

APPENDIX A.—STATEMENT OF ASSUMPTIONS, METHODOLOGY, AND DETAILS OF LONG-RANGE COST ESTIMATES

The basic assumptions and methodology used in preparing the long-range cost estimates of the OASDI program are described in this appendix. The first section covers the assumptions and methodology underlying the cost estimates, as well as the results themselves. The second section deals with the sensitivity of the estimates to change in particular assumptions.

The cost estimates were prepared under three different sets of basic assumptions, designated as alternatives I, II, and III. The assumptions comprising each alternative have been summarized in an earlier section entitled "Economic and Demographic Factors and Assumptions." They will not be resummarized here but will be discussed within the context of methodology. Within that discussion all comments pertain to the cost estimates under each of the three alternatives unless specifically stated otherwise.

ASSUMPTIONS, METHODOLOGY, AND RESULTS

Population

Projections were made of the United States population (including persons overseas covered by the OASDI program) by age and sex for future years to 2055. The starting point was the population on July 1, 1977, as estimated by the Bureau of the Census from the 1970 census and from births, deaths, and migration during 1970-77. This population estimate (which included an adjustment for net census undercount) was augmented by the population in the geographical areas covered by the OASDI program but not included in the estimate of the Bureau of the Census. The starting population was then projected forward to reflect anticipated deaths, births, and net immigration.

In projecting the population, the general trend of improving mortality during 1950-75 was assumed to continue to 2050. As shown in appendix table A the projected mortality level in 2050 is 19.1 percent below the 1977 level, which was estimated from preliminary mortality data. This projected improvement in mortality ranges from a low of about 13 percent for men aged 20-64 to a high of about 38 percent for women under 20. Mortality was assumed to remain level after 2050.

Fertility rates in the United States have shown a much more erratic history than have mortality rates. The total fertility rate decreased from a post-World War I level of about 3.3 children per woman to a Great Depression level of about 2.1, only to rise again to about 3.7 in 1957, and then fall to an estimated level of 1.7 in 1976. A slight upturn to 1.8 in 1977 is indicated from preliminary data. The total fertility rate is the number of children a woman would have during her lifetime if age-by-age she experiences the birth rates observed in a given year.

APPENDIX TABLE A.—PROJECTED MORTALITY IMPROVEMENT FROM 1977 TO 2050

Sex and age	Age-adjusted death rate ¹		Mortality improvement (percent)
	1977	2050	
Men:			
Under 20.....	149.4	110.8	25.8
20 to 64.....	655.3	572.5	12.6
65 and over.....	6,366.0	5,419.2	14.9
Total.....	939.2	800.7	14.7
Women:			
Under 20.....	102.0	63.0	38.2
20 to 64.....	342.5	266.4	22.2
65 and over.....	4,312.2	3,249.7	24.6
Total.....	698.6	525.8	24.7
Total:²			
Under 20.....	126.1	87.3	30.8
20 to 64.....	493.9	414.5	16.1
65 and over.....	5,717.7	4,157.6	19.6
Total.....	815.7	659.6	19.1

¹ Deaths per 100,000 persons in the population.

² The rates for men and women combined are based on the sex distribution of the enumerated population of the United States as of Apr. 1, 1970.

The historical variations in fertility rates result from many changeable and unpredictable factors such as social attitudes and economic conditions. Because of these intangible factors, a range of fertility assumptions was deemed preferable to a single assumption. With due consideration given to recent social attitudes and developments, ultimate total fertility rates of 2.3, 2.1, and 1.7 children per woman were selected for use in alternatives I, II, and III respectively. In each alternative, the total fertility rate was projected from its current level to its ultimate level in the year 2005 by the cohort method, which projects the fertility rate separately for women born in a given year. By way of comparison with the 1.7 to 2.3 ultimate range used in this report, it may be noted that the Bureau of Census used ultimate total fertility rates ranging from 1.7 to 2.7 children per woman in their latest series of population projections.¹ Included in both ranges is the theoretical population replacement rate of 2.1 children per woman, that is, the total fertility rate which in the absence of migration would eventually result in just enough births in a year to compensate for the deaths in that year. This is the rate used in the intermediate set of assumptions in this report.

Net immigration was assumed to be 400,000 persons per year in all three alternative sets of assumptions.

Appendix table B presents the projected population by broad age groups under alternatives I, II, and III.

Employment

The total annual unemployment rate has averaged about 5.3 percent for the last 25 years and 5.7 percent for the last 10 years. Under alternatives I, II, and III, respectively, the total annual unemployment rate after 1984 was assumed to be 4.5 percent, 5.0 percent, and 5.5 percent, respectively, with varying rates in the earlier years. Unemployment rates by age and sex were projected on the basis of the historical trend of their relationships with the total unemployment rate existing since 1966.

¹ U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 704 "Projections of the Populations of the United States: 1977-2050," U.S. Government Printing Office, Washington, D.C., 1977.

