## TABLE II.H2.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1945-2070 (Cont.)

Iln	thousands]	

	Retired wo	rkers and au	xiliaries					
Calendar year	Worker	Wife- husband	Child	Widow- widower	Mother- father	Child	Parent	Total
High Cost:								
1995	26.842	3,067	461	5,324	296	1,918	4	37,910
2000	28,453	3,011	503	5,516	306	2,066	3	39,859
2005	30.612	2,971	562	5,645	319	2,095	3	42,20€
2010	34,489	2.915	615	5.750	293	1,937	3	46,003
2015	40.871	2,842	674	5.864	268	1.763	3	52,286
2020	48,576	2,844	725	5,937	254	1,643	3	59 982
2025	55,735	2,902	747	6.018	247	1.572	3	67,225
2030	61,585	2,919	752	6.056	237	1.522		73,075
2035	65,469	2,901	751	6,082	226	1,479	3	76.910
2040	67,375	2,837	737	6,120	212	1.434	3 3 3	78.718
2045	68.878	2,837	721	6,180	199	1.382	3	80.201
2050	70,896	2,897	707	6.226	187	1,330	3	82,247
2055	73,568	3,046	707	6.237	176	1,280	ž	85.017
	76,199	3,196	705	6.189	166	1,229	š	87,688
2060	78,199	3,297	697	6.135	156	1,179	3 3	89,482
2065					147	1,132	3	90,552
2070	79,133	3,347	685	6,104	147	1,132	3	90,5

Note: The number of beneficiaries does not include certain uninsured persons, most of whom both attained age 72 before 1968 and have fewer than 3 quarters of coverage, in which case the costs are reimbursed by the general fund of the Treasury. The number of such uninsured persons was 2,448 as of December 31, 1993, and is estimated to be fewer than 500 by the turn of the century. Totals do not necessarily equal the sums of rounded components.

## 7. Disability Insurance Beneficiaries

The number of DI beneficiaries was projected for each type of benefit separately, by the sex of the worker on whose earnings the benefits are based, and the age of the beneficiary. The number of disabled-worker beneficiaries was projected from the estimated number of such beneficiaries entitled on December 31, 1992, by adding new entitlements and subtracting terminations. The starting number of entitled disabled-worker beneficiaries was estimated by age, sex, and duration of entitlement, from the tabulated number of disabled-worker beneficiaries in current-payment status on December 31, 1992. The number of new entitlements during each year was projected by applying assumed disability incidence rates. Incidence rates by age and sex were applied to the projected disability insured population (excluding those already entitled to disabled-worker benefits) to obtain new entitlements.

The number of terminations was projected by applying assumed termination rates to the disabled-worker population. In the short-range period, the number of terminations was projected by applying assumed termination rates by reason—death, recovery, and all oth-

er—and by age and sex, to the entitled disabled-worker population. In the long-range period, the number of terminations was projected by applying assumed death rates and recovery rates, by age, sex, and duration of entitlement, to the entitled disabled-worker population. This number of terminations was then increased, in both the short-range and long-range periods, by the number of disabled-worker beneficiaries who would be automatically converted to retired-worker beneficiaries upon attainment of the normal retirement age (currently, age 65).

Disability incidence rates declined rapidly from historically high levels for 1974-75 to a level less than half as large by the year 1982. From 1982 through 1986, incidence rates increased steadily, regaining about one-fifth of the decline from the prior period. Between 1986 and 1989, incidence rates remained fairly steady. From 1989 to 1992, incidence rates again increased at a rapid pace, reaching a level about three quarters of the way back to the rates of 1974-75, from the rates for 1982.

Assumed future levels for disability incidence rates are determined in two stages: (1) rates are first projected from recent levels based on past trends and future expectations, as if the increases scheduled in present law for the normal retirement age (NRA) would not occur, and (2) for the year 2000 and later an adjustment is made to reflect the scheduled increase in the NRA; rates for persons aged 60 through 64 are assumed to increase, and rates for ages 65 and 66 are extrapolated.

