This analysis includes the benefits and contributions in respect to all persons anticipated to be covered in the future under present statutory provisions and not merely (*a*) the benefits to be paid to workers who have been covered by the system in the past and to their dependents and survivors, (*b*) the future taxes to be paid by, and with respect to, such workers, and (*c*) the existing trust funds. An insurance company must set up reserves equal to all currently accrued liabilities, since it cannot compel individuals to become new policyholders and must be in a position at any time so that in the future it can pay all benefits that will become due with respect to its present and past policyholders, using only its present assets and the future premiums to be paid by present policyholders. In analyzing the actuarial condition of a compulsory social insurance system that will continue indefinitely, the income and outgo with respect to new entrants should properly be included, thus obviating the need to set up reserves for all currently accrued liabilities.

A discussion of the assumptions under which these estimates have been made is presented in appendix I.

Medium-Range Cost Estimates

The preceding sections have presented both short-range cost estimates (for the next 5 years) and long-range cost estimates (for many decades into the future) for the old-age, survivors, and disability insurance system. This section presents medium-range cost estimates covering a period of 15 to 20 years that take into account possible variations in economic factors, such as level of earnings and level of employment, as well as variations in demographic factors.

Tables 23 and 24 present two medium-range projections based on different assumptions. For both projections, it is assumed that economic activity will have normal expansion throughout the period, with employment increasing steadily at an average annual rate of 1¾ percent and with the average total earnings of covered workers increasing at an annual rate of 3 percent (somewhat higher increases are assumed in the first few years).

In the first projection (table 23), the maximum taxable earnings base is assumed to remain at $7,800 per year, while for the second one (table 24), the base is assumed to be kept up to date—i.e., changed periodically so as to cover about the same proportion of total earnings that was covered in 1968 by the $7,800 base. These assumptions imply that, for the first projection, only about three-sevenths of the 73-percent increase in average earnings that is estimated to occur in 1968–85 will be taxable under the program, due to the dampening effect of the fixed maximum taxable earnings base. For the second projection, the entire 73-percent increase will be taxable because of the assumed constant updating of the taxable earnings base.

TABLE 23.—ESTIMATED PROGRESS OF TRUST FUNDS, INCREASING EARNINGS ASSUMPTION, FIXED EARNINGS BASE, AND EQUIVALENT 3.75 PERCENT INTEREST RATE BASIS [1]

[In millions]

Calendar year	Contributions [2]	Benefit payments [3]	Administrative expenses	Financial interchange [4]	Interest on fund	Fund at end of year
	Old-age and survivors insurance trust fund					
1975	$43,760	$29,733	$596	$455	$3,142	$96,236
1980	50,559	34,584	688	285	6,575	192,815
1985	56,709	39,917	773	155	11,004	316,355
	Disability insurance trust fund					
1975	$4,604	$3,345	$168	$17	$381	$11,361
1980	5,327	3,839	183	−3	694	20,228
1985	5,977	4,191	196	−13	1,126	32,369

[1] On the same basis as used to develop the trust funds for the long-range intermediate-cost estimates in tables 21 and 22.

[2] Includes reimbursement for additional cost of noncontributory credits for military service and for old-age and survivors trust fund includes reimbursement from the General Treasury for the cost of special benefits to certain persons aged 72 and over.

[3] For the old-age and survivors insurance trust fund, includes the special payments to certain persons aged 72 and over that are reimbursable from the General Treasury. Includes payments for vocational rehabilitation services.

[4] A positive figure indicates payment from the trust funds to the railroad retirement account; a negative figure indicates the reverse.

TABLE 24.—ESTIMATED PROGRESS OF TRUST FUNDS, INCREASING EARNINGS AND BENEFITS ASSUMPTIONS, VARIABLE EARNINGS BASE, AND EQUIVALENT 3.75 PERCENT INTEREST RATE BASIS [1]

[In millions]

Calendar year	Contributions [2]	Benefit payments [3]	Administrative expenses	Financial interchange [4]	Interest on fund	Fund at yearend
	Old-age and survivors insurance trust fund					
1975	$48,415	$37,347	$705	$543	$2,675	$82,486
1980	60,909	49,834	898	436	5,146	152,176
1985	75,137	65,735	1,125	337	7,930	229,945
	Disability insurance trust fund					
1975	$5,135	$4,325	$205	−$12	$319	$9,559
1980	6,447	5,675	241	−22	498	15,698
1985	7,927	7,119	282	−30	705	20,484

[1] On the same basis as used to develop the trust funds for the long-range intermediate-cost estimates in tables 21 and 22.

[2] Includes reimbursement for additional cost of noncontributory credits for military service and for old-age and survivors trust fund includes reimbursements from the General Treasury for the cost of special benefits to certain persons aged 72 and over.

