 1986. Nevertheless, the estimated trust fund ratio at the beginning of 1986 is 5 percentage points lower in all instances under the cycle-down path than under the alternative II-B trend assumptions. It is not until 1986 and 1987 that the experience under the cycle-down path shows a smaller decrease in the combined OASDI Trust Funds than under the alternative II-B assumptions, and the fund ratio recovers slightly to within 3 percentage points of the ratio under alternative II-B. However, the cycle-down path enters into a second recession.

Under alternative II-B and the cycle-down path, the combined OASDI Trust Funds become unable to pay benefits when due in 1982, while under the cycle-up path this occurs in early 1983. Also, as may be noted from Table C3, the difference between the cost rates and the tax rates varies among the paths. During 1982-84, the cost rates are higher than the tax rates by an average of 0.57 percentage points under the cycle-up path, 0.69 percentage points under alternative II-B, and 0.88 percentage points under cycle-down. During 1985-89, the corresponding averages of the excess percentage points of disbursements over revenues are 0.30, 0.39, and 0.46, respectively.

TABLE C3.—ESTIMATED COST RATES FOR THE OASI AND DI TRUST FUNDS COMPARED WITH COMBINED EMPLOYEE-EMPLOYER CONTRIBUTION RATES, FOR CALENDAR YEARS 1980-90 UNDER THREE ECONOMIC PATHS

Calendar year	OASI Trust Fund			DI Trust Fund			OASI and DI Trust Funds, combined		
	Estimated cost rate	Combined employee-employer contribution rate	Difference	Estimated cost rate	Combined employee-employer contribution rate	Difference	Estimated cost rate	Combined employee-employer contribution rate	Difference
Cycle-up:									
1980[1]	9.39	9.04	-0.35	1.38	1.12	-0.26	10.77	10.16	-0.61
1981	9.82	9.40	-.42	1.40	1.30	-.10	11.21	10.70	-.51
1982	10.02	9.15	-.87	1.36	1.65	.29	11.38	10.80	-.58
1983	10.07	9.15	-.92	1.30	1.65	.35	11.37	10.80	-.57
1984	10.09	9.15	-.94	1.25	1.65	.40	11.35	10.80	-.55
1985	10.34	9.50	-.84	1.25	1.90	.65	11.59	11.40	-.19
1986	10.65	9.50	-1.15	1.25	1.90	.65	11.90	11.40	-.50
1987	10.59	9.50	-1.09	1.23	1.90	.67	11.82	11.40	-.42
1988	10.47	9.50	-.97	1.21	1.90	.69	11.68	11.40	-.28
1989	10.33	9.50	-.83	1.19	1.90	.71	11.52	11.40	-.12
1990	10.45	10.20	-.25	1.20	2.20	1.00	11.65	12.40	.75
Alternative II-B:									
1980[1]	9.39	9.04	-.35	1.38	1.12	-.26	10.77	10.16	-.61
1981	9.89	9.40	-.49	1.41	1.30	-.11	11.30	10.70	-.60
1982	10.08	9.15	-.93	1.36	1.65	.29	11.45	10.80	-.65
1983	10.15	9.15	-1.00	1.31	1.65	.34	11.45	10.80	-.65
1984	10.29	9.15	-1.14	1.28	1.65	.37	11.57	10.80	-.77
1985	10.38	9.50	-.88	1.25	1.90	.65	11.63	11.40	-.23
1986	10.49	9.50	-.99	1.23	1.90	.67	11.73	11.40	-.33
1987	10.57	9.50	-1.07	1.22	1.90	.68	11.79	11.40	-.39
1988	10.63	9.50	-1.13	1.23	1.90	.67	11.86	11.40	-.46
1989	10.65	9.50	-1.15	1.23	1.90	.67	11.88	11.40	-.48
1990	10.64	10.20	-.44	1.23	2.20	.97	11.86	12.40	.54
Cycle-down:									
1980[1]	9.39	9.04	-.35	1.38	1.12	-.26	10.77	10.16	-.61
1981	9.90	9.40	-.50	1.41	1.30	-.11	11.30	10.70	-.60
1982	10.28	9.15	-1.13	1.39	1.65	.26	11.66	10.80	-.86
1983	10.35	9.15	-1.20	1.33	1.65	.32	11.68	10.80	-.88
1984	10.40	9.15	-1.25	1.29	1.65	.36	11.69	10.80	-.89
1985	10.43	9.50	-.93	1.25	1.90	.65	11.68	11.40	-.28
1986	10.40	9.50	-.90	1.22	1.90	.68	11.62	11.40	-.22
1987	10.52	9.50	-1.02	1.22	1.90	.68	11.74	11.40	-.34
1988	10.91	9.50	-1.41	1.25	1.90	.65	12.17	11.40	-.77
1989	10.83	9.50	-1.33	1.24	1.90	.66	12.07	11.40	-.67
1990	10.56	10.20	-.36	1.20	2.20	1.00	11.76	12.40	.64

[1]Actual experience.