APPENDIX TABLE B.—PROJECTIONS OF THE U.S. POPULATION BY BROAD AGE GROUPS

Year	Population (in thousands) as of July 1				Dependency ratio	
	Under 20	20-64	65 and over	Total	Aged ¹	Total ²
Alternative I—2.3 ultimate fertility:						
1977	76,024	126,037	24,105	226,166	0.191	0.794
1978	75,092	128,207	24,641	227,940	.192	.778
1979	74,287	130,351	25,160	229,798	.193	.763
1980	73,613	132,445	25,675	231,733	.194	.750
1985	72,108	142,061	28,145	242,314	.198	.706
1990	74,679	148,180	30,708	253,567	.207	.711
1995	78,788	153,171	32,392	264,351	.211	.726
2000	82,311	158,706	32,960	273,977	.208	.726
2005	83,781	165,750	33,633	283,163	.203	.708
2010	85,143	171,791	36,045	292,978	.210	.705
2015	87,564	175,080	40,739	303,383	.233	.733
2020	91,010	176,131	46,409	313,550	.263	.780
2025	94,340	176,109	52,430	322,878	.298	.833
2030	96,796	177,856	56,871	331,523	.320	.864
2035	98,935	183,049	58,048	340,031	.317	.858
2040	101,603	189,772	57,375	348,749	.302	.838
2045	104,909	196,309	56,483	357,702	.288	.822
2050	108,289	201,250	57,420	366,958	.285	.823
2055	111,276	205,921	59,454	376,651	.289	.829
Alternative II—2.1 ultimate fertility:						
1977	76,024	126,037	24,105	226,166	.191	.794
1978	75,092	128,207	24,641	227,940	.192	.778
1979	74,262	130,351	25,160	229,773	.193	.763
1980	73,538	132,445	25,675	231,659	.194	.749
1985	71,398	142,061	28,145	241,603	.198	.701
1990	72,753	148,180	30,708	251,641	.207	.698
1995	75,292	153,171	32,392	260,855	.211	.703
2000	77,168	158,632	32,960	268,760	.208	.694
2005	77,295	165,049	33,633	275,977	.204	.672
2010	77,384	169,893	36,045	283,321	.212	.668
2015	78,306	171,642	40,739	290,687	.237	.694
2020	79,986	171,011	46,409	297,406	.271	.739
2025	81,517	169,072	52,430	303,019	.310	.792
2030	82,334	168,420	56,871	307,625	.338	.827
2035	82,892	170,675	58,048	311,615	.340	.826
2040	83,813	174,096	57,375	315,284	.330	.811
2045	85,158	177,182	56,425	318,765	.318	.799
2050	86,512	178,854	56,880	322,246	.318	.802
2055	87,552	180,272	58,047	325,871	.322	.808
Alternative III—1.7 ultimate fertility:						
1977	76,024	126,037	24,105	226,166	.191	.794
1978	75,092	128,207	24,641	227,940	.192	.778
1979	74,213	130,351	25,160	229,724	.193	.762
1980	73,388	132,445	25,675	231,509	.194	.748
1985	69,975	142,061	28,145	240,181	.198	.691
1990	68,899	148,180	30,708	247,787	.207	.672
1995	68,298	153,171	32,392	253,861	.211	.657
2000	66,895	158,484	32,960	258,339	.208	.630
2005	64,455	163,645	33,633	261,733	.206	.599
2010	62,333	166,096	36,045	264,473	.217	.592
2015	60,862	164,765	40,739	266,365	.247	.617
2020	59,814	160,785	46,409	267,008	.289	.661
2025	58,637	155,124	52,430	266,191	.338	.716
2030	57,106	150,005	56,871	263,982	.379	.760
2035	55,560	146,980	58,048	260,588	.395	.773
2040	54,292	144,601	57,375	256,268	.397	.772
2045	53,262	141,765	56,308	251,335	.397	.773
2050	52,246	138,129	55,799	246,174	.404	.782
2055	51,120	134,651	55,231	241,003	.410	.790

¹ Population 65 and over as ratio to population 20-64.² Population 65 and over plus those under 20 as ratio to population 20-64.

Note: Alternatives I, II, and III are defined in the text of this report.

Labor force participation rates were projected on the basis of historical data since 1960. The assumed ultimate rates by age and sex are attained by 2010. The ultimate age-adjusted rates reflect a decrease of 1.3 percent for men and an increase of 19.2 percent for women, relative to the 1977 level. These assumptions result in ultimate labor force participation rates for women which average about 75 percent of those for men.

Projections of the percentage of the population in covered employment—that is, coverage rates—were made by age and sex on the basis of the projections of unemployment rates and labor force participation rates, and the relationships existing among those rates during 1970–75. For men the projected coverage rates increase slightly for those aged 16–39, and decrease slightly for those of other ages, reflecting the trend of increased value placed upon leisure time. For women the coverage rates are projected to increase for all ages, as women become more active in the labor force. Under alternative II, the ultimate age-adjusted coverage rates by sex, reflect increases of 0.8 percent for men and 18.3 percent for women, relative to the 1977 rates. Under alternatives I and III, the trends in projected coverage rates are similar to those under alternative II.

Coverage rates projected for persons at the older ages reflect a significant deceleration in the recent trend toward earlier retirement. Most of this deceleration was projected because of Public Law 95–256, which generally prohibits mandatory retirement before age 70. For the group aged 60 and over, ultimate coverage rates, on an age-adjusted basis, are only 4.4 percent lower for men and are 1.0 percent higher for women than the corresponding rates in 1977. This compares with a decrease in these rates from 1970 to 1977 of 16.5 percent for men and 9.5 percent for women.

Insured population

There are three types of insured status under the OASDI program: fully, currently, and disability insured. Fully insured status is required of an aged worker for his eligibility for a primary retirement benefit, and for his dependents' eligibility for secondary benefits. Fully insured status is also required of a deceased worker, for his survivors' eligibility for benefits (with the exception of child survivors and parents of eligible child survivors, who may be eligible if the deceased worker had currently insured status). Disability insured status, which is more restrictive than fully insured status, is required of a disabled worker for his eligibility for a primary benefit, and for his dependents' eligibility for secondary benefits.

Projections of the percentage of the population who are fully insured were made by age and sex based on recent experience and projected coverage rates. Under all three sets of assumptions, the ultimate levels are projected to be 95 percent for aged men and 85 percent for aged women. Currently insured status was disregarded in the cost projection because the number of cases in which eligibility for benefits is based on currently insured status is relatively small. Projections of the percentage of the population who are disability insured were developed from the percentages fully insured on the basis of projections of historical trends relating disability insured to fully insured.

Old-age and survivors insurance beneficiaries

Several types of benefits, at different benefit levels, are payable under the OASI program, so that the numbers of beneficiaries have been projected by type of benefit received.

Retired-worker beneficiaries were projected on the basis of the aged insured population (which was developed from the projections of the aged population and the percentages of the population who are fully

insured). The percentages, by age and sex, of the insured population who were receiving benefits at the beginning of 1978 were projected to increase gradually on the basis of past trends (after adjustment for change in the earnings test, in the retirement ages, and in the level of unemployment). The resulting proportions of beneficiaries to aged population yield gradual increases in the implicit retirement rates.

Wives aged 62 and over of male retired-worker beneficiaries were estimated by using insured population projections and census data on marital status. The potential wife beneficiaries, after the exclusion of those eligible for their own retired-worker benefits and those eligible for a government pension from earnings in noncovered employment, were assumed to claim benefits as soon as they became eligible, even if this occurred at ages 62-64, when they would have to take reduced benefits. The experience to date indicates that, in the vast majority of cases, such immediate claiming of wives benefits does occur. Benefits payable to husbands aged 62 and over were estimated in a similar manner.

Children of retired workers were projected by ratios to male retired-worker beneficiaries, as derived from recent actual data and projected according to the fertility assumptions.

Young wife beneficiaries were estimated by extrapolating the base year ratio of such beneficiaries to the estimated number of beneficiaries who are children of retired-worker beneficiaries. The extrapolation reflects projected fertility and female labor force participation.

Child-survivor beneficiaries were based on the number of orphans in the United States, which was projected by multiplying the projected child population by the age-specific probability of being an orphan. These probabilities were derived by using distributions of age of parent at birth of child and death rates consistent with the population projections. The number of orphans was then adjusted to include eligible disabled orphans aged 18 and over and to eliminate orphans of uninsured deceased parents. For nondisabled children aged 18-21 a further reduction was made to exclude those not attending school.