[3] For the old-age and survivors insurance trust fund, includes the special payments to certain persons aged 72 and over that are reimbursable from the General Treasury. Includes payments for vocational rehabilitation services.

[4] A positive figure indicates payment from the trust funds to the railroad retirement account; a negative figure indicates the reverse.

It is assumed for the first projection that all provisions of the law would remain as they were after the 1967 amendments. This projection is based on dynamic earnings-level assumptions and static benefit-provision assumptions. However, over the 18-year period covered by the estimates, changes will undoubtedly be made. The purpose of this estimate is to indicate the size of the financial commitments of present law, even though it is recognized that the law itself will undoubtedly be changed during the period. The extent and timing of these changes are, of course, unpredictable.

It is assumed for the second projection that the maximum taxable earnings base and the benefit provisions of the law are amended periodically so that the relationships among total earnings, taxable earnings, and benefit expenditures during each of the years 1968–85 are the same as those shown in the long-range intermediate-cost estimates prepared on level-earnings assumptions. The cost estimate shown in table 24 is, therefore, very similar to the long-range cost estimate if costs are considered in terms of percentages of taxable payroll, but it has the advantage of presenting dollar figures of a more realistic magnitude. This projection, accordingly, is based on dynamic earnings-level assumptions, combined with an assumption that the law is frequently amended to keep the system fully up-to-date.

As shown in tables 23 and 24, according to the medium-range estimates, the old-age and survivors insurance trust fund grows steadily through the 18-year period—reaching about $193 billion in 1980 in the first projection and about $152 billion in the second one. For 1985, the corresponding figures for the balance in the trust fund are $316 billion and $230 billion, respectively. In 1985, estimated contribution income exceeds benefit outgo by about 42 percent under the assumptions of dynamic earnings-level conditions and static benefit provisions, both by only 14 percent under the "double dynamic" assumptions basis.

The disability insurance trust fund, according to the first projection, increases rapidly—reaching about $20 billion in 1980 and about $32 billion in 1985. According to the second projection, with the "double dynamic" assumptions, the fund increases less rapidly reaching $16 billion in 1980 and $20 billion in 1985.

Actuarial Analysis of Benefit Disbursements From the Federal Old-Age and Survivors Insurance Trust Fund With Respect to Disabled Beneficiaries

Monthly benefits are payable from the old-age and survivors insurance trust fund to disabled adult children aged 18 and over—sons and daughters of retired and deceased workers—with respect to disabilities that have continued since childhood. These benefits first became payable for January 1957. As a result of the 1967 amendments, reduced monthly benefits are payable from this trust fund, effective February 1968, to disabled widows and widowers beginning at age 50.

On December 31, 1967, about 243,000 persons were receiving monthly benefits from the old-age and survivors insurance trust fund with respect to the disability of children aged 18 and over. This total represents the sum of 218,000 disabled children and 25,000 mothers. These mothers—wives under age 65 of retired-worker beneficiaries and widows of deceased insured workers—met all other qualifying requirements and were receiving benefits solely because they had at least one disabled-child beneficiary in their care. Benefits paid from this trust fund to this class of beneficiaries totaled $163 million in calendar year 1967, or 0.051 percent of taxable earnings for that year. Similar figures are presented in table 25 to show the past experience in each of the calendar years 1957–67.

Table 25 also shows the expected future experience in calendar years 1968–72. The estimates take into account the initiation, in 1968, of benefit payments to disabled widows and widowers. Total benefit payments from the old-age and survivors insurance trust fund with respect to disabled beneficiaries will increase from $251 million, or 0.070 percent of taxable payroll, in calendar year 1968, to $349 million, or 0.082 percent, in 1972.

TABLE 25.—BENEFITS PAYABLE FROM THE OLD-AGE AND SURVIVORS INSURANCE TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES, CALENDAR YEARS 1957-72

[Numbers in thousands; dollar amounts in millions]

Calendar year	Disabled beneficiaries, end of year			Amount of benefit payments [2]			Benefit payments [2] as a percentage of taxable earnings [3]		
	Total	Children [1]	Widows and widowers	Total	Children [1]	Widows and widowers	Total	Children [1]	Widows and widowers
Past experience:									
1957	34	34		$7	$7		0.004	0.004	
1958	59	59		23	23		.013	.013	
1959	94	94		41	41		.021	.021	
1960	117	117		59	59		.030	.030	
1961	138	138		74	74		.036	.036	
1962	163	163		89	89		.042	.042	
1963	183	183		101	101		.046	.046	
1964	200	200		113	113		.050	.050	
1965	214	214		134	134		.055	.055	
1966	228	228		147	147		.049	.049	
1967	243	243		163	163		.051	.051	
Estimated future experience:									
1968	334	274	60	251	201	$50	.070	.056	0.014
1969	361	290	71	286	223	63	.076	.059	.017
1970	380	305	75	308	240	68	.079	.061	.017
1971	398	320	78	328	257	71	.080	.063	.017
1972	417	335	82	349	275	74	.082	.065	.017

[1] Reflects effect of including a relatively small number (about 25,000 at the end of 1967) of mothers—wives under age 65 of retired-worker beneficiaries and widows of deceased insured workers—who met all other qualifying requirements and were receiving benefits solely because they had at least 1 disabled-child beneficiary in their care.