As mentioned in the body of the report, when the fund ratio of either the OASI program or the DI program falls below 9 percent, the assets of the fund become insufficient to pay benefits when due. One must be aware that, if the fund ratio were to go as low as 9 percent at the beginning of any month, on the 3rd of that month the trust funds would be nearly depleted with only a nominal amount of cash. Income during the month would have to be relied upon to make payments on the 3rd of the following month.

The results of this analysis show that fluctuations in the fund ratio of about 5 percentage points in either direction of the trend are likely to occur, because of the normal cyclical behavior of the U.S. economy. Since the system needs a fund ratio of about 9 percent to be able to meet its monthly benefit payments, it could be concluded that a projected fund ratio of at least 14 percent would be needed to protect the benefit payments against normal cycles in the economy. It should be recognized, however, that all of the other factors used in the projections could also fluctuate about their assumed trends. For a particular year the net effect of the fluctuations of these other factors could adversely affect the system causing the actual fund ratio to be significantly lower than projected. Prudence would require a safety margin with respect to these other factors of at least another 5 percentage points in the fund ratio. Thus, a projected fund ratio of less than 20 percent should be considered a clear call for action to satisfactorily assure the payment of monthly benefits as projected under the trend assumptions. Of course, such a ratio would not provide an adequate margin of safety against actual future trends different than assumed, but only against temporary cyclical fluctuations.

APPENDIX D.—DETERMINATION AND ANNOUNCEMENT OF SOCIAL SECURITY BENEFIT INCREASES[1]

I hereby determine and announce a cost-of-living increase of 14.3 percent in benefits under titles II and XVI of the Social Security Act.

Under title II, Old-Age, Survivors and Disability Insurance benefits will increase by 14.3 percent beginning with the June 1980 benefits which are payable on July 3, 1980. This increase is based on the authority contained in section 215(i) of the Social Security Act (42 U.S.C. 415(i)), as amended by section 201 of Pub. L. 95-216 enacted December 20, 1977.

Under title XVI, supplemental security income payment levels will increase by 14.3 percent effective for payments made on July 1, 1980. This is based on the authority contained in section 1617 of the Social Security Act (42 U.S.C. 1382f).

TITLE II BENEFITS

Title II benefits are payable under the Federal Old-Age, Survivors and Disability Insurance program. Individuals entitled under this program include insured workers, wives, husbands, children, widows, widowers, mothers, fathers and parents.

In accordance with section 215(i)(4) of the Social Security Act (the Act), the primary insurance amounts and the maximum family benefits shown in columns IV and V of the revised benefit table (table 1) set forth below were obtained by increasing by 14.3 percent the corresponding amounts established by: (1) the last cost-of-living increase; and (2) the extension of the benefit table made under section 215(i)(4) and published on November 1, 1979 at 44 FR 62956. The table applies only to those persons who attained age 62, became disabled or died before January 1979 and is deemed to appear in section 215(a) of the Act. Note that this table does not apply to those individuals who become eligible for retirement benefits, become disabled, or die after 1978; their benefits will generally be determined by a new benefit formula provided by the Social Security Amendments of 1977 (Pub. L. 95-216). For such persons first eligible for benefits in 1979 and 1980, the 14.3 percent increase will apply beginning June 1980; but the 14.3 percent increase will not apply for persons first becoming eligible for benefits after 1980.

Section 215(i)(2)(D) of the Act also requires that, when the Secretary determines a cost-of-living 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 provisions described in section 215(a)(1)(C)(i)(II). 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)(II), the attached Table 2 shows the revised range of primary insurance amounts and corresponding maximum family benefit amounts after the 14.3 percent benefit increase.

Section 227 of the Act provides limited benefits to a worker who became age 72 before 1969 and was not insured under the usual

[1]This statement, edited for presentation here, was published in the Federal Register for May 14, 1980 (Vol. 45, No. 95, pp. 31781-82)

requirements, and to his wife or widow. Section 228 of the Act provides similar benefits at age 72 for certain uninsured persons. The current monthly benefit amounts of $92.00 and $46.10 established under sections 227 and 228 of the Act are increased by 14.3 percent to obtain the new amounts of $105.20 and $52.70.

TITLE XVI BENEFITS

Section 1617 of the Act provides that whenever title II benefits are increased under section 215(i), the amounts in sections 1611(a)(1)(A), 1611(a)(2)(A), 1611(b)(1) and 1611(b)(2) of the Act and in section 211(a)(1)(A) of Pub. L. 93-66 shall be increased. The new amounts are effective for months after the month in which the title II increase is effective. The percentage increase is the same as the title II benefit increase and the annual payment amount is rounded, when not a muliple of $1.20, to the next higher multiple of $1.20.