Mother beneficiaries were estimated by a method similar to the one used to estimate young wife beneficiaries, that is, extrapolating the present ratio of such beneficiaries to child-survivor beneficiaries (excluding those nondisabled children aged 18-21 who were attending school). Benefits payable to father beneficiaries were estimated in a similar manner.

To estimate widow beneficiaries the proportions of widows in the female aged population were projected according to mortality assumptions and adjusted for eligibility for their own retired-worker benefits, for eligibility for a government pension from earnings in noncovered employment, and for the insured status of their deceased husbands. For ages 50-59, the disabled widow beneficiaries were estimated from the eligible widows by using disability prevalence rates. Benefits payable to widower beneficiaries were estimated in a similar manner.

These projected wife, widow, husband, and widower beneficiaries consist only of uninsured persons. Actually, however, some insured persons also receive residual benefits consisting of the excess of the potential secondary benefits over their own retired-worker benefits. Estimates of such residual benefits were incorporated into the projections of the wives, widows, husbands, and widowers benefits.

The minor category of parent beneficiaries was projected on the basis of the past trend in numbers of such beneficiaries. Parents were projected by assuming a decrease from a level of 18,000 at the beginning of 1978 to an ultimate level of 7,000 in 1990 under the intermediate set of assumptions.

Appendix table C shows the estimated number of beneficiaries in the OASI program.

APPENDIX TABLE C.—OASI BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS UNDER ALTERNATIVES I, II, AND III

[In thousands]

Beneficiaries with monthly benefits in current-payment status as of June 30								
Calendar year	Retired workers and dependents			Survivors of deceased workers				Total
	Old age	Wives and husbands	Children	Mothers and fathers	Children	Widows and widowers	Parents	
Actual data:								
1970.....	13,066	2,651	535	514	2,673	3,151	29	22,619
1971.....	13,604	2,673	556	523	2,745	3,287	28	23,416
1972.....	14,181	2,706	578	536	2,847	3,433	27	24,308
1973.....	14,880	2,758	602	548	2,887	3,575	25	25,273
1974.....	15,589	2,806	619	565	2,908	3,706	24	26,217
1975.....	16,210	2,836	633	568	2,905	3,823	22	26,997
1976.....	16,789	2,857	674	576	2,876	3,938	21	27,741
1977.....	17,380	2,899	655	573	2,859	4,042	19	28,427
Alternative I:								
1980.....	19,293	3,054	708	595	2,791	4,440	15	30,896
1985.....	22,104	3,106	751	636	2,597	4,970	10	34,174
1990.....	25,008	3,170	505	527	2,439	4,203	7	35,859
1995.....	26,664	3,114	363	606	2,557	4,103	7	37,414
2000.....	27,549	3,040	379	662	2,749	4,043	7	38,429
2005.....	29,004	2,920	431	679	2,850	3,851	7	39,742
2010.....	32,109	2,975	521	676	2,875	3,800	7	42,963
2015.....	37,056	3,080	639	678	2,899	3,602	7	47,961
2020.....	43,088	3,203	760	687	2,986	3,417	7	54,148
2025.....	49,022	3,274	843	697	3,105	3,280	7	60,228
2030.....	52,828	3,154	844	707	3,200	3,200	7	63,940
2035.....	54,168	3,058	807	720	3,269	3,118	7	65,147
2040.....	53,717	2,854	768	744	3,326	2,971	7	64,387
2045.....	53,581	2,825	777	773	3,422	2,837	7	64,222
2050.....	54,808	2,972	829	795	3,535	2,676	7	65,622
2055.....	56,674	3,183	875	812	3,642	2,660	7	67,853
Alternative II:								
1980.....	19,296	3,054	708	595	2,791	4,440	15	30,899
1985.....	22,119	3,108	750	636	2,593	4,970	10	34,186
1990.....	25,024	3,172	506	525	2,414	4,203	7	35,851
1995.....	26,682	3,115	364	595	2,486	4,103	7	37,352
2000.....	27,569	3,043	380	640	2,613	4,043	7	38,295
2005.....	29,029	2,919	412	651	2,656	3,851	7	39,525
2010.....	32,139	2,976	459	645	2,641	3,799	7	42,706
2015.....	37,090	3,082	600	643	2,626	3,600	7	47,648
2020.....	43,127	3,207	700	642	2,660	3,411	7	53,754
2025.....	49,063	3,287	762	641	2,718	3,271	7	59,749
2030.....	52,867	3,190	762	646	2,755	3,189	7	63,412
2035.....	54,203	3,126	729	646	2,771	3,110	7	64,592
2040.....	53,750	2,940	693	656	2,776	2,955	7	63,777
2045.....	53,458	2,889	698	669	2,813	2,794	7	63,328
2050.....	54,155	2,964	730	677	2,860	2,585	7	63,978
2055.....	55,187	3,100	756	682	2,902	2,485	7	65,119
Alternative III:								
1980.....	19,344	3,062	710	595	2,790	4,440	15	30,956
1985.....	22,134	3,110	748	636	2,585	4,970	10	34,193
1990.....	25,041	3,172	507	517	2,358	4,203	7	35,805
1995.....	26,697	3,118	365	573	2,345	4,103	7	37,208
2000.....	27,587	3,045	371	595	2,342	4,043	7	37,990
2005.....	29,052	2,917	384	593	2,271	3,851	7	39,075
2010.....	32,168	2,975	443	582	2,180	3,797	7	42,152
2015.....	37,129	3,081	507	571	2,100	3,594	7	46,989
2020.....	43,172	3,219	579	557	2,055	3,400	7	52,989
2025.....	49,108	3,328	631	537	2,015	3,252	7	58,878
2030.....	52,907	3,275	631	519	1,963	3,166	7	62,468
2035.....	54,242	3,276	603	506	1,908	3,091	7	63,633
2040.....	53,786	3,124	574	496	1,852	2,985	7	62,824
2045.....	53,181	3,015	569	488	1,812	2,858	7	61,930
2050.....	52,809	2,962	573	478	1,778	2,690	7	61,297
2055.....	52,167	2,937	566	465	1,743	2,624	7	60,509

Note: Alternatives I, II, and III are defined in the text of this report.

Lump-sum death payments

The number of lump-sum death payments was projected by applying the death rates used in the population projections to the projected insured population.

Disability insurance beneficiaries

Disabled-worker beneficiaries were projected on the basis of the population exposed to disability, which was developed from the general population by applying the projected percentages of disability insured and then removing those persons already entitled to disabled-worker benefits. The number of newly entitled beneficiaries was developed from the exposed population by applying disability incidence rates. To obtain the number of currently entitled beneficiaries, termination rates were applied to the population consisting of the newly entitled beneficiaries and those already currently entitled.