For the alternative II assumptions, gross incidence rates are projected to continue increasing over the next 10 years due to the growing proportion of insured workers at the higher ages. Gross rates projected under the first stage increase from 1993 levels by about 22 percent over the next 10 years, reaching a level of about 6.0 per thousand persons exposed (defined as the number of persons who are disability insured and not currently entitled to disabled worker benefits).

Further increases in incidence rates over age 60 along with rates assumed for persons aged 66 and 67, due to the scheduled increase in the NRA are reflected in the second stage. These adjustments contribute to the overall rise in the gross disability incidence rate from a level of 4.9 per thousand exposed for 1993 to an ultimate rate

of 7.1 per thousand exposed by the year 2026, at which time the scheduled increase in the NRA will be complete.

For alternative I, the gross disability incidence rate is assumed to decline by about 3 percent over the next 10 years. The 2026 gross incidence rate is assumed to be 5.7 per thousand exposed. For alternative III, the gross disability incidence rate is assumed to increase by about 47 percent over the next 10 years, to a level comparable to the peak experience for 1974-75. The gross incidence rate under alternative III is assumed to reach about 8.6 per thousand exposed by 2026.

In the short-range period, the termination rates were projected by reason—death, recovery, and all other—and by age and sex. For alternative II, the death rates were projected to remain constant, while the rates for recovery and all other terminations were projected to increase from the relatively low levels of 1990-92, by about 90 and 30 percent, respectively. For alternative III, the death rates decline by about 10 percent, while the rates for recovery and all other terminations increase more slowly and to lower levels. For alternative I, the death rates increase by about 10 percent, while the rates for recovery and all other terminations increase more quickly and to higher levels.

In the long-range period, the death rates and recovery rates were projected by age, sex, and duration of entitlement. For alternative II, death rates reach levels in 2068 approximately 14 percent lower for males and approximately 10 percent lower for females than those experienced by disabled-worker beneficiaries during 1977-80, the most recent period for which detailed data are available. The recovery rates are assumed to increase from 1993 levels until 2008, when they attain ultimate levels about 35 percent lower than those experienced during the period 1977-80. Projected increases in recovery rates reflect the estimated effect of the periodic reviews required by provisions of law first enacted in 1980, and amended in 1983, 1984, and 1990.

For alternative I, the death rates in 2068 are assumed to be roughly 10 percent higher for males and approximately 20 percent higher for females than those experienced by disabled-worker beneficiaries during 1977-80, and the recovery rates are assumed to increase from current levels to levels that are 22 percent lower than those of the

same period. For alternative III, the death rates in 2068 are assumed to be about 39 percent lower for both males and females than those experienced during 1977-80, and recovery rates are assumed to be 48 percent lower than those experienced during 1977-80.

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

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

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

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

Table II.H3 shows the projected number of beneficiaries under the DI program by type of benefit.

# TABLE II.H3.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1960-2070

[In thousands]

	[In thousands]				
		Auxiliarie	Auxiliaries		
Colondos voos	Disabled worker	Wife- husband	Child	Total	
Calendar year	WOING	Husband	Offina	1014	
Historical data:					
1960	455	77	155	687	
1965	988	193	558	1,739	
1970	1,493	283	889	2,665	
1975	2.489	453	1,411	4,352	
1980	2,859	462	1.358	4.678	
1985	2,656	306	945	3,907	
		301	965	3,993	
1986	2,727			4.045	
1987	2,786	291	968		
1988	2,830	281	963	4,074	
1989	2,895	271	962	4,129	
1990	3,011	266	989	4,266	
1991	3,195	266	1,052	4,513	
1992	3,468	271	1,151	4,890	
1993	3,726	273	1,255	5,254	
Intermediate:					
1995	4.301	278	1,427	6,006	
2000	5,601	292	1.704	7.596	
2005	6,769	315	1.894	8,977	
2010	7,713	323	1,837	9.873	
= = : = : : : : : : : : : : : : : : : :	8.184	312	1.740	10,236	
2015	8.334	310	1,675	10,319	
2020	-,	332		10,513	
2025	8,599		1,663		
2030	8,485	327	1,673	10,486	
2035	8,395	321	1,688	10,404	
2040	8,493	316	1,697	10,507	
2045	8,891	327	1,704	10,921	
2050	9,094	333	1,710	11,137	
2055	9.217	342	1,722	11,281	
2060	9,119	341	1.731	11,191	
2065	9,114	339	1,739	11.192	
2070	9.205	341	1.746	11,292	
Low Cost:	0,200	• • •	.,	, , , , , , , , , , , , , , , , , , , ,	
1995	4,168	268	1,381	5.818	
2000	5,006	260	1,537	6.804	
	6.021	268	1.707	7,995	
2005		253	1.596	8.373	
2010	6,525				
2015	6,713	226	1,496	8,435	
2020	6,703	211	1,445	8,360	
2025	6,835	219	1,456	8,510	
2030	6,708	210	1,494	8,413	
2035	6,630	205	1,533	8,368	
2040	6,716	202	1,568	8,485	
2045	7,043	210	1,608	8,861	
2050	7,250	216	1,655	9,120	
2055	7,434	224	1,708	9,365	
2060	7,507	227	1.760	9,493	
2065	7,687	231	1.809	9.726	
	7,942	237	1,857	10,036	
2070	1, <del>34</del> 2	231	1,007	10,030	