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

[3] Percentage takes into account (1) lower contribution rate payable by the self-employed compared with combined employer-employee rate, (2) employee contributions subject to refund, and (3) for 1966 and later, that only the employee tax is payable on tips taxable as wages.

In calendar year 1967, benefit payments (including expenditures for vocational rehabilitation services) with respect to disabled persons from the old-age and survivors insurance trust fund and from the disability insurance trust fund (including payments from the latter fund to all dependents of disabled-worker beneficiaries) totaled $2,113 million, of which $163 million, or 7.7 percent, represented payments from the old-age and survivors insurance trust fund. Similar figures for all of the calendar years 1957–72 are presented in table 26.

TABLE 26.—BENEFIT PAYMENTS UNDER THE OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM WITH RESPECT TO DISABLED BENEFICIARIES, BY TRUST FUND, CALENDAR YEARS 1957–72

[In millions]

Calendar year	Total [1]	Benefit payments [1] from—		
		Disability insurance trust fund [2]	Old-age and survivors insurance trust fund	
			Amount [3]	As a percentage of total benefit payments with respect to disabled beneficiaries
Past experience:				
1957	$64	$57	$7	11.1
1958	272	249	23	8.5
1959	498	457	41	8.2
1960	627	568	59	9.4
1961	961	887	74	7.7
1962	1,194	1,105	89	7.4
1963	1,311	1,210	101	7.7
1964	1,422	1,309	113	8.0
1965	1,707	1,573	134	7.9
1966	1,932	1,784	147	7.6
1967	2,113	1,950	163	7.7
Estimated future experience:				
1968	2,641	2,390	251	9.5
1969	2,893	2,607	286	9.9
1970	3,048	2,740	308	10.1
1971	3,195	2,867	328	10.3
1972	3,335	2,986	349	10.5

[1] Beginning in 1966, includes payments for vocational rehabilitation services.
[2] Benefit payments to disabled workers and their dependents.
[3] Benefit payments to disabled children aged 18 and over, to certain mothers (see footnote 3, table 25), and, beginning in 1968, to disabled widows and widowers.

The long-range level-cost of benefits to disabled workers and their dependents under the disability insurance program is estimated at 0.95 percent of taxable payroll, according to the intermediate-cost estimate. Similarly, the estimated long-range level cost of benefits with respect to disabled beneficiaries under the old-age and survivors insurance program is estimated at 0.10 percent of taxable payroll (table 27), or about 10 percent of the combined level-cost of 1.05 percent of taxable payroll for benefits with respect to disabled beneficiaries under the old-age and survivors insurance and disability insurance programs. These estimates include expenditures for vocational rehabilitation services, which, over the long-range period of the cost estimates, are expected to be offset by shorter durations of disabilities.

TABLE 27.—ESTIMATED COSTS OF DISABILITY BENEFIT PAYMENTS UNDER OLD-AGE AND SURVIVORS INSURANCE PROGRAM AS PERCENT OF PAYROLL,[1] 1966 LEVEL-EARNINGS ASSUMPTION

[In percent]

	Low-cost estimate	High-cost estimate	Intermediate-cost estimate [2]
Disabled children aged 18 or over [3]	0.07	0.07	0.07
Disabled widows and widowers aged 50 or over	.02	.04	.03
Total	.09	.11	.10

[1] Taking into account the lower contribution rate on self-employment income, on tips, and on multiple-employer "excess wages," as compared with combined employer-employee rate.
[2] Based on the average of dollar contributions and dollar costs under the low-cost and high-cost estimates.
[3] Including the related mother's and wife's benefits.

The cost of benefits to disabled children aged 18 and over of deceased or retired workers (including the related mother's and wife's benefits) is projected to increase in the future from the current level of 0.05 percent of taxable payroll to a level of 0.07 percent. No significant difference is projected between the low- and high-cost estimates as a result of changes in the mortality rates of workers, since an eligible child may qualify either as a dependent of a retired worker or as a survivor of a deceased worker. Moreover, the proportion of persons in the population with a childhood disability should be expected to remain stable. This occurs because most of their disabling conditions are of a congenital nature.