In accordance with section 1617, Federal Supplemental Security Income (SSI) guarantees for the aged, blind and disabled are increased effective with July 1980 by 14.3 percent. The current yearly Federal SSI guarantees of $2,498.40 for an eligible individual and $3,747.60 for an eligible individual with an eligible spouse are thereby increased to $2,856.00 and $4,284.00 respectively. The monthly payment is determined by dividing the yearly guarantee by 4, subtracting quarterly countable income, and dividing the remainder by 3. In the case of an eligible individual with an eligible spouse, the amount payable is further divided equally between the two spouses. The amount by which the Federal SSI guarantee amount is increased because of the presence of an essential person in the home, currently $1,250.40 per year for each essential person under section 211(a)(1)(A) of Pub. L. 93-66, is also increased by 14.3 percent to obtain a new amount of $1,430.40.

AUTOMATIC BENEFIT INCREASE DETERMINATION

Section 215(i) of the Act requires that when certain conditions are met in the first calendar quarter of a year, the Secretary shall determine that a cost-of-living increase in benefits is due. Section 215(i) of the Act also specifies the formula for determining the amount of any cost-of-living increase in benefits. This formula utilizes the Consumer Price Index for urban wage earners and clerical workers reported by the Department of Labor.

Section 215(i)(2)(A) of the Act requires the Secretary to determine each year, whether there is a cost-of-living computation quarter in that year. If the Secretary so determines, the Secretary shall, effective with June of that year, increase benefits for individuals entitled under sections 227 and 228 of the Act, and shall increase the primary insurance amounts of all other individuals entitled under title II of the Act, subject to the limitations provided in section 215(i)(2)(A) of the Act. Section 1617 of the Act requires that SSI benefits be increased by the same percentage increase as title II benefits, whenever title II benefits are increased under section 215(i). The percentage increase is equal to the percentage increase in the Consumer Price Index for the cost-of-living computation quarter over the index for the most recent cost-of-living computation quarter.

Section 215(i)(1) of the Act defines a base quarter as a calendar quarter ending on March 31 in each year after 1974, or any other calendar quarter in which occurs the effective month of a general benefit increase. Section 215(i)(1) also defines a cost-of-living computation quarter as a base quarter in which the Consumer Price Index prepared by the Department of Labor exceeds by not less than 3 percent the index in the later of (1) the last prior cost-of-living computation quarter or (2) the most recent calendar quarter in which a general benefit increase was effective. It is specified, however, that there shall be no cost-of-living computation quarter in any calendar year if, in the prior year, a general benefit increase was enacted or became effective. Section 215(i)(1) of the Act also provides that the Consumer Price Index for a cost-of-living computation quarter shall be the arithmetical mean of such index for the 3 months in that quarter.

The Department of Labor's revised Consumer Price Index for urban wage earners and clerical workers for each month in the quarter ending March 31, 1979, was: for January 1979, 204.0; for February 1979, 207.1; and for March 1979, 209.3. The arithmetical mean for that calendar quarter was 207.0. The corresponding Consumer Price Index for each month in the quarter ending March 31, 1980, was: for January 1980, 233.3; for February 1980, 236.5; and for March 1980, 239.9. The arithmetical mean for this calendar quarter is 236.6. The increase for the calendar quarter ending March 31, 1980, is 14.3 percent. Thus, since the percentage of increase in the Consumer Price Index from the calendar quarter ending March 31, 1979, to the calendar quarter ending March 31, 1980, is not less than 3 percent, the quarter ending March 31, 1980, is a cost-of-living computation quarter. Consequently, a cost-of-living benefit increase of 14.3 percent is effective for benefits under title II of the Act beginning June 1980.

(Catalog of Federal Domestic Assistance Programs Nos. 13.802-5, and 13.807 Social Security Programs.)

Dated: May 8, 1980.

Nathan J. Stark,
Acting Secretary of Health and Human Services

(The revised tables of benefits which were published at the end of the above announcement in the Federal Register are not reproduced here because of their length.)

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

Summary

The Secretary has determined—

(1) The Social Security contribution and benefit base to be $29,700 for remuneration paid in 1981 and self-employment income earned in taxable years beginning in 1981;

(2) The amount of earnings a person must have to be credited with a quarter of coverage in 1981 to be $310;

(3) The monthly exempt amount under the Social Security retirement test for taxable years ending in calendar year 1981 to be $458.33⅓ for beneficiaries aged 65 and over and $340 for beneficiaries under age 65; and

(4) The average of the total wages for 1979 to be $11,479.46.

The formulas we use to compute the benefits for a worker and his or her family who first becomes eligible for benefits in 1981 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, 1980, the contribution and benefit base, the amount of earnings required for a quarter of coverage, and the retirement test exempt amount, for calendar year 1981. In addition, section 215(a)(1)(D) requires that we publish by November 1, 1980 the formula for computing a primary insurance amount for workers who become eligible for benefits or die in 1981, and section 203(a)(2)(C) requires that we publish by November 1, 1980 the formula for computing a family's maximum benefits for families of workers who become eligible for old-age benefits or die in 1981.

CONTRIBUTION AND BENEFIT BASE

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.