## TABLE II.H3.—DI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS AS OF DECEMBER 31 BY ALTERNATIVE, CALENDAR YEARS 1960-2070 (Cont.)

[in thousands]

Calendar year	Disabled worker	Wife- husband	Child	Total
High Cost:				
1995	4,433	287	1,472	6,192
2000	6.372	336	1,930	8,638
2005	7,521	373	2,082	9,976
2010	8.920	413	2.072	11,405
2015	9,692	421	1.961	12.074
2020	10,022	435	1.860	12,318
2025	10.452	471	1.806	12,729
2030	10.384	469	1.773	12,626
2035	10.314	460	1.751	12,524
2040	10,441	449	1.730	12,620
2045	10,917	460	1.696	13,073
2050	11,097	463	1,657	13,217
	11,113	471	1,621	13,206
2055	10,752	459	1,586	12,797
2060			1,551	12,448
2065	10,452	445		
2070	10,281	436	1,518	12,236

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

#### 8. Average Benefits

Average benefits were projected by type of benefit based on recent historical averages, projected average Primary Insurance Amounts (PIAs), and projected ratios of average benefits to average PIAs. Average PIAs were calculated from projected distributions of beneficiaries by duration from year of award, average awarded PIAs, and increases thereto since the year of award, reflecting automatic benefit increases, recomputations to reflect additional covered earnings, and other factors. Average awarded PIAs were calculated from projected earnings histories, which were developed from the actual earnings histories associated with a sample of awards made in 1992. The 1992 sample replaced a 1988 sample, which was used for the 1993 report. This change had a significant effect on the projected level of average benefits as discussed earlier in section II.F2.

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

of average benefits to average PIAs for these types of benefits were based on projections of age distributions at initial entitlement.

#### 9. Benefit Payments

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

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

### 10. Administrative Expenses

The projection of administrative expenses through 2003 was based on assumed increases in average wages, increases in the CPI, and increases in the number of beneficiaries. For years after 2003, administrative expenses are assumed to increase because of increases in the number of beneficiaries and increases in the average wage which will more than offset assumed improvements in administrative productivity.

#### 11. Railroad Retirement Financial Interchange

Railroad workers are covered under a separate multi-tiered plan, the first tier being very similar to OASDI coverage. An annual financial interchange between the Railroad Retirement fund and the OASI and DI funds is made reflecting the difference between (1) the amount of OASDI benefits that would be paid to railroad workers and their families if railroad employment had been covered under the OASDI program and (2) the amount of OASDI payroll tax that would be

received from railroad workers if they were covered directly under the OASDI program.

The effect of the financial interchange with the Railroad Retirement program was evaluated on the basis of trends similar to those used in estimating the cost of OASDI benefits. The resulting effect was annual short-range costs of about \$3-5 billion and a long-range summarized cost of 0.04 percent of taxable payroll to the OASDI program.