The incidence rates were projected on the basis of age, sex, and year of exposure to disability. They were based on estimated average annual rates for the period 1972-75, smoothed to reflect the relative age-sex distributions during the 4-year period, and updated to reflect the disability benefit award experience through calendar year 1977. Although the disability award rate during 1977 remained level as compared with 1976, a generally upward trend in incidence rates, as experienced over the past decade, was assumed to continue. Age-sex specific incidence rates were assumed to increase over the period 1978-97 to a level about 25 percent higher than that estimated for 1977, and to remain at that level thereafter.

The termination rates were projected on the basis of age, sex, and duration of entitlement. They were based on mortality and recovery experience of disabled-worker beneficiaries during 1973-76, and were assumed to remain level in the future. All disability benefits were assumed to terminate at age 65, when retired-worker benefits would become payable.

The number of child beneficiaries entitled under the DI program was projected as a proportion of the number of male disabled-worker beneficiaries, based on recent experience and allowing for projected changes in fertility.

The number of young wife beneficiaries was projected as a proportion of the number of child beneficiaries, based on recent experience and allowing for projected changes in fertility and female labor force participation. The number of aged wife beneficiaries was projected as a proportion of the number of male disabled-worker beneficiaries.

The numbers of young husband and aged husband beneficiaries were projected as proportions of the number of female disabled-worker beneficiaries.

Appendix table D shows the projected number of beneficiaries in the DI program.

Annual increases in average wages in covered employment and in the Consumer Price Index

In previous years, the assumptions as to future increases in average wages and in the Consumer Price Index (CPI) have had considerable influence on the actuarial balance of the trust funds. As a result of the 1977 Social Security Amendments, however, that influence has been greatly reduced. This is mainly because of the new method of

APPENDIX TABLE D.—DISABILITY INSURANCE BENEFICIARIES WITH MONTHLY BENEFITS IN CURRENT-PAYMENT STATUS UNDER ALTERNATIVES I, II, AND III—CONTINUED

[In thousands]

Calendar year	Beneficiaries with monthly benefits in current-payment status as of June 30			
	Workers	Wives and husbands	Children	Total
Actual data:				
1970	1,436	271	861	2,568
1971	1,561	293	934	2,788
1972	1,737	327	1,028	3,092
1973	1,925	364	1,127	3,416
1974	2,098	391	1,203	3,692
1975	2,363	429	1,333	4,125
1976	2,602	468	1,462	4,532
1977	2,755	482	1,496	4,733
Alternative I:				
1980	3,248	535	1,641	5,424
1985	4,031	578	1,733	6,342
1990	4,696	732	1,863	7,291
1995	5,458	844	1,953	8,255
2000	6,413	965	2,109	9,487
2005	7,457	1,092	2,362	10,911
2010	8,310	1,192	2,661	12,163
2015	8,777	1,225	2,929	12,931
2020	8,860	1,234	3,132	13,226
2025	8,612	1,225	3,175	13,012
2030	8,341	1,207	3,093	12,641
2035	8,407	1,224	3,097	12,728
2040	8,782	1,263	3,214	13,259
2045	9,252	1,326	3,405	13,983
2050	9,541	1,368	3,529	14,438
2055	9,682	1,397	3,591	14,670
Alternative II:				
1980	3,249	535	1,641	5,425
1985	4,040	579	1,737	6,356
1990	4,709	734	1,868	7,311
1995	5,465	844	1,935	8,244
2000	6,415	966	2,058	9,439
2005	7,455	1,086	2,257	10,798
2010	8,299	1,175	2,492	11,966
2015	8,750	1,203	2,700	12,653
2020	8,811	1,203	2,829	12,843
2025	8,523	1,188	2,811	12,522
2030	8,190	1,158	2,692	12,040
2035	8,161	1,159	2,650	11,970
2040	8,390	1,178	2,708	12,276
2045	8,675	1,209	2,819	12,703
2050	8,792	1,227	2,873	12,892
2055	8,793	1,237	2,877	12,907
Alternative III:				
1980	3,273	535	1,653	5,461
1985	4,049	580	1,741	6,370
1990	4,725	735	1,869	7,329
1995	5,468	845	1,897	8,210
2000	6,415	965	1,946	9,326
2005	7,447	1,070	2,043	10,560
2010	8,278	1,142	2,154	11,574
2015	8,702	1,151	2,234	12,087
2020	8,712	1,140	2,248	12,100
2025	8,347	1,112	2,139	11,598
2030	7,895	1,065	1,966	10,926
2035	7,677	1,035	1,866	10,578
2040	7,625	1,009	1,835	10,469
2045	7,551	990	1,833	10,374
2050	7,350	966	1,801	10,117
2055	7,107	946	1,748	9,801

Note: Alternatives I, II, and III are defined in the text of this report.

benefit calculation which removes the double indexing of future benefits to both average wages and the CPI.

The assumed ultimate percentage increases in the average annual CPI under alternatives I, II, and III are 3 percent, 4 percent, and 5 percent, respectively. The corresponding real-wage differentials, are 2¼ percent, 1¾ percent, and 1¼ percent. The sums of these differen-

tials and the corresponding percentage increases in the average annual CPI yield the assumed ultimate percentage increases in average annual wages in covered employment, which are $5\frac{1}{4}$ percent, $5\frac{1}{4}$ percent, and $6\frac{1}{4}$ percent, for alternatives I, II, and III, respectively.

For alternative II, the CPI was assumed to increase ultimately at an annual rate of 4 percent, which is slightly higher than the 3.4 percent average over the last 30 years. This level was selected because the trend over the last 65 years indicates a tendency for the rate of increase in the CPI to increase slowly with time. The current outlook does not support a cessation or reversal of this tendency, although the recent high rates of increase in the CPI are not expected to continue over the long-range. The ultimate percentage increases in the average annual CPI of 3 percent under alternative I and 5 percent under alternative III were chosen to be 1 percentage point lower and higher, respectively, than the 4 percent used in alternative II.

The alternative II ultimate real-wage differential of $1\frac{1}{4}$ percent was based on projections of productivity and consideration of the factors linking productivity and the real-wage differential. Since 1951, average annual increases in productivity have averaged 2.7 percent, while the real-wage differential has averaged 1.7 percent. This difference of 1 percent results from such factors as changes in the average number of hours worked, the degree to which employees share in productivity gains, and the methods of employee compensation. The ultimate average annual increase in productivity is projected to be $2\frac{1}{2}$ percent, and the differential adjustment from the above mentioned factors is assumed to be $\frac{3}{4}$ percent, thereby yielding an ultimate real-wage differential of $1\frac{1}{4}$ percent. For alternatives I and III, the ultimate real-wage differentials of $2\frac{1}{4}$ percent and $1\frac{1}{4}$ percent were chosen to be $\frac{1}{2}$ percentage point higher and lower, respectively, than the $1\frac{1}{4}$ percent used in alternative II.