Section 230(c) of the Social Security Act specifies that the amount of the contribution and benefit base for 1981 is $29,700.

[1]This statement, edited for presentation here, was published in the Federal Register for November 18, 1980 (Vol. 45, No. 224, pp. 76252-54).

AVERAGE OF THE TOTAL WAGES FOR 1979

The determination of the average wage figure for 1979 is based on the 1978 average wage figure of $10,556.03 announced in the Federal Register on November 1, 1979 (44 FR 62956) along with the percentage increase in average wages from 1978 to 1979 measured by annual wage data tabulated by the Internal Revenue Service (IRS). The average amounts of wages calculated directly from IRS data were $10,840.68 and $11,789.01 for 1978 and 1979, respectively. To determine an average wage figure for 1979 at a level that is consistent with the series of average wages for 1951-1977 (published December 29, 1978 at 43 FR 61016), we multiplied the 1978 average wage figure of $10,556.03 by the percentage increase in average wages from 1978 to 1979 (based on IRS data) as follows (with the result rounded to the nearest cent):

Average wage for 1979 = $10,556.03 x ($11,789.01/$10,840.68) = $11,479.46.

Therefore, the average wage for 1979 is determined to be $11,479.46.

QUARTER OF COVERAGE AMOUNT

Computation

The 1981 amount of earnings required for a quarter of coverage is $310. 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 quarterly; 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 $250 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. Under the prescribed formula, the quarter of coverage amount for 1981 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 1979 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 1979 has been determined to be $11,479.46 as stated in a previous section.

Amount

The ratio of the average wage for 1979, $11,479.46, compared to 1976, $9,226.48, is 1.244186. Multiplying the 1978 quarter of coverage amount of $250 by the ratio of 1.244186 produces the amount of $311.05, which must then be rounded to $310. Accordingly, the quarter of coverage amount for 1981 is $310.

RETIREMENT TEST EXEMPT AMOUNT

Computation

The 1981 amount of $458.33⅓ for the retirement test monthly exempt amount for beneficiaries aged 65 through 71 is stated in the law. The corresponding annual retirement test exempt amount for those individuals is $5,500. Section 301 of the Social Security Amendments of 1977 amended section 203 of the Social Security Act to provide a higher retirement test exempt amount for beneficiaries aged 65 through 71 than for those beneficiaries under age 65.

The monthly exempt amount of $340 for beneficiaries under age 65 is determined according to a formula specified in the law, which automatically produces a mathematical result based upon reported statistics. Section 203(f)(8) of the Social Security Act provides that the retirement test monthly exempt amount for 1981 shall be equal to the 1980 amount of $310 multiplied by the ratio of (1) the average amount, per employee, of the wages of all employees reported under the program for calendar year 1979 to (2) the average amount of those wages reported for calendar year 1978. 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.

There is no limit on the amount an individual aged 72 or over may earn and still receive Social Security benefits. (Beginning in 1982, the age at which the retirement test no longer applies will be reduced from age 72 to age 70.)

Average wages

Average wages for this purpose are determined in the same way as for a quarter of coverage. Therefore, the ratio of the average wages for 1979, $11,479.46, compared to 1978, $10,556.03, is 1.087479.

Exempt amount for persons under age 65

Multiplying the 1980 retirement test monthly exempt amount of $310 by the ratio of 1.087479 produces the amount of $337.12. This must then be rounded to $340. Accordingly, the retirement test monthly exempt amount for persons under age 65 is determined to be $340 for 1981. The corresponding annual exempt amount for 1981 is $4,080.

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 1981, we divide the average of the total wages for 1979, $11,479.46, by the average of the total wages for each year prior to 1978 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 1981.

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 1981 are obtained by multiplying the 1979 amounts by the ratio between the average of the total wages for 1979, $11,479.46, and for 1977, $9,779.44. These results are then rounded to the nearer dollar. For 1981 the ratio is 1.173836. Multiplying the 1979 amounts of $180 and $1,085 by 1.173836 produces the amounts of $211.29 and $1,273.61. These must then be rounded to $211 and $1,274. Accordingly, the portions of the average indexed monthly earnings to be used in 1981 are determined to be the first $211, the amount between $211 and $1,274, and the amount over $1,274.

Consequently, for individuals who first become eligible for old-age insurance benefits or disability insurance benefits in 1981 or who die in 1981 before becoming eligible for benefits, we will compute their primary insurance amount by adding the following:

(a) 90 percent of the first $211 of their average indexed monthly earnings, plus

(b) 32 percent of the average indexed monthly earnings over $211 and through $1,274, plus

(c) 15 percent of the average indexed monthly earnings over $1,274.

This amount is then rounded to the next higher multiple of $.10 if it is not already a multiple of $.10. This formula and the adjustments we have

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described are contained in section 215(a) of the Social Security Act (42 U.S.C. 415(a)).