#### 12. Benefits to Uninsured Persons

The law provides for special monthly cash payments to certain uninsured persons who attained age 72 before 1968 or who have 3 quarters of coverage for each year after 1966 and before the year of attainment of age 72. The number of such uninsured persons was projected based on an extrapolation of the historical survival rate of the members of that group. The benefit payable to these uninsured persons is a fixed amount which increases by the percentage benefit increase applicable to regular OASDI benefits. These payments are made from the OASI Trust Fund, which is then reimbursed from the general fund of the Treasury for the costs (including administrative expenses and interest) associated with providing payments to those persons with fewer than 3 quarters of coverage. The nonreimbursable payments are assumed to be insignificant after 2000. Neither the reimbursable payments nor the associated reimbursements are reflected in the cost rates or the income rates. These amounts are reflected, however, in tables which show trust fund operations.

### 13. Military-Service Transfers

As a result of the 1983 amendments, the OASI and DI Trust Funds received lump-sum payments, in May 1983, for the cost (including administrative expenses) of providing additional benefit payments resulting from noncontributory wage credits for military service performed prior to 1957. Adjustments to the payments were made in 1985 and 1990, and additional adjustments will be made in 1995 and every fifth year thereafter. The adjustments for 1995 were estimated based on the change in interest rates since the determination of the adjustments in 1990. No adjustments after 1995 would be due unless actual interest rates are different from those assumed, or changes

are made in the methods used to determine the military-service transfers.

#### 14. Income From Taxation of Benefits

Under present law, the OASI and DI Trust Funds are credited with the additional income taxes attributable to the taxation of the first 50 percent of OASDI benefit payments. (The remainder of the income taxes attributable to the taxation of up to 85 percent of OASDI benefit payments is credited to the HI Trust Fund.) For the short-range period, income to the trust funds from such taxation was estimated by applying the following two factors to total OASI and DI benefit payments: (1) the percentage of benefit payments (limited to 50 percent) that is taxable, and (2) the average tax rate applicable to those benefits. For the long-range period, income to the trust funds from such taxation was estimated by applying projected ratios of such income to total OASI and DI benefit payments. Because the income thresholds used for benefit taxation are, by law, constant in the future, their values in relation to future income and benefit levels will decline. Thus, ratios of income from taxation of benefits to the amount of benefits are projected to increase. These ratios were projected reflecting the results of a model developed by the Office of Tax Analysis, Department of the Treasury, relating OASDI benefit payments to total personal income for a sample of recent tax returns.

#### III. APPENDICES

### A. ACTUARIAL ESTIMATES FOR THE OASDI AND HI PROGRAMS, COMBINED

In this appendix, long-range actuarial estimates for the OASDI and Hospital Insurance (HI) programs are combined to facilitate analysis of the adequacy of the combined income and assets of the trust funds relative to their combined expenditures. Combining cost and income rates as percentages of taxable payroll requires a note of caution. The taxable payrolls for the HI program are larger than those estimated for the OASDI program because (1) a larger maximum taxable amount was established for the HI program in 1991, with the maximum being eliminated altogether for the HI program in 1994, (2) a larger proportion of Federal, State, and local government employees have their wages covered under the HI program, and (3) the earnings of railroad workers are included in the HI taxable payroll but not in the OASDI taxable payroll (railroad contributions for the equivalent of OASDI benefits are accounted for on a net interchange that occurs annually between the OASDI and Railroad Retirement programs). As a result, the HI taxable payroll is about 20 percent larger than the OASDI taxable payroll throughout the long-range period. Nonetheless, combined OASDI and HI rates shown in this appendix are computed by adding the separately derived rates for the programs. The resulting combined rates may be interpreted as those applicable to the taxable payroll in the amount of the OASDI payroll, with the separate HI rates being additionally applicable to the excess of the HI payroll over the OASDI payroll.

Long-range estimates are subject to much uncertainty and should not be considered precise forecasts. Instead they should be considered as indicative of the general trend and range of costs that could reasonably be expected to occur. The emphasis in this appendix on combined operations, while significant, should not obscure the analysis of the financial status of the individual trust funds, which are legally separate and cannot be commingled. In addition, the factors which determine the costs of the OASI, DI, and HI programs differ substantially.