The cost of benefits to disabled widows and widowers aged 50 and over is projected to increase rapidly and then to level off at about 0.03 percent of taxable payroll. Initially, the cost will increase rapidly because of additional disabled widows and widowers coming on to the rolls each year. However, since the reduction in benefits is permanent, there will be, later, the offsetting effect of lower benefits that will be paid to disabled widows who continue to receive benefits past age 60 (and to disabled widowers past age 62) as compared to the higher nondisabled widow's (and widower's) benefits that would have been otherwise paid.

Wide relative variation in cost is projected between the low-cost estimate and the high-cost estimate. This is due to differences in projected future mortality of insured workers and to differences in projected disability prevalence rates among eligible widows and widowers.

CONCLUSION

The current long-range actuarial cost estimates for the old-age, survivors, and disability insurance system as a whole indicate that the system has a favorable actuarial balance. According to the intermediate-cost estimate, the old-age and survivors insurance program has a favorable actuarial balance of 0.01 percent of taxable payroll on a level-cost basis computed over the next 75 years. The disability insurance program is in exact actuarial balance.

These long-range cost estimates show that the system, as modified by the 1967 amendments, continues to be financed on an actuarially sound basis. Both the old-age and survivors insurance program and the disability insurance program will have sufficient income from contributions (based on the tax schedule and taxable earnings base now in the law) and from investments to meet the cost of benefit payments and administrative expenses both for the next 15 to 20 years and for the distant future.

APPENDIXES

APPENDIX I. ASSUMPTIONS, METHODOLOGY, AND DETAILS OF LONG-RANGE COST ESTIMATES

The basic assumptions used in the long-range estimates for the old-age, survivors, and disability insurance system are described in this appendix.[1] Also given are more detailed data in connection with the results of these estimates.

Population

Projections were made of the U.S. population (including overseas areas covered by the old-age, survivors, and disability insurance program) for future quinquennial years, by 5-year age groups and by sex. The starting point was the population on July 1, 1965, as estimated by the Bureau of the Census from the 1960 census and from births, deaths, and migration in 1960–65. This population estimate was increased to allow for probable underenumeration in the 1960 census and adjusted for differences in the geographical areas covered by the estimate of the Bureau of the Census and those covered by the old-age, survivors, and disability insurance system.

In the projections for both cost estimates it is assumed that mortality rates will decline until the year 2000. In the high-cost estimates, mortality rates for the year 2000 are, on the average, about 73 percent of the 1959–61 level. The mortality is projected to decrease by about 40–55 percent at the younger ages, but with the rates at the older ages showing somewhat smaller improvements. The low-cost estimate assumes exactly half of the improvement in mortality used in the high-cost estimate.

In the low-cost estimate, fertility rates are assumed to decrease slowly until reaching a level in 1985 roughly equivalent to about 83 percent of the average rates prevailing in the period 1960–65. The high-cost fertility rates decrease more rapidly and reach an ultimate rate in 2010 equivalent to about 68 percent of the 1960–65 experience. Both estimates assume a small amount of net immigration.

The low-cost estimate is based on high fertility and high mortality, while the high-cost estimate assumes low fertility and low mortality. This makes the high-cost population relatively much older than the low-cost population, which is reasonable in view of the fact that benefits to aged persons account for more than 80 percent of the cost of the system. Complete details about the population projections are given in Actuarial Study No. 62, Social Security Administration.

Employment

Assumptions as to the percentage of the population who have covered employment during a year were made for each age group by sex for each quinquennial year. The estimated percentages for 1965 for males were projected to increase slightly (so as to reflect some decrease in the unemployment rate over that prevailing in 1965), except for the older ages where they were assumed to decrease for both the low-cost and high-cost assumptions (thus recognizing the possibility of higher retirement rates). An increase was assumed for females, except for the very old ages; these increases are higher in the middle ages and are a continuation of trends in the past.

The foregoing assumptions are consistent with the assumed 4-percent unemployment rate. A long depression could substantially increase the cost, but it is believed that any periods of low employment would be of short duration and would not have a significant long-range effect.

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[1] A more detailed discussion of the procedures followed in making the long-range cost estimates will be published in Actuarial Study No. 64, Social Security Administration.

Earnings

Level average earnings at about the 1966 level were assumed for each sex. This assumption implies that within each sex group the earnings level would not rise on account of changes in the distribution of covered workers by occupation or industry.

In the past, average earnings have increased substantially, partly because of inflation, and partly because of increased productivity. If this trend continues and if the benefit formula is not changed, the cost relative to payroll would be less than the estimates show because the formula provides a benefit that is a decreasing percentage of average wage as the average wage increases.