The ultimate real-wage differentials are not projected to be attained until the year 2000. During 1978–2000, the real-wage differentials are generally higher than the ultimate values, averaging 2.4 percent, 1.9 percent, and 1.4 percent for alternatives I, II, and III, respectively. The higher real-wage differentials thereafter projected for the next couple of decades reflect the transition to a different demographic structure which is expected to result in productivity growth before the turn of the century that is higher than the assumed ultimate growth.

More detail on the short-range wage and CPI assumptions for all three alternatives appears in the section of this report entitled "Economic and Demographic Factors and Assumptions".

Interest rate

Interest on the trust funds is assumed to accrue ultimately at 6.6 percent under alternative II. This rate was adopted to yield a real interest rate of 2.5 percent, based on the assumed ultimate 4 percent rate of increase in the CPI. In the short-range, interest rates somewhat higher than 6.6 percent were used. The assumed ultimate interest rates under alternatives I and III were chosen to yield real interest rates of 2.5 as under alternative II.

The assumed interest rates have no effect on the estimated expenditures as a percent of payroll or on the actuarial balance. They do, however, affect the projected trust fund ratios.

Average benefits

The amount of the average retired-worker benefit awarded was projected by simulating the automatic benefit adjustment provisions, and calculating future benefits for workers at various earnings levels. The average retired-worker benefit in current payment status was projected on the basis of the distribution of current beneficiaries by year of award, their average awarded benefits, and the increases in their benefits since the year of award. The average benefits for all other persons receiving monthly benefits from the OASI trust fund (except young survivors benefits and residual benefits paid to wives, widows, husbands, and widowers) were projected to increase at the same rate as the average retired-worker benefit. The average benefits for young survivors and the average residual benefits were projected to increase at rates that were slightly faster and slower, respectively, than the rate of increase in the average retired-worker benefit. The average benefits for all persons receiving monthly benefits from the DI trust fund were assumed to increase at the same rate as the average disabled-worker benefit, which was projected in a manner similar to that of the average retired-worker benefit.

Benefit payments

Total benefit payments were calculated as the product of the number of beneficiaries and their corresponding average benefits; these amounts were then adjusted to include retroactive payments to newly entitled beneficiaries, and residual payments to dually entitled beneficiaries.

Administrative expenses

The projection of administrative expenses through 1988 was based on increases in average wages, increases in the CPI, and increases in the number of beneficiaries. For the years after 1988, administrative expenses were assumed to increase at the combined rate of the estimated increases in the number of beneficiaries and in average wages.

Railroad retirement financial interchange

The effect of the financial interchange was evaluated on the basis of trends similar to those used for estimating the cost of the OASDI benefits. The resulting effect is a small long-range loss to the OASDI program.

Military service reimbursement

Although the effect of noncontributory credits for military service is implicit in the calculation of expenditures, the reimbursement from the general fund of the Treasury for such credits has not been reflected in the cost estimates. Under alternative II the reduction in cost resulting from such reimbursement is estimated to be about 0.05 percent of taxable payroll currently and to decrease as a percent of taxable payroll until about 2015, after which it is negligible.

Change in cost due to methodology changes

One of the reasons for the change in projected cost from the last estimates given to the Congress to the estimates in this report is that changes were made in the cost-estimation methodology. In other words, if all assumptions had remained the same from last year's report to this report, and actual experience in the intervening period exactly matched what had been projected, the projected cost would

nevertheless have changed due to a number of changes in the methods used to calculate the projections.

The major methodological change is in the updating of the procedure for relating assumed future wage and CPI increases to the resulting increases in future benefit levels. Under the decoupling provisions enacted in 1977, awarded benefits increase approximately, but not exactly, in proportion to wage increases. Because of the increasing computation period, which will continue to force the use of relatively lower earnings in the benefit calculations for approximately the next 15 years, the awarded benefits will increase in the future at a lower rate than wages. In the last estimates given to the Congress the magnitude of this effect was estimated by using a sample of workers with theoretical earnings histories to project future benefits. This year, in order to improve the usefulness of the procedure, the sample was expanded, the distribution of earnings was updated, the pattern of assumed age-specific wage increases was modified, and other minor changes were made as well. The net result was an increase in projected cost for OASI and a decrease in projected cost for DI.

As for other methodological changes, the procedure used to get from the age-specific fertility rates in the starting year to the ultimate rates was changed to smooth out the dip in fertility previously projected to occur in 1980. In addition, the assumed rates of increase of benefits in current payment status were updated to better reflect the effect of earnings after retirement under the new decoupled benefit structure, as well as the effect of the three percent delayed retirement credit enacted in 1977. There were also a number of other changes which had minor effect on the projected costs.

SENSITIVITY OF COST ESTIMATES TO CHANGES IN SELECTED ASSUMPTIONS

The estimates under alternatives I, II, and III illustrate the variation in the projected cost of the OASDI system resulting from different combinations of assumptions. However, because of the complex interactions among the various assumptions, these estimates cannot be used to discern how changes in a single assumption affect the cost projections. This section is devoted to an analysis of the sensitivity of the long-range cost estimates to changes in selected individual assumptions. In the following tables, only the assumption whose effect is being analyzed is varied from its counterpart in the intermediate set of assumptions.

Sensitivity to mortality improvement assumptions

Appendix table E shows the projected average expenditures (as a percent of taxable payroll) under alternative II in combination with three different assumptions as to ultimate future improvement in mortality. Those three assumptions are: no improvement in mortality rates from the level experienced in 1977, improvement of approximately 19 percent (as assumed for alternative II), and improvement of about 35 percent.

Over the medium-range period, the estimated average expenditures increases with increasing mortality improvement, from 10.51 percent (for no mortality improvement) to 10.77 percent (for 35 percent improvement). Over the long-range period, a similar but more pro-

APPENDIX TABLE E.—ESTIMATED AVERAGE EXPENDITURES OF OASDI SYSTEM UNDER ALTERNATIVE II WITH VARIOUS MORTALITY IMPROVEMENT ASSUMPTIONS

[In percent of taxable payroll]

Calendar years	Average expenditures based on ultimate mortality improvement of ¹ —		
	Zero percent	19 percent	35 percent
1978-2002.....	10.51	10.64	10.77
2003-27.....	12.85	13.51	14.19
2028-52.....	14.95	16.50	18.05
1978-2052.....	12.77	13.55	14.34

¹ The rate of mortality improvement refers to the ratio of the age-adjusted death rate in the year 2050 to that in 1977. The 19 percent improvement in mortality was used in alternatives I, II, and III.

Note: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

nounced trend exists. The estimated long-range average varies from 12.77 percent (for no mortality improvement) to 14.34 percent (for 35 percent improvement).