As with the OASI and DI Trust Funds, income to the HI Trust Fund comes primarily from contributions paid by employees, employers, and self-employed persons. The combined OASDI and HI contribution

rate for employees and their employers is often referred to as the FICA tax, because it is authorized by the Federal Insurance Contributions Act. Contribution rates for the OASDI and HI programs are shown in table III.A1.

TABLE III.A1.—CONTRIBUTION RATES FOR THE OASDI AND HI PROGRAMS

	(In perc	ent]					
-	Employees	and emp	oloyers,	Self	Self employed		
Calendar years	OASDI	н	Com- bined	OASDI	н	Com- bined	
1966. 1967. 1968. 1969-70. 1971-72.	3.85 3.90 3.80 4.20 4.60	0.35 .50 .60 .60	4.20 4.40 4.40 4.80 5.20	5.80 5.90 5.80 6.30 6.90	0.35 .50 .60 .60	6.15 6.40 6.40 6.90 7.50	
1973	4.85 4.95 5.05 5.08 5.35	1.00 .90 1.00 1.05 1.30	5.85 5.85 6.05 6.13 6.65	7.00 7.00 7.10 7.05 8.00	1.00 .90 1.00 1.05 1.30	8.00 7.90 8.10 8.10 9.30	
1982-83 19841 19851 1986-871 1988-891 1990 and later.	5.40 5.70 5.70 5.70 6.06 6.20	1.30 1.30 1.35 1.45 1.45	6.70 7.00 7.05 7.15 7.51 7.65	8.05 11.40 11.40 11.40 12.12 12.40	1.30 2.60 2.70 2.90 2.90 2.90	9.35 14.00 14.10 14.30 15.02 15.30	

<sup>1</sup>See footnote 1 under table II.B1 in the section entitled "Description of the Trust Funds" for a description of tax credits allowed against the combined OASDI and HI taxes on net earnings from self-employment in 1984-89.

Table III.A2 shows estimated annual income rates and cost rates for the OASDI program, the HI program, and the combined OASDI and HI programs, based on the low cost, intermediate, and high cost sets of assumptions (alternatives I, II, and III) described earlier in this report. Income rates exclude interest earned on trust fund assets. Table III.A2 also shows the difference between income rates and cost rates, called balances. Estimates shown for the combined trust funds are theoretical because no authority currently exists for transferring assets from one trust fund to another.

Under all three sets of assumptions, combined OASDI and HI cost rates are projected to rise above current levels, with the sharpest increase occurring during the period 2010-2030. Under the high cost set of assumptions, alternative III, annual deficits are projected to occur within the next 3 years, and to continue for the remainder of the 75-year projection period. Cost rates are projected to rise to nearly three and one-half times their current level by the end of the projection period. Under the intermediate assumptions, alternative II,

## Appendices

annual deficits begin by the year 2000, with cost rates doubling by the end of the projection period. Under the low cost assumptions, alternative I, cost rates are projected to increase by about 25 percent, with annual deficits beginning by the year 2020.

TABLE III.A2.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES¹ FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1994-2070

As	а	percentage	of	taxable	payroll1]