It is likely, however, that if average earnings increase, the benefit formula and the earnings base used for contributions will be modified.

If benefit payments are increased in exactly the same ratio as the increase in average earnings, the year-by-year cost estimates of benefit payments expressed as a percentage of payroll would be unchanged. There would, however, be some increase in the level-cost because of the diminished relative value of interest earnings on the trust funds.

Insured population

The term "insured" is used as meaning fully insured, since the number of persons who are currently insured only is relatively small and can be disregarded for long-range cost analysis purposes. The percentages of insured persons by age and sex in various future years are estimated from the percentages of persons covered. It is evident that eventually almost all males in the country will be insured for old-age and survivor benefits; the ultimate percentage for aged males is estimated at 96 percent in the low-cost estimate and 98 percent in the high-cost estimates. For females there is much greater uncertainty; it is estimated that the corresponding proportions for aged females will eventually be 70 percent in the low-cost estimate and 75 percent in the high-cost estimate (the differential reflecting the range possible because of women moving in and out of the labor market and whether or not thereby they obtain insured status).

The estimated numbers of persons insured for disability benefits are lower than those insured for old-age and survivor benefits because of the more restrictive insured status provisions for disability benefits.

Aged beneficiaries

Old-age beneficiaries are estimated from the aged insured population. The proportions, by age and sex, of the insured population that were receiving benefits at the beginning of 1965 were projected to increase slightly in the high-cost estimate, following the trends in the past—thus, reflecting the assumed gradual increase in the retirement rates. In the low-cost estimate, the rates were assumed to remain at the 1965 level, which reflects the most recent tendency for a leveling-off in this factor.

Wives aged 62 and over of male old-age beneficiaries were estimated by using census data and mortality projections. These potential wife beneficiaries, after adjustment for eligibility to benefits on their own account, were assumed to claim benefits as soon as they are eligible, even if this occurred at ages 62 to 64, when they would have to take reduced benefits. The experience to date indicates that in the vast majority of the cases such immediate claiming of wife's benefits does occur.

To estimate widow beneficiaries the proportions of widows in the female aged population were projected according to mortality assumptions and adjusted for both eligibility to benefits on their own account and for the insured status of their deceased husbands. These uninsured eligible widows were assumed to claim benefits as soon as available even if this occurred at ages 60 and 61, when they would have to take reduced benefits. For ages 50 to 59 the disabled widow beneficiaries were estimated from the eligible widows by using disability prevalence rates.

It can be observed that the assumed wife and widow beneficiaries consist of the uninsured potential beneficiaries. In actual practice, some of the insured potential beneficiaries also receive a residual benefit consisting of the excess of the potential wife's or widow's benefit over their own old-age benefit. These residual benefits, although not giving rise to additional aged beneficiaries, were considered in the cost of the particular type of dependent or survivor benefit concerned.

The minor category of parent beneficiaries is estimated as a constant proportion of aged persons not eligible for any other benefit. The insignificant effect of the retirement test as it applies to wife's, widow's, and parent's benefits was ignored. No estimates were made for benefits to dependent husbands and widowers since their cost is relatively negligible.

Appendix table 1 shows the estimated numbers of aged beneficiaries.

APPENDIX TABLE 1.—MONTHLY RETIREMENT BENEFICIARIES IN CURRENT-PAYMENT STATUS,[1] 1956–2000

[In thousands]

Calendar year	Old-age beneficiaries		Wives of old-age beneficiaries[2]	Aged widows[3]	Dependent parents	Total
	Male	Female				
	Actual data					
1956	3,572	1,540	1,376	913	27	7,428
1957	4,198	1,999	1,779	1,095	29	9,101
1958	4,617	2,303	1,979	1,233	30	10,162
1959	4,937	2,589	2,123	1,394	35	11,077
1960	5,217	2,845	2,236	1,544	36	11,877
1961	5,765	3,160	2,368	1,697	37	13,027
1962	6,244	3,494	2,510	1,859	37	14,145
1963	6,497	3,766	2,561	2,011	37	14,872
1964	6,657	4,011	2,587	2,159	36	15,451
1965	6,825	4,276	2,614	2,371	35	16,121
1966	7,034	4,624	2,640	2,602	35	16,935
	Low-cost estimate					
1980	9,121	7,620	2,935	3,560	32	23,268
1985	9,951	8,902	2,994	3,723	31	25,601
1990	10,704	10,146	3,065	3,652	30	27,597
1995	11,145	11,050	2,997	3,686	29	28,907
2000	11,259	11,595	2,861	3,604	28	29,347
	High-cost estimate					
1980	9,734	7,987	3,128	3,548	33	24,430
1985	10,771	9,388	3,235	3,695	32	27,121
1990	11,779	10,772	3,306	3,664	31	29,552
1995	12,434	11,891	3,260	3,675	30	31,290
2000	12,767	12,695	3,074	3,750	29	32,315

[1] Persons qualifying both for old-age benefits and for wife's, widow's, husband's, widower's, and parent's benefits are shown only as old-age beneficiaries. Minimum retirement age was 65 until November 1956, when it was lowered to 62 for women, and until August 1961, when it was also reduced to 62 for men, except that for widows it was further lowered to 60 in September 1965. Actual data as of the end of the year (except for 1958—November); estimated data as of the middle of the year. Excluding effect of railroad financial interchange provisions.