That the projected average medium-range and long-range costs increase with greater improvement in mortality is largely due to the relationship between age and mortality. For the population over age 65, where mortality rates are the highest, any mortality improvement means a relative extension to the length of time that retirement benefits are paid. Between ages 50 and 65, mortality improvements would result in relatively more tax contributions, but this gain in taxes would be more than offset by the resulting benefits payable to the additional new retirees at age 65. At the ages of 20 through 50, mortality rates are quite low so that even substantial improvement in the rates would not result in significant gains in the number of covered workers paying social security taxes. Mortality improvement at ages under 20 has relatively little effect, in the long run, on expenditures versus income. Consequently, the net effect of mortality improvement is to increase expenditures more than tax income, thereby resulting in higher costs as a percent of taxable payroll. Sensitivity to total fertility rate assumptions.

Appendix table F shows the projected average expenditures under alternative II and various ultimate total fertility rate assumptions. Those assumptions are: 1.7, 1.9, 2.1 (as in alternative II), 2.3, and 2.5 children per woman.

APPENDIX TABLE F.—ESTIMATED AVERAGE EXPENDITURES OF OASDI SYSTEM UNDER ALTERNATIVE II WITH VARIOUS FERTILITY ASSUMPTIONS

[In percent of taxable payroll]

Calendar years	Average expenditures based on ultimate total fertility rate of ¹ —				
	1.7	1.9	2.1	2.3	2.5
1978-2002.....	10.64	10.64	10.64	10.64	10.65
2003-27.....	14.25	13.87	13.51	13.18	12.87
2028-52.....	19.59	17.93	16.50	15.28	14.22
1978-2052.....	14.83	14.15	13.55	13.04	12.58

¹ The total fertility rate is expressed in terms of children per woman. See text for further details of fertility projection. All other assumptions are given by alternative II, which is defined in the text of this report.

Note: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

Over the medium-range period, the estimated average expenditures increases with increasing fertility—albeit very minutely—from 10.64 percent (for 1.7 children per woman) to 10.65 percent (for 2.5 children per woman). Over the long-range period, that trend is reversed. The long-range estimated average expenditures varies from 14.83 percent (for 1.7 children per woman) to 12.58 percent (for 2.5 children per woman).

The reversal of the effect of the fertility assumptions between the medium-range and long-range periods is due to the time lag between the effect of fertility increases on the beneficiary population and on the worker population. Under high fertility, for example, the relatively large number of children receiving benefits during the medium-range period is not offset to any appreciable extent by additional taxpayers. This results in an average medium-range cost that increases with increasing fertility. Later in the 75-year period, however, under higher fertility the labor force increases more than the beneficiary population, so that the average long-range expenditures when expressed as percent of taxable payroll decreases with increasing fertility.

SENSITIVITY TO CONSUMER PRICE INDEX ASSUMPTIONS

Appendix table G shows the projected average expenditures under alternative II with assumed ultimate annual CPI increases of 2 percent, 4 percent (as in alternative II), and 6 percent. In each case the ultimate real-wage differential is assumed to be 1¾ percent, yielding ultimate percentage increases in average annual wages of 3¾ percent, 5¾ percent, and 7¾ percent, respectively.

Over both the medium-range and long-range periods, the projected average expenditures decreases with increasing rates of increase in the CPI. The estimated average medium-range expenditures varies from 10.85 percent (assuming an ultimate rate of increase in the CPI of 2 percent) to 10.44 percent (assuming an ultimate rate of 6 percent). Over the long-range, the estimated average expenditures varies from 14.01 percent to 13.14 percent. The estimated average medium-range and long-range expenditures decrease by about .1 and .2 percentage points, respectively, for each 1 percent increase in the rate of increase in the CPI.

APPENDIX TABLE G.—ESTIMATED AVERAGE EXPENDITURES OF OASDI SYSTEM UNDER ALTERNATIVE II WITH VARIOUS CONSUMER PRICE INDEX ASSUMPTIONS

[In percent of taxable payroll]

Calendar years	Average expenditures based on ultimate wage-CPI increases of 1—		
	3¾—2	5¾—4	7¾—6
1978–2002.....	10.85	10.64	10.44
2003–2027.....	13.99	13.51	13.09
2028–2052.....	17.18	16.50	15.88
1978–2052.....	14.01	13.55	13.14

¹ The initial value in each pair refers to the assumed annual percentage increases in average wages after 1999. The 2d value refers to the assumed annual percentage increases in CPI after 1984. The wage-CPI assumptions used in the earlier years were designed so as to gradually reflect the difference in ultimate values. All other assumptions are given by alternative II, which is defined in the text of this report.

Note: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

The trend of decreasing cost with increasing rate of increase in the CPI, results from the time lag between the effect on the income to the system and the effect on benefit expenditures. When assuming a higher rate of increase in the CPI (in conjunction with a constant real-wage differential), the effect on income to the system of the corresponding higher rate of increase in wages is experienced immediately, while the effect on benefits of the higher rate of increase in the CPI is experienced with about a half-year lag. In addition, the effect on benefits of the higher rate of increase in wages is experienced with about a two-year lag.

SENSITIVITY TO AVERAGE REAL-WAGE ASSUMPTIONS

Appendix table H shows the estimated average expenditures under alternative II with assumed ultimate real-wage differentials of 1 percent, 1½ percent (as in alternative II), and 2½ percent. In each case the ultimate annual rate of increase in the CPI is assumed to be 4 percent, yielding ultimate annual increases in average wages of 5 percent, 5½ percent, and 6½ percent, respectively.

Over the medium-range period, the estimated average expenditures decreases from 11.13 percent (assuming a 1 percent real-wage differential) to 10.19 percent (assuming a 2½ percent differential). Over the long-range period, the average decreases from 14.47 percent to 12.72 percent. For each 1 percent increase in the assumed real-wage differential, the estimated average medium-range expenditures decreases by about 0.6 percentage points, and the estimated average long-range expenditures decreases by about 1.1 to 1.2 percentage points.

That the average medium-range and long-range expenditures decrease with increasing real-wage differentials results from the substantial lag between the time when a worker makes contributions based on the assumed higher earnings and the time when he draws benefits based on those higher earnings. In addition, the marginal increase to benefits is relatively small for high earners, resulting in a greater increase in income to the system than in benefits to those workers.

APPENDIX TABLE H.—ESTIMATED AVERAGE EXPENDITURES OF OASDI SYSTEM UNDER ALTERNATIVE II WITH VARIOUS REAL-WAGE ASSUMPTIONS

[In percent of taxable payroll]

Calendar years	Average expenditures based on ultimate wage-CPI increases of ¹		
	5—4	5½—4	6½—4
1978—2002.....	11.13	10.64	10.19
2003—27.....	14.51	13.51	12.62
2028—52.....	17.77	16.50	15.35
1978—2052.....	14.47	13.55	12.72

¹ The initial value in each pair refers to the assumed annual percentage increases in average wages after 1999. The 2d value refers to the assumed annual percentage increases in CPI after 1984. The difference between the 2 values is approximately the annual percentage increase in real wages. The wage assumptions used in the earlier years were designed so as to gradually reflect the difference in ultimate values. All other assumptions are given by alternative II, which is defined in the text of this report.