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 (P.L. 96-265) established a new formula for computing the maximum benefits payable to the family of a disabled worker. This new formula is to be applied to the family benefits of workers who first become entitled to disability insurance benefits after June 30, 1980, based on a disability that began after 1978. We are preparing a Notice of Proposed Rule Making for publication in the Federal Register that explains this new formula. 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 1981 are obtained by multiplying the 1979 amounts by the ratio between the average of the total wages for 1979, $11,479.46, and for 1977, $9,779.44. This amount is then rounded to the nearer dollar. For 1981, the ratio is 1.173836. Multiplying the amounts of $230, $332, and $433 by 1.173836 produces the amounts of $269.98, $389.71 and $508.27. These amounts are then rounded to $270, $390, and $508. Accordingly, the portions of the primary insurance amounts to be used in 1981 are determined to be the first $270, the amount between $270 and $390, the amount between $390 and $508, and the amount over $508.

Consequently, for the family of a worker who reaches age 62 or dies in 1981, the total amount of benefits payable to them will be computed so that it does not exceed:

(a) 150 percent of the first $270 of the worker's primary insurance amount, plus

(b) 272 percent of the worker's primary insurance amount over $270 through $390, plus

(c) 134 percent of the worker's primary insurance amount over $390 through $508, plus

(d) 175 percent of the worker's primary insurance amount over $508.

This amount is then rounded to the next higher 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)).

EXTENSION OF BENEFIT TABLE EFFECTIVE JANUARY 1981

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 1981 in accordance with section 215(i) of the Social Securiy 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 13, 1980.

Patricia Roberts Harris,
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 F.—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 that are subject to automatic adjustment from the time that such adjustments became effective through the present time. Projected values for future years through 1986, based on the two intermediate sets of assumptions (alternatives II-A and II-B), are also shown. These assumptions are summarized earlier in this report in the section entitled "Economic and Demographic Assumptions" and were shown in Tables 10 and 11. The section entitled "Automatic Adjustments," and Appendices D and E, should be referred to for 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 persons 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 1979, including a brief description of its derivation, is shown in Appendix E. Appendix E also describes the determinations of other program amounts that are in effect for 1981. Table F1 shows the average amount of total wages as announced for 1951 through 1979, together with projected values for 1980 through 1986 based on the two intermediate sets of assumptions.

TABLE F1.—AVERAGE AMOUNT OF TOTAL WAGES, 1951-79, AND PROJECTED FUTURE AMOUNTS FOR 1980-86 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	
	Projected future amounts by alternative—	
	II-A	II-B
1980	$12,454.00	$12,454.00
1981	13,727.00	13,729.00
1982	15,070.00	15,045.00
1983	16,372.00	16,509.00
1984	17,665.00	17,961.00
1985	18,919.00	19,418.00
1986	20,237.00	20,838.00

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 1980 benefit increase is shown in Appendix D. Table F2 shows the automatic benefit increases determined for each year 1975-81 and the benefit increases for each year 1982-86 projected on the basis of the two intermediate sets of assumptions.

TABLE F2.—BENEFIT INCREASE AND OTHER OASDI PROGRAM AMOUNTS DETERMINED UNDER THE AUTOMATIC PROVISIONS, 1975-81, AND ESTIMATED FUTURE AMOUNTS FOR 1982-86, 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: Under age 65	Retirement test exempt amount: Age 65 and over	Amount of earnings required for quarter of coverage[3]	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	([4])	$2,520	$2,520	([5])	([4])	([4])	([4])	([4])	([4])
1976	6.4	15,300	([4])	2,760	2,760	([5])	([4])	([4])	([4])	([4])	([4])
1977	5.9	16,500	([4])	3,000	3,000	([5])	([4])	([4])	([4])	([4])	([4])
1978	6.5	17,700	([4])	3,240	[6]4,000	[7]$250	([4])	([4])	([4])	([4])	([4])
1979	9.9	[6]22,900	$18,900	3,480	[6]4,500	260	[7]$180	[7]$1,085	[7]$230	[7]$332	[7]$433
1980	14.3	[6]25,900	20,400	3,720	[6]5,000	290	194	1,171	248	358	467
1981	11.2	[6]29,700	22,200	4,080	[6]5,500	310	211	1,274	270	390	508
Projected future experience:											
Alternative II-A:											
1982	9.3	32,100	24,000	4,440	[6]6,000	340	229	1,382	293	423	551
1983	6.6	35,400	26,400	4,920	6,600	370	253	1,523	323	466	608
1984	5.8	39,000	29,100	5,400	7,200	410	277	1,672	354	512	667
1985	4.9	42,300	31,500	5,880	7,800	440	301	1,816	385	556	725
1986	4.4	45,600	33,900	6,360	8,400	480	325	1,960	415	600	782
Alternative II-B:											
1982	9.7	32,100	24,000	4,440	[6]6,000	340	229	1,382	293	423	551
1983	9.2	35,400	26,400	4,920	6,600	370	253	1,523	323	466	608
1984	8.5	38,700	28,800	5,400	7,200	410	277	1,669	354	511	666
1985	7.7	42,600	31,500	5,880	7,920	450	304	1,832	388	560	731
1986	6.9	46,200	34,200	6,360	8,640	490	331	1,993	422	610	795

[1]Effective with benefits payable for the month of June in each year shown.