[2] Including dependent husbands and including wives of any age with child beneficiaries in their care (both relatively small categories).

[3] Including dependent widowers and disabled widows and widowers aged 50 and over.

Beneficiaries under retirement age

Young wives and children of retired workers were estimated by reference to their ratios to male old-age beneficiaries, as derived from recent actual data and projected according to the population fertility and mortality assumptions.

Child-survivor beneficiaries were obtained from estimates of total paternal orphans in the country in future years. The projected child population by age groups was multiplied by the probability of being a paternal orphan. These probabilities were derived by using distributions of age of fathers at birth of child and death rates consistent with the population projections. The number of paternal orphans was then adjusted to eliminate orphans of uninsured men, to add orphans of insured women and to include the eligible disabled orphans aged 18 and over. For the nondisabled children aged 18 to 21, a further reduction was made to exclude those not attending school. Mother survivor beneficiaries were estimated by assuming a constant ratio of mothers to children, after excluding maternal orphans and those aged 18 to 21 who are attending school. The numbers of lump-sum death payments were estimated by multiplying the insured population by death rates used in the population projections.

Disabled beneficiaries and their dependents

Future numbers of persons receiving monthly disability benefits based on their own earnings records are estimated by applying disability prevalence rates (by age and sex) to the population insured for disability benefits. Prevalence rates may be defined as the proportion of the relevant population (population insured for disability in this case) that has a specific characteristic (receiving disability benefits in this case).

The prevalence rates are based on current operating experience and the new definitions in the 1965 and 1967 amendments and are used to calculate the numbers of beneficiaries in the future. In accordance with current experience, the prevalence rates for females are assumed to be about 80 percent of those for male workers.

Appendix table 2 shows the estimates of number of beneficiaries under the minimum retirement age (including disability insurance beneficiaries and their dependents).

Average benefits and total benefit payments

Average benefits in the various benefit categories were interpolated between the sizes of current benefit awards, estimated from recent claims data, and the sizes of the ultimate benefits computed. The latter were determined as though the 1966 earnings level were in effect throughout the entire working life of all workers with respect to whom benefits are being paid. Total benefit payments are shown in dollar amounts, in tables 21 and 22, and as a percentage of payroll, in table 20.

APPENDIX TABLE 2.—MONTHLY BENEFICIARIES UNDER MINIMUM RETIREMENT AGE IN CURRENT-PAYMENT STATUS[1] AND NUMBER OF DEATHS RESULTING IN LUMP-SUM DEATH PAYMENTS, 1956–2000

[In thousands]

Calendar year	Children[2]	Widowed mothers	Disability beneficiaries			Total monthly beneficiaries	Lump-sum death cases
			Workers	Wives[3]	Children[4]		
			Actual data				
1956	1,341	301				1,642	547
1957	1,502	328	150			1,980	689
1958	1,606	354	238	12	18	2,228	[5] 657
1959	1,754	376	334	48	78	2,590	[6] 822
1960	1,845	401	455	77	155	2,934	779
1961	1,989	428	618	118	291	3,444	813
1962	2,160	452	741	147	387	3,887	865
1963	2,230	462	827	168	457	4,144	969
1964	2,298	471	894	179	490	4,332	1,011
1965	2,535	472	988	193	558	4,746	990
1966	2,739	488	1,097	220	654	5,197	1,060
			Low-cost estimate				
1980	3,222	508	1,467	257	837	6,291	1,446
1985	3,297	523	1,551	259	845	6,475	1,579
1990	3,544	567	1,608	268	848	6,835	1,698
1995	3,715	593	1,715	287	879	7,189	1,822
2000	3,823	611	1,935	324	963	7,656	1,944
			High-cost estimate				
1980	3,112	475	1,685	296	964	6,532	1,491
1985	3,071	465	1,805	301	982	6,624	1,630
1990	3,175	481	1,879	312	1,017	6,864	1,747
1995	3,229	487	2,016	334	1,086	7,152	1,866
2000	3,211	482	2,287	377	1,228	7,585	1,981

[1] See footnote 1 of app. table 1 for definition of minimum retirement age. Does not include wives under age 62 of old-age beneficiaries; including disability beneficiaries aged 62 to 64 and spouses aged 62 and over of disability beneficiaries. For actual data, as of December (except for 1958, November); for estimated future data, as of middle of year. Excluding effect of railroad financial interchange provisions.
[2] Children of retired and deceased workers.
[3] Spouses of disabled workers, including some such spouses aged 62 and over.
[4] Children of disabled workers.
[5] January through November 1958.
[6] December 1958 through December 1959.