Note: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.

APPENDIX B.—DETERMINATION AND ANNOUNCEMENT OF SOCIAL SECURITY BENEFIT INCREASES ¹

I hereby determine and announce a cost-of-living increase of 5.9 percent in benefits under the Social Security Act, (the Act) under title II effective with the month of June 1977 and under title XVI effective with the month of July 1977. This is pursuant to authority contained in section 215(i) of the Social Security Act (42 U.S.C. 415(i)), as amended by section 3 of Pub. Law. 93-233, enacted December 31, 1973, and in section 1617 of the Social Security Act (42 U.S.C. 1382f).

The revised table of benefits following this notice is deemed to appear in section 215(a) of the Act. With respect to benefits for transitional insured persons aged 72 and over entitled under section 227 of the Act (42 U.S.C. 427) and for uninsured persons aged 72 and over entitled under section 228 of the Act (42 U.S.C. 428), the amounts \$78.50 and \$39.30 for a month are established and deemed to appear in sections 227 and 228, in lieu of the respective amounts of \$74.10 and \$37.10 that were established by the last cost-of-living increase. The additional amount of the supplemental security income benefit with respect to essential persons payable under section 211 of Public Law 93-66 is established in the amount of \$1,068.00 for a year in lieu of the amount of \$1,008.00 that was in effect under section 211(a)(1)(A) of the law as a result of the last cost-of-living increase.

Annual income limitations under the Supplemental Security Income Program for the aged, blind, and disabled, are established in the amounts of \$2,133.60 and \$3,200.40 in lieu of the respective amounts of \$2,013.60 and \$3,021.60 that were in effect under sections 1611(a)(1)(A), 1611(a)(2)(A), 1611(b)(1), and 1611(b)(2) of the Act, as a result of the last cost-of-living increase. (The last cost-of-living increase in benefits under titles II and XVI of the Social Security Act and in income limitations for beneficiaries under the Supplemental Security Income Program herein referred to was published on May 14, 1976, at 41 FR 19999.)

AUTOMATIC BENEFIT INCREASE DETERMINATION

Section 215(i) of the Social Security 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 and income limitations is due. That section further specifies a formula which automatically determines the amount of any cost-of-living increase in benefits and income limitations, based on the Consumer Price Index reported by the Department of Labor.

¹ This statement was published in the Federal Register for May 12, 1977 (Vol. 42, No. 92, pp. 24209-14).

Section 215(i)(2)(A) of the Act provides that the Secretary shall determine each year, beginning with 1975, whether there is a cost-of-living computation quarter in such year. If he so determines, he 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 to benefits under title II of the Act (excluding primary insurance amounts determined under section 215(a)(3)). The percentage of increase in benefits shall be equal to the percentage of increase by which the Consumer Price Index for the cost-of-living computation quarter exceeds the Index for the most recent prior base quarter or 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. This subsection of the Act 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 such 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; with the exception that there shall be no cost-of-living computation quarter in any calendar year if, in the year prior to such year, a law has been enacted providing a general benefit increase or if, in such prior year, such a general benefit increase becomes effective. Section 215(i)(1) of the Act further provides that the Consumer Price Index for a base quarter or a cost-of-living computation quarter shall be the arithmetical mean of such Index for the 3 months in such quarter.

The Consumer Price Index prepared by the Department of Labor for each month in the quarter ending March 31, 1977, was: for January 1977, 175.3; for February 1977, 177.1, for March 1977, 178.2. The arithmetical mean for this calendar quarter is 176.9. This result is compared to the last prior cost-of-living computation quarter, which was the quarter ending March 31, 1976. The Consumer Price Index prepared by the Department of Labor for each month in that quarter was: for January 1976, 166.7; for February 1976, 167.1, for March 1976, 167.5. The arithmetical mean for that calendar quarter was 167.1. The increase for the calendar quarter ending March 31, 1977, is 5.9 percent. Thus, since the percentage of increase in the Consumer Price Index from the calendar quarter ending March 31, 1976, to the calendar quarter ending March 31, 1977, is not less than 3 percent, the quarter ending March 31, 1977, is a cost-of-living computation quarter. Consequently, a cost-of-living benefit increase of 5.9 percent is effective for benefits under title II of the Act beginning June 1977.

TITLE II BENEFITS

Title II benefits are payable under the Federal old-age, survivors, and disability insurance program. Individuals entitled under such programs include insured workers, wives, husbands, children, widows, widowers, mothers, and parents.

In accordance with section 215(1)(2)(D)(iv) of the Act, the primary insurance amounts and the maximum family benefits shown in

columns IV and V, respectively, of the revised benefit table set forth in this announcement were obtained by increasing by 5.9 percent the corresponding amounts shown in the benefit table heretofore established by the last cost-of-living increase and further extended, by the operation of section 215(i)(2)(D)(v), as a result of the increase in the contribution and benefit base determined in 1976 under section 230 of the Act and published on October 13, 1976, at 41 FR 44878. Section 227 of the Act provides limited benefits to a worker, who became age 72 before 1969 and was not insured under the usual requirements, and to his wife or widow. Such an individual has a transitional insured status. Section 228 of the Act provides similar benefits at age 72 for certain uninsured persons. The monthly benefit amounts of \$74.10 and \$37.10 heretofore established, for persons entitled under sections 227 and 228 of the Act, were increased by 5.9 percent to obtain the new amounts of \$78.50 and \$39.30, respectively.

TITLE XVI BENEFITS

Section 1617 of the Social Security Act provides that, whenever the benefits under title II are increased as a result of a determination made 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 Social Security Act and in section 211(a)(1)(A) of Pub. L. 93-66 shall be increased, effective with months after the month in which the title II increase is effective, and that the percentage of such increase shall be the same as the percentage of increase by which the title II benefits are increased (and rounded, when not a multiple of \$1.20, to the next higher multiple of \$1.20).

In accordance with section 1617, monthly Federal Supplemental Security Income (SSI) guarantees under the SSI program for the aged, blind, and disabled are increased effective with July 1977, by 5.9 percent. The benefits, under that program, other than income excluded under section 1612(b), of \$2,013.60 and \$3,021.60 heretofore established are increased by 5.9 percent to \$2,133.60 and \$3,200.40, respectively. The amount of \$1,008.00 previously established as the amount of the additional supplemental security income benefit with respect to essential persons payable under section 211(a)(1)(A) of Public Law 93-66, is increased by 5.9 percent to obtain a new amount of \$1,068.00.

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

Dated: May 5, 1977.