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

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

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

[6]Amount represents ad hoc increase specified by Social Security Amendments of 1977.

[7]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 set 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 will be determined automatically on the basis of increases in average wages. Table F2 shows past and estimated future amounts for the contribution and benefit base.

As mentioned 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 F2 presents such amounts as determined for 1979-81, together with projections for 1982-86 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 earnings retirement 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 those aged 65 and over. The former amounts continue to increase automatically, while the latter amounts are set at specific levels for 1978-82, after which time they will again increase automatically. The announcement of the exempt amounts for 1981 is shown in Appendix E, and Table F2 shows both sets for 1975-86.

The 1977 amendments provided for an amount of earnings to be used in 1978 to credit a "quarter of coverage," and for automatic adjustment of this amount for future years. Appendix E describes the determination of the amount for 1981. Table F2 shows the amounts for 1978-86.

As mentioned previously, the 1977 amendments substantially revised the method of computing benefits for people first becoming eligible for benefits in 1979 and later. The formula used to compute an individual's Primary Insurance Amount (PIA) for persons 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 are called "bend points." They 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.) The determination of the bend points for the 1981 PIA formula is described in Appendix E.

The bend points for 1979-81, and the amounts estimated for 1982-86, are shown in Table F2.

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 E contains the announcement of the 1981 family maximum formula bend points. The past and projected amounts are shown in Table F2.

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

Cost projections for the OASI, DI, and Hospital Insurance Trust Funds will now be summarized, so as to facilitate analysis of the adequacy of the combined income and assets of these three trust funds relative to their combined expenditures. These projections generally represent the combination of projections shown in this report and in the similar report for the HI Trust Fund. Table G1 shows estimated assets of the combined funds as a percentage of combined annual expenditures for calendar years 1981-90, based on the five alternative sets of assumptions used in this report.

As shown in column 1, the assets of the OASI Trust Fund are projected to be insufficient to pay benefits when due within about 1½ years under all five sets of assumptions. Column 2 indicates that, after 1982, the DI Trust Fund is expected to experience rapid growth for the remainder of this decade under all five sets of assumptions. Combined OASI and DI assets (shown in column 3) would be insufficient to pay combined benefits when due in the near future under each of the alternatives. Column 4 shows that the assets of the HI Trust Fund will increase steadily during the 1980's only under the optimistic assumptions; under the other sets of assumptions, projected assets increase during the early part of the decade, but they begin to decline rapidly during the second half of the decade. As described in the HI Annual Report, the HI Trust Fund is estimated to be exhausted as early as 1989 under alternative III. Exhaustion is also projected under alternatives II-B, II-A, and I, with this estimated to occur in 1991, 1993, and 1998, respectively. The "worst-case" assumptions do not extend beyond 1986; the HI Trust Fund, however, would be depleted within a few more years if such economic conditions continued.

Assets of the combined OASI, DI, and HI Trust Funds as a percentage of combined annual expenditures (shown in the last column) are estimated under alternatives I and II-A to continue to decline through the beginning of 1985, reaching a low point of 19 and 13 percent, respectively, before beginning to increase. Under alternatives II-B and III, and the "worst-case" assumptions, the fund ratios for the three trust funds combined decline throughout the period shown and would be insufficient to pay combined benefits when due within a few years.

The question has frequently been raised concerning whether reallocation of tax rates among the OASI, DI, and HI programs, or the authorization of loans from one fund to another, would be sufficient to prevent the OASI Trust Fund's imminent financing problems. Under "interfund borrowing," a fund with assets nearing depletion could borrow from the assets of another, better endowed, trust fund with the loan to be repaid with interest when the deficient fund's assets recover sufficiently. Interest would be determined at the rate the lending fund would have received if it had invested the loan amount in the normal manner. Such proposals have normally encompassed the OASI, DI, and HI Trust Funds, these being the three funds financed by the Social Security payroll tax.

As indicated by the projections in Table G1, under the optimistic and intermediate II-A sets of assumptions, projected OASDI and HI tax income under present law would be sufficient to allow timely payment of projected OASDI and HI benefits in the aggregate for the remainder of this decade. However, it should be noted that under these assumptions a wide margin of safety would not exist. In other words, if actual future economic and demographic conditions are somewhat less favorable than those assumed in alternative II-A, scheduled OASDI and HI tax income would be insufficient and tax rate reallocation or interfund borrowing could only postpone temporarily the need for additional income or reduced benefits. In particular, under alternatives II-B and III, and the "worst-case" assumptions, the assets of the combined funds are insufficient to pay benefits when due beginning in about 1984. Thus tax rate reallocation or interfund borrowing alone cannot be prudently relied upon to prevent the depletion of the OASI Trust Fund within the relatively near future.