		OASDI	(AS a perce	Jillago of	HI	oayron j	Combined		
Calendar year	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Intermediate: 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003	12.63 12.60 12.63 12.63 12.64 12.64 12.64 12.64 12.64	11.64 11.67 11.71 11.72 11.74 11.75 11.77 11.80 11.83 11.86	0.98 .93 .92 .92 .90 .88 .87 .84 .81	3.02 3.02 3.03 3.03 3.03 3.03 3.03 3.03	3.23 3.32 3.44 3.54 3.66 3.79 3.92 4.04 4.17 4.29	-0.21 30 41 51 63 76 89 -1.01 -1.14	15.65 15.63 15.66 15.66 15.66 15.67 15.67 15.67	14.87 15.00 15.15 15.25 15.40 15.54 15.68 15.85 16.00 16.15	0.78 .63 .51 .41 .26 .12 02 17 33 47
2005	12.67 12.75 12.86 13.05 13.13 13.17 13.20 13.23 13.26 13.30 13.32 13.34	11.89 12.27 13.42 14.96 16.36 17.22 17.52 17.42 17.42 17.44 18.07 18.48 18.77 19.00	.78 .48 56 -2.01 -3.31 -4.10 -4.35 -4.22 -4.41 -5.18 -5.45 -5.67	3.05 3.08 3.13 3.19 3.24 3.28 3.31 3.32 3.33 3.34 3.36 3.38 3.39 3.41	4.52 5.03 5.80 6.63 7.56 8.46 9.15 9.55 9.80 9.99 10.24 10.57 10.96 11.35	-1.48 -1.95 -2.67 -3.44 -4.32 -5.18 -5.84 -6.23 -6.65 -6.88 -7.19 -7.57 -7.94	15.72 15.84 15.84 16.14 16.29 16.41 16.51 16.53 16.57 16.63 16.68 16.71 16.74	16.41 17.30 19.22 21.59 23.92 25.69 26.67 26.97 27.22 27.63 28.31 29.05 29.73 30.35	69 -1.47 -3.23 -5.45 -7.63 -9.28 -10.19 -10.69 -11.69 -11.69 -12.37 -13.02 -13.61
Low Cost: 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003	12.62 12.58 12.62 12.62 12.62 12.62 12.62 12.62 12.62 12.62	11.50 11.34 11.18 11.02 10.88 10.75 10.64 10.54 10.47 10.40	1.13 1.24 1.44 1.60 1.74 1.87 1.98 2.07 2.15 2.21	3.02 3.02 3.02 3.02 3.02 3.02 3.02 3.02	3.20 3.23 3.28 3.32 3.37 3.44 3.50 3.56 3.61 3.66	17 21 26 30 36 42 48 54 59	15.65 15.60 15.64 15.64 15.64 15.64 15.64 15.64 15.64	14.69 14.57 14.46 14.34 14.25 14.18 14.13 14.10 14.08 14.06	.95 1.03 1.18 1.30 1.39 1.45 1.50 1.53 1.56 1.58
2005 2010 2015 2020 2025 2030 2035 2040 2045 2055 2060 2065	12.64 12.70 12.78 12.85 12.97 12.99 12.99 12.99 13.00 13.01 13.01	10.29 10.34 11.18 12.33 13.26 13.67 13.57 13.13 12.79 12.63 12.62 12.61 12.54	2.35 2.36 1.59 33 70 58 14 .20 .36 .38 .40 .47	3.03 3.06 3.09 3.14 3.20 3.22 3.22 3.22 3.23 3.23 3.24	3.74 3.84 4.08 4.27 4.46 4.69 4.86 4.97 5.18 5.30 5.48 5.68	71 78 99 -1.13 -1.29 -1.64 -1.75 -1.86 -1.96 -2.07 -2.24 -2.45 -2.65	15.67 15.75 15.87 15.99 16.10 16.17 16.21 16.21 16.21 16.23 16.24 16.25 16.25	14.02 14.18 15.26 16.59 17.72 18.36 18.10 17.87 17.81 17.92 18.09 18.22 18.38	1.64 1.57 .60 60 -1.62 -2.19 -2.22 -1.89 -1.66 -1.60 -1.70 -1.85 -1.97 -2.12

TABLE III.A2.—COMPARISON OF ESTIMATED INCOME RATES AND COST RATES¹
FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1994-2070 (Cont.)

[As a percentage of taxable payroll1]