JOSEPH A. CALIFANO, Jr.,
Secretary.

[The revised table of benefits that followed the above announcement in the Federal Register is not reproduced here because of its length.]

APPENDIX C.—DETERMINATION AND ANNOUNCEMENT
OF SOCIAL SECURITY CONTRIBUTION AND BENEFIT
BASE AND RETIREMENT TEST EXEMPT AMOUNT FOR
1978¹

Summary

The Secretary has determined and announces the social security contribution and benefit base to be \$17,700 with respect to remuneration paid in, and taxable years beginning in, 1978. He has also determined and announces the monthly exempt amount under the social security retirement test to be \$270 for taxable years ending in calendar year 1978. Also authorized and published is a table reflecting the new higher average monthly wage and related benefit amounts made possible by the higher contribution and benefit base.

Supplementary information

Sections 203(f)(8) and 230 of the Social Security Act (42 U.S.C. 403(f)(8) and 430), as amended by section 8(h) and (i) of Public Law 94-202, require the Secretary of Health, Education, and Welfare to publish in the Federal Register on or before November 1, 1977, the contribution and benefit base and the retirement test exempt amount for calendar year 1978.

ACTUARIAL COMPUTATIONS

Each of the 1978 amounts of \$270 and \$17,700 for the retirement test monthly exempt amount and the contribution and benefit base, respectively, 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 1978 shall be equal to the 1977 amount of \$250 multiplied by the ratio of (1) the average amount, per employee, of the taxable wages of all employees reported under the program for the first calendar quarter of 1976 to (2) the average amount of such wages reported for the first calendar quarter of 1975. 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.

Similarly, section 230 of the Social Security Act provides that the contribution and benefit base for 1978 shall be equal to the 1977 amount of \$16,500 multiplied by the ratio of (1) the average amount, per employee, of the taxable wages of all employees reported under the program for the first calendar quarter of 1976 to (2) the average amount of such wages reported for the first calendar quarter of 1975.

¹ This statement, edited for presentation here, was published in the Federal Register for November 4, 1977 (Vol. 42, No. 213, pp. 57754-5).

The section further provides that if the amount so determined is not a multiple of \$300, it shall be rounded to the nearest multiple of \$300.

The data used to make the necessary computations of such average taxable wages were derived from reports submitted to the Social Security Administration of taxable wages paid to employees by their employers. Each quarter, taxable wages are posted to the record of earnings of each individual employee for whom wages were reported. These records are referred to hereinafter as Summary Earnings Records. As the wages were posted to the Summary Earnings Records, the data were tabulated on a 100-percent basis to obtain the total amount of reported taxable wages and the total number of employees for whom such wages were reported. The tabulated data on taxable wages reported for the first calendar quarter of each year 1975 and 1976 were limited to those wages that were reported and posted to the Summary Earnings Records by the end of the quarterly updating operations completed in September of the same year.

About 70.6 million employees had taxable wages reported for the first calendar quarter of 1975 that were posted to the Summary Earnings Records by the end of September 1975, and the average amount of their taxable wages was \$2,157.73 per employee. The corresponding number of employees and average amount of taxable wages for the first calendar quarter of 1976 were 72.8 million and \$2,306.62, respectively. The ratio of average taxable wages reported for the first quarter of 1976 to average taxable wages reported for the first quarter of 1975 is therefore 1.069003.

RETIREMENT TEST EXEMPT AMOUNT

Multiplying the 1977 retirement test monthly exempt amount of \$250 by the ratio of 1.069003 produces the amount of \$267.25, which must then be rounded to \$270. Accordingly, the retirement test exempt amount for taxable years ending in calendar year 1978 is \$270 on a monthly basis, or \$3,240 on an annual basis.

CONTRIBUTION AND BENEFIT BASE

Multiplying the 1977 contribution and benefit base of \$16,500 by the ratio of 1.069003 produces the amount of \$17,638.55, which must then be rounded to \$17,700. Accordingly, the contribution and benefit base for remuneration paid in, and taxable years beginning in, calendar year 1978 is \$17,700.

EXTENSION TABLE EFFECTIVE JANUARY 1978

The following is an extension of the Table for Determining Primary Insurance Amount and Maximum Family Benefits provided in section 215(a) of the Social Security Act. This extension reflects the new higher average monthly wage and related benefit amounts now possible under the increased contribution and benefit base promulgated herein effective January 1978 in accordance with section 215(i) of the Social Security Act.

TABLE FOR DETERMINING PRIMARY INSURANCE AMOUNT AND MAXIMUM FAMILY BENEFITS BEGINNING JANUARY 1978

I (Primary insurance benefits under 1939 Act, as modified)		II (Primary insurance amount effective for June 1976)		III (Average monthly wage)		IV (Primary insurance amount)	V (Maximum family benefits)
If an individual's primary insurance benefit (as determined under subsec. (d)) is—		Or his primary insurance amount (as determined under subsec. (c)) is—		Or his average monthly wage (as determined under subsec. (b)) is—		The amount referred to in the preceding paragraphs of this subsection shall be—	And the maximum amount of benefits payable (as provided in sec. 203(a)) on the basis of his wages and self-employment income shall be—
At least—	But not more than—	At least—	But not more than—	At least—	But not more than—		
				\$1, 376	\$1, 380	\$633. 90	\$1, 109. 40
				1, 381	1, 385	634. 90	1, 111. 10
				1, 386	1, 390	635. 90	1, 112. 90
				1, 391	1, 395	636. 90	1, 114. 60
				1, 396	1, 400	637. 90	1, 116. 40
				1, 401	1, 405	638. 90	1, 118. 10
				1, 406	1, 410	639. 90	1, 119. 90
				1, 411	1, 415	640. 90	1, 121. 60
				1, 416	1, 420	641. 90	1, 123. 40
				1, 421	1, 425	642. 90	1, 125. 10
				1, 426	1, 430	643. 90	1, 126. 90
				1, 431	1, 435	644. 90	1, 128. 60
				1, 436	1, 440	645. 90	1, 130. 40
				1, 441	1, 445	646. 90	1, 132. 10
				1, 446	1, 450	647. 90	1, 133. 90
				1, 451	1, 455	648. 90	1, 135. 60
				1, 456	1, 460	649. 90	1, 137. 40
				1, 461	1, 465	650. 90	1, 139. 10
				1, 466	1, 470	651. 90	1, 140. 90
				1, 471	1, 475	652. 90	1, 142. 60

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

Dated: October 31, 1977.

JOSEPH A. CALIFANO, Jr.,
Secretary.

[After the above determination was announced, the 1978 retirement test exempt amount for beneficiaries aged 65 and over was increased to \$4,000 under the Social Security Amendments of 1977. The exempt amount for beneficiaries under age 65 remains at \$3,240 for 1978.]