TABLE G1.—PROJECTED ASSETS 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 FIVE ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1981-90

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
Alternative I:					
1981	18	20	18	46	23
1982	[1]14	13	14	58	21
1983	[1]6	35	[2]9	69	20
1984	[1]-1	66	[2]6	77	19
1985	[1]-8	104	[2]4	82	19
1986	[1]-11	169	8	87	24
1987	[1]-12	246	14	96	31
1988	[1]-11	325	24	103	40
1989	[1]-9	405	33	106	49
1990	[1]-6	487	45	106	59
Alternative II-A:					
1981	18	20	18	46	23
1982	[1]13	13	13	57	21
1983	[1]5	33	[2]8	66	18
1984	[1]-4	62	[2]3	70	15
1985	[1]-13	96	[2]-1	70	13
1986	[1]-18	155	[2]1	69	15
1987	[1]-21	219	[2]4	70	18
1988	[1]-24	285	9	68	22
1989	[1]-26	352	14	61	25
1990	[1]-28	418	20	51	27
Alternative II-B:					
1981	18	20	18	46	23
1982	[1]13	13	13	57	21
1983	[1]4	32	[2]7	64	18
1984	([3])	58	[2]2	67	14
1985	([3])	87	[2]-5	65	[2]8
1986	([3])	138	[2]-8	62	[2]6
1987	([3])	191	[2]-11	61	[2]4
1988	([3])	244	[2]-15	56	([4])
1989	([3])	299	[2]-19	46	([3])
1990	([3])	354	[2]-24	34	([3])
Alternative III:					
1981	18	20	18	46	23
1982	[1]13	13	13	56	21
1983	[1]4	31	[2]7	62	17
1984	([3])	52	([3])	60	[2]9
1985	([3])	75	([3])	53	[2]1
1986	([3])	118	([3])	43	([3])
1987	([3])	163	([3])	34	([3])
1988	([3])	206	([3])	21	([3])
1989	([3])	248	([3])	[1]3	([3])
1990	([3])	288	([3])	([3])	([3])

TABLE G1.—PROJECTED ASSETS 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 FIVE ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1981-90 (Cont.)

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
"Worst-case"[5]:					
1981	18	20	18	46	23
1982	[1]13	13	[2]13	56	20
1983	[1]2	29	[2]5	61	[2]15
1984	([3])	47	([3])	60	[2]5
1985	([3])	68	([3])	55	([3])
1986	([3])	111	([3])	51	([3])

[1]Assets of OASI Trust Fund will be insufficient to pay benefits when due during part or all of this year.

[2]Assets of combined trust funds will be insufficient to pay combined benefits when due during part or all of this year.

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

[4]Between 0.0 percent and 0.5 percent.

[5]Underlying assumptions extend through 1986 only.

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 OASI, OASDI, and combined OASDI and HI Trust Fund ratios in 1982 and later under each alternative are theoretical, because the OASI Trust Fund is projected to be depleted, and no provision for additional income exists in present law. See text for details.

Table G2 shows projected cost rates for the OASI, DI, and HI programs during the period 1981-2005 under alternatives II-A and II-B. HI cost projections for years after 2005 are not shown in the HI Annual Report. The program's expenditures as a percentage of taxable payroll would, nonetheless, be subject to the same demographic effects that will cause OASDI costs to increase rapidly after the year 2010. Total cost rates for the three trust funds combined are shown in column 4 of Table G2 and are compared to total employee-employer tax rates in column 5. The resulting surplus or deficiency is presented in column 6. As previously explained, cost rates represent program expenditures as a percentage of effective taxable payroll. It is important to note that the definition of effective taxable payroll is slightly different for OASDI compared to HI, due to the different tax treatment of self-employment earnings. 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 trust funds to a level suitable as a contingency reserve, or the cost of maintaining such a level once reached. The text of this report and Table 8 of the HI Annual Report present these additional costs.

TABLE G2.—ESTIMATED COST RATES OF THE OASI, DI, AND HI PROGRAMS UNDER ALTERNATIVES II-A AND II-B AND COMPARISON WITH TAX RATES, CALENDAR YEARS 1981-2005

[As percent of taxable payroll[1]]

Calendar year	Estimated cost rate[2]				Total tax rate	Difference[3]
	OASI	DI	HI	Total		
Alternative II-A:						
1981	9.89	1.41	2.27	13.57	13.30	-0.27
1982	10.07	1.36	2.35	13.78	13.40	-.38
1983	10.04	1.29	2.43	13.76	13.40	-.36
1984	9.97	1.24	2.55	13.76	13.40	-.36
1985	9.90	1.20	2.67	13.77	14.10	.33
1986	9.78	1.16	2.80	13.74	14.30	.56
1987	9.69	1.14	2.94	13.77	14.30	.53
1988	9.66	1.14	3.10	13.90	14.30	.40
1989	9.59	1.14	3.23	13.96	14.30	.34

TABLE G2.—ESTIMATED COST RATES OF THE OASI, DI, AND HI PROGRAMS UNDER ALTERNATIVES II-A AND II-B AND COMPARISON WITH TAX RATES, CALENDAR YEARS 1981-2005 (Cont.)