-		OASDI			Н	-	C	Combine	<u> </u>
Calendar year	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
High Cost: 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002.	12.63 12.65 12.64 12.64 12.66 12.67 12.67 12.67 12.67 12.67	11.73 12.13 12.22 12.38 13.03 13.22 13.30 13.42 13.56 13.70	0.89 .52 .42 .27 37 56 63 75 89 -1.02	3.02 3.03 3.03 3.03 3.04 3.04 3.04 3.05 3.05	3.25 3.43 3.59 3.71 3.96 4.16 4.35 4.56 4.78 5.00	-0.22 40 56 68 92 -1.12 -1.31 -1.52 -1.73 -1.95	15.65 15.68 15.67 15.68 15.70 15.70 15.71 15.72 15.72	14.98 15.56 15.81 16.09 17.38 17.65 17.98 18.35 18.70	0.67 .12 14 42 -1.29 -1.67 -1.94 -2.26 -2.62 -2.97
2005 2010 2015 2020 2035 2035 2040 2045 2050 2055 2060 2065	12.72 12.82 12.93 13.05 13.18 13.28 13.37 13.42 13.54 13.62 13.70 13.77	13.77 14.15 15.34 17.20 19.09 20.59 22.20 22.95 23.98 25.30 26.61 27.72 28.72	-1.02 -1.05 -1.34 -2.41 -4.15 -5.91 -7.31 -8.23 -8.78 -9.48 -11.68 -12.91 -13.95 -14.89	3.07 3.17 3.23 3.30 3.40 3.44 3.47 3.50 3.55 3.69 3.66	5.45 6.59 8.30 10.42 12.91 15.40 17.34 18.50 19.02 19.41 19.86 20.52 21.29 22.04	-2.38 -3.48 -5.13 -7.18 -9.61 -12.04 -15.06 -15.56 -15.90 -16.31 -16.93 -17.66 -18.38	15.79 15.79 15.93 16.10 16.29 16.48 16.64 16.77 16.86 16.94 17.17 17.29 17.40 17.49	19.22 20.74 23.64 27.62 32.00 35.99 38.93 40.70 41.98 43.39 45.15 47.13 49.01 50.77	-3.43 -4.82 -7.54 -11.33 -15.52 -19.35 -22.16 -23.84 -25.04 -26.35 -27.99 -29.84 -31.61 -33.27

<sup>&</sup>lt;sup>1</sup>The taxable payroll for HI is significantly larger than the taxable payroll for OASDI because the HI taxable maximum amount was eliminated beginning 1994, and because HI covers all Federal civilian employees, including those hired before 1984, all State and local government employees hired after April 1, 1986, and railroad employees. Combined OASDI and HI rates as a percent of taxable payroll are computed as the sum of the rates for the separate programs.

#### Notes

Table III.A3 shows the estimates of summarized OASDI and HI income rates, cost rates and balances for various time periods, based on all three sets of assumptions. Values are summarized over the three 25-year subperiods (excluding the beginning fund balances and the cost of reaching and maintaining ending fund targets) as well as the 25-year, 50-year, and 75-year valuation periods (for which beginning fund balances are included in the summarized income rates, and the costs of reaching and maintaining an ending fund balance equal to 100 percent of annual expenditures by the end of the period are included in the summarized cost rates). Estimates shown for the combined trust funds are theoretical because no authority currently exists for transferring assets from one trust fund to another.

Under the high cost alternative III, the combined OASDI and HI system is projected to experience large deficits during the 25-year,

<sup>1.</sup> The income rate excludes interest income and certain transfers from the general fund of the Treasury.

<sup>2.</sup> Totals do not necessarily equal the sums of rounded components.

#### **Appendices**

50-year, and 75-year valuation periods (including beginning trust fund balances and the cost of ending fund targets). Deficits are projected to occur during each 25-year subperiod of the 75-year projection period (excluding beginning trust fund balances and the cost of ending fund targets). Under intermediate alternative II assumptions, deficits of smaller magnitude than those for the high cost alternative III are projected to occur for each of the three 25-year subperiods and for each of the three valuation periods. Under the low cost alternative I, the combined OASDI and HI system is projected to show positive balances for the first 25-year subperiod and the 25-year valuation period, and a small positive balance for the 50-year valuation period. Relatively small deficits are projected for the 75-year valuation period and for the second and third 25-year subperiods.