The combined cost of old-age, survivors, and disability benefits (expressed as a percentage of taxable payroll) in 1967 as shown in tables 16 and 19 is projected to increase by about 60 percent in the low-cost estimate and by about 120 percent in the high-cost estimate, according to table 20. The significant upward cost trend is temporarily reversed around the year 2000, at which time a significant part of the aged population consists of survivors of persons born in the 1930's, when birth rates were low.

Administrative expenses

Assumed administrative expenses for old-age, survivors, and disability insurance are based on two factors—the number of persons having any covered employment in the given year and the number of monthly beneficiaries.

Railroad retirement financial interchange

A financial interchange between the old-age, survivors, and disability insurance system and the railroad retirement system is provided, as explained in appendix II. The purpose of this interchange is to place the old-age and survivors insurance and the disability insurance trust funds in the same position they would have been in if railroad employment were, and always had been, covered employment.

Because of the relatively older age distribution of railroad workers, the transfer is currently in favor of the railroad retirement system. But it is estimated that eventually the low-cost factors in respect to railroad employment—higher average wage, lower percentage of females, and more wives and widows of railroad workers receiving old-age, survivors, and disability insurance benefits on their own earnings records, rather than on the record of the railroad worker—will shift the transfer the other way. The long-range effect is relatively insignificant insofar as old-age, survivors, and disability insurance costs are concerned, but the current estimates indicate a small "net gain" to the railroad retirement system over the entire period of these estimates.

Interest rate

The 1960 amendments revised the basis for determining the interest rate on public-debt obligations issued for purchase by the trust funds (special issues), which constitute a major portion of the investments of the trust funds. Under previous law, the interest rate on special obligations was related to the average coupon rate on all outstanding marketable obligations of the United States not due or callable for at least 5 years from the original issue date. Under present law, this interest rate is based on the average market yield of all such marketable obligations not due or callable for 4 or more years from the time of the issuance of the special obligations.

This change will have the immediate effect of gradually increasing the interest income of the trust funds as compared with the previous basis. The ultimate effect is expected to be only a slight increase in the interest income of the system since, over the long run, coupon rates on new long-term Government obligations tend to follow (both up and down) the average market yield on all outstanding long-term issues.

For the intermediate-cost estimate a level interest rate of 3.75 percent was assumed. This is somewhat below the average yield of the total investments of both trust funds as of January 1, 1968 (3.89 percent), and also is below the rate applicable for new investments in December 1967 (5⅝ percent). The interest rate for the low-cost and high-cost estimates was assumed at 4.25 percent and 3.25 percent, respectively.

Appendix II. Legislative History Affecting the Trust Funds [1]

Board of trustees.—From January 1, 1940, when the Federal old-age and survivors insurance trust fund was established, through July 15, 1946, the three members of the board of trustees, who served in an ex officio capacity, were the

[1] Amendments to the Social Security Act and to related sections of the Internal Revenue Code were made during the period 1939–68. The more important changes made in 1950–58 that are significant from an actuarial standpoint are described in app. II of the 21st annual report of the board of trustees. The more important changes contained in the 1960 and 1961 amendments are described in the main body of the 23d annual report, the changes made in 1964 are described in the 25th annual report, and the more important changes contained in the amendments made in 1965 and in 1966 are described in the 1967 annual report. The more important changes contained in the 1967 amendments are described in the main body of the present report.

Secretary of the Treasury, the Secretary of Labor, and the Chairman of the Social Security Board. On July 16, 1946, under Reorganization Plan No. 2 of 1946, the Federal Security Administrator became ex officio member of the board of trustees in place of the Chairman of the Social Security Board, which agency was abolished.

On April 11, 1953, Reorganization Plan No. 1 of 1953, creating the Department of Health, Education, and Welfare, went into effect, and the office of Federal Security Administrator was abolished. The functions of the Administrator as ex officio member of the board of trustees were taken over by the Secretary of Health, Education, and Welfare. The remaining membership of the board has not changed since it was first established. Since the establishment of the fund, the Secretary of the Treasury has been managing trustee. The Social Security Act Amendments of 1950 designated the Commissioner for Social Security—since April 11, 1953, the Commissioner of Social Security—as Secretary of the board of trustees.