[As percent of taxable payroll[1]]

Calendar year	Estimated cost rate[2]				Total tax rate	Difference[3]
	OASI	DI	HI	Total		
Alternative II-A: (Cont.)						
1990	9.55	1.14	3.39	14.08	15.30	1.22
1991	9.52	1.14	3.57	14.23	15.30	1.07
1992	9.50	1.15	3.75	14.39	15.30	.91
1993	9.47	1.15	3.94	14.56	15.30	.74
1994	9.44	1.15	4.10	14.69	15.30	.61
1995	9.43	1.16	4.27	14.85	15.30	.45
1996	9.33	1.19	4.44	14.96	15.30	.34
1997	9.25	1.21	4.60	15.06	15.30	.24
1998	9.17	1.24	4.77	15.17	15.30	.13
1999	9.08	1.26	4.90	15.24	15.30	.06
2000	8.99	1.28	5.04	15.31	15.30	-.01
2001	8.94	1.31	5.18	15.43	15.30	-.13
2002	8.91	1.34	5.33	15.58	15.30	-.28
2003	8.89	1.37	5.48	15.74	15.30	-.44
2004	8.87	1.40	5.64	15.91	15.30	-.61
2005	8.87	1.42	5.80	16.09	15.30	-.79
25-year average (1981-2005)	9.43	1.24	3.94	14.61	14.78	.17
Alternative II-B:						
1981	9.89	1.41	2.27	13.57	13.30	-.27
1982	10.08	1.36	2.36	13.81	13.40	-.41
1983	10.15	1.31	2.46	13.91	13.40	-.51
1984	10.29	1.28	2.58	14.15	13.40	-.75
1985	10.38	1.25	2.73	14.36	14.10	-.26
1986	10.49	1.23	2.88	14.61	14.30	-.31
1987	10.57	1.22	3.04	14.83	14.30	-.53
1988	10.63	1.23	3.20	15.06	14.30	-.76
1989	10.65	1.23	3.37	15.25	14.30	-.95
1990	10.64	1.23	3.55	15.41	15.30	-.11
1991	10.61	1.22	3.74	15.57	15.30	-.27
1992	10.57	1.22	3.95	15.75	15.30	-.45
1993	10.53	1.22	4.17	15.92	15.30	-.62
1994	10.48	1.23	4.35	16.06	15.30	-.76
1995	10.47	1.23	4.55	16.25	15.30	-.95
1996	10.35	1.26	4.74	16.35	15.30	-1.05
1997	10.22	1.28	4.92	16.42	15.30	-1.12
1998	10.09	1.30	5.12	16.51	15.30	-1.21
1999	9.95	1.32	5.27	16.54	15.30	-1.24
2000	9.85	1.34	5.44	16.63	15.30	-1.33
2001	9.80	1.37	5.62	16.78	15.30	-1.48
2002	9.74	1.39	5.80	16.93	15.30	-1.63
2003	9.68	1.42	5.98	17.08	15.30	-1.78
2004	9.64	1.45	6.18	17.27	15.30	-1.97
2005	9.61	1.48	6.39	17.48	15.30	-2.18
25-year average (1981-2005)	10.21	1.30	4.19	15.70	14.78	-.92

[1]Effective taxable payroll is slightly different for OASDI compared to HI, due to the different tax treatment of self-employment earnings. The difference does not materially affect the comparisons.

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

[3]The difference is the tax rate minus the OASDHI cost rate. Positive differences are referred to as surpluses, and negative differences, as deficits.

Note: The definitions of alternatives II-A and II-B, cost rate, tax rate, and taxable payroll are presented in the text.

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. Total OASDI and HI costs would also increase from their current level of 13.57 percent of taxable payroll, reaching 16.09 percent by the year 2005 under alternative II-A and 17.48 percent under alternative II-B.

Under alternative II-A, projected total cost rates for OASDI and HI combined exceed the combined employee-employer tax rates until 1985, at which time a scheduled tax increase would become effective. Tax income would then exceed expenditures until about the year 2000, when annual shortfalls would recur. On average, over the 25-year period, scheduled OASDHI tax income exceeds OASDHI costs by 0.17 percent of taxable payroll under alternative II-A. Under the less favorable economic conditions assumed in alternative II-B, however, combined program costs are projected to exceed total payroll tax income in every year 1981-2005, with the shortfalls increasing in magnitude over time. On average during this period, an actuarial deficit of 0.92 percent of taxable payroll is projected under alternative II-B.

APPENDIX H.—STATEMENT OF ACTUARIAL OPINION

It is my opinion (1) that the techniques and methodology used herein in evaluating the actuarial status of the Old-Age and Survivors Insurance and the 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 purposes for which they are intended, as described in the body of this report, taking into consideration the experience and expectations of the program.

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