TABLE III.A3.—COMPARISON OF SUMMARIZED INCOME RATES AND COST RATES¹
FOR OASDI AND HI BY ALTERNATIVE, CALENDAR YEARS 1994-2068

[As a percentage of taxable payroll1]

		OASDI			н		Combined		
Calendar year period	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance	Income rate	Cost rate	Balance
Intermediate:									
25-year subperior	ds·2								
1994-2018	12.70	12.32	0.39	3.07	4.60	-1.53	15.77	16.91	-1.14
2019-2043	13.10	16.78	-3.69	3.27	8.32	-5.05	16.36	25.11	-8.74
2044-2068	13.26	18.14	-4.88	3.36	10.33	-6.97	16.62	28.47	-11.85
Valuation periods		10.14	4.00	0.00	10.00	0.57	10.02	20.77	11.00
25-vears:									
1994-2018	13.35	12.85	.50	3.25	4.83	-1.59	16.60	17.68	-1.09
50-vears:	13.33	12.00	.50	3.23	4.00	-1.55	10.00	17.00	-1.09
1994-2043	13.24	14.53	-1.29	3.26	6.38	-3.12	16.50	20.91	-4.41
75-vears:	13.24	14.55	-1.29	3.20	0.30	-3.12	10.50	20.91	-4.41
1994-2068	13.24	15.37	-2.13	3.28	7.33	-4.05	16.53	22.70	-6.17
1994-2000	13.24	15.57	-2.13	3.20	7.33	-4.05	10.55	22.70	-0.17
Low Cost:									
25-year subperior	ds:2								
1994-2018	12.66	10.80	1.86	3.05	3.70	66	15.71	14.51	1.20
2019-2043	12.94	13.24	29	3.19	4.67	-1.48	16.13	17.90	-1.77
2044-2068	13.00	12.66	.33	3.23	5.36	-2.13	16.22	18.02	-1.80
Valuation periods									
25-years:	•								
1994-2018	13.27	11.25	2.03	3.22	3.86	64	16.49	15.11	1.38
50-vears:	10.27		2.00	0.22	0.00	.0-	10.40		
1994-2043	13.13	12.08	1.05	3.21	4.21	-1.00	16.33	16.29	.05
75-vears:	10.10	12.00	1.00	0.2 ,	7.21	1.00	.0.00	10.20	.00
1994-2068	13.09	12.19	.90	3.21	4.50	-1.29	16.31	16.69	39
1334-2000	10.03	12.10	.50	0.21	4.00	1.20	10.01	10.00	.00
High Cost:									
25-year subperior	ds·2								
1994-2018	12.75	13.87	-1.13	3.09	5.77	-2.68	15.84	19.64	-3.81
2019-2043	13.26	20.29	-7.03	3.35	15.04	-11.69	16.61	35.33	-18.72
2044-2068	13.62	25.42	-11.80	3.55	20.05	-16.50	17.17	45.47	-28.30
Valuation periods		EJ.TE	-11.00	0.00	20.00	~10.50	17.17	70.77	20.00
25-years:	.•								
1994-2018	13.43	14.49	-1.06	3.27	6.13	-2.86	16.70	20.62	-3.93
	13.43	14.49	-1.00	3.21	0.13	-2.00	10.70	20.02	-3.93
50-years:	40.05	17.00	0.67	2.24	10.10	6.00	10.00	27.16	10.50
1994-2043	13.35	17.03	-3.67	3.31	10.13	-6.83	16.66	27.10	-10.50
75-years:	10.40	10.00	E 67	2 27	10.47	0.40	16 70	31.46	-14.68
1994-2068	13.42	18.99	5.57	3.37	12.47	-9.10	16.78	31.40	-14.08

<sup>1</sup>The taxable payroll for HI is significantly larger than the taxable payroll for OASDI because the HI taxable maximum amount was eliminated beginning 1994, and because HI covers all Federal civilian employees, including those hired before 1984, all State and local government employees hired after April 1, 1986, and railroad employees. Combined OASDI and HI rates are computed as the sum of the separately derived rates for each program.

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

<sup>&</sup>lt;sup>2</sup>For 25-year subperiods, income rates do not include beginning trust fund balances and cost rates do not include the cost of reaching ending fund targets.

<sup>&</sup>lt;sup>3</sup>For valuation periods, income rates include beginning trust fund balances and cost rates include an ending fund target equal to 100 percent of annual expenditures by the end of the period.