Under the Social Security Amendments of 1956, the functions of the board of trustees have related to both the Federal old-age and survivors insurance trust fund and the Federal disability insurance trust fund. The Social Security Amendments of 1960 eliminated the so-called three-times rule (requiring the board of trustees to report to the Congress whenever it expects that in the course of the next 5 fiscal years either of the trust funds will exceed three times the highest annual expenditures from such fund anticipated during that 5-year period). The Social Security Amendments of 1965 provide that the board of trustees shall meet not less frequently than once each calendar year.

Contribution rates.—The Social Security Act of 1935 fixed the contribution rates for employees and their employers at 1 percent each on taxable wages for the calendar years 1937–39, and provided for higher rates thereafter. However, subsequent acts of Congress extended the 1-percent rates through calendar year 1949. On January 1, 1950, the rates rose to 1½-percent each for employees and employers, as provided by the Social Security Act Amendments of 1947. In accordance with the Social Security Act Amendments of 1950, the 1½-percent rates remained in effect through calendar year 1953 and, on January 1, 1954, rose to 2-percent each for employees and employers. These rates remained in effect through December 31, 1956.

In accordance with the Social Security Amendments of 1956, which provided for the creation of the Federal disability insurance trust fund, the 2-percent rates were increased to 2¼ percent each on January 1, 1957, in order to finance the new disability benefits under the expanded old-age, survivors, and disability insurance (OASDI) program. These rates remained in effect through calendar year 1958. On January 1, 1959, the rates rose to 2½ percent each, and on January 1, 1960, to 3 percent each, as provided by the Social Security Amendments of 1958. These rates remained in effect through December 31, 1961.

In accordance with the Social Security Amendments of 1961, the 3-percent rates rose, on January 1, 1962, to 3⅛ percent each for employees and employers, and on January 1, 1963, to 3⅝ percent each. These rates remained in effect through December 31, 1965. In accordance with the Social Security Amendments of 1965, the rates rose to 3.85 percent each for employees and employers on January 1, 1966, and 3.9 percent each on January 1, 1967. Beginning on January 1, 1966, coverage was extended to include cash tips, taxable as wages, with only the employee's share of the tax contributions payable (the employer is exempted from payment of tax contributions on cash tips).

Beginning January 1, 1951—the effective date of extension of coverage to self-employed persons—the rates of tax on self-employment income have been equal to 1½ times the corresponding employee rates, except that beginning in 1962 the resulting rates for the self-employed are rounded to the nearest tenth of 1 percent.

The Social Security Act, as amended in 1956, provided that beginning January 1, 1957, from the total contribution income based on the foregoing rates, contributions at the rate of 0.25 percent each for employees and employers, and 0.375 percent for the self-employed, should be allocated to the disability insurance trust fund. Under the act as amended in 1965, this allocation for the disability insurance (DI) program increased to 0.35 percent each for employees and employers on January 1, 1966; for the self-employed, the allocation rate increased to 0.525 percent.

The tax rates that have been in effect since 1937, as well as the rates that have been allocated (after 1956) for payment of benefits from the disability insurance trust funds, and the maximum amount of annual earnings to which the rates applied are shown in appendix table 3.

Special refunds of employee contributions.—With respect to wages paid before 1951, refunds to employees who worked for more than one employer during the course of a year and paid contributions on such wages in excess of the statutory maximum were made from the general fund of the Treasury. With respect to wages paid after 1950, these refunds are paid from the Treasury account for refunding internal revenue collections. The Social Security Act Amendments of 1950 directed the managing trustee to pay from time to time from the old-age and survivors insurance trust fund into the Treasury, as repayments to the account for refunding internal revenue collections, the amount of contributions which are subject to refund with respect to wages paid after 1950. The Social Security Amendments of 1956 provided for similar repayments from the disability insurance trust fund.

APPENDIX TABLE 3.—TAX CONTRIBUTION RATES AND MAXIMUM TAXABLE AMOUNT OF ANNUAL EARNINGS, CALENDAR YEARS 1937–67

Calendar years	Maximum taxable amount of annual earnings	Tax contribution rates (percent of taxable earnings)			
		OASDI		DI [1]	
		Employees and employers, each	Self-employed	Employees and employers, each	Self-employed
1937–49	$3,000	1.000			
1950	3,000	1.500			
1951–53	3,600	1.500	2.250		
1954	3,600	2.000	3.000		
1955–56	4,200	2.000	3.000		
1957–58	4,200	2.250	3.375	0.250	0.375
1959	4,800	2.500	3.750	.250	.375
1960–61	4,800	3.000	4.500	.250	.375
1962	4,800	3.125	4.700	.250	.375
1963–65	4,800	3.625	5.400	.250	.375
1966	6,600	3.850	5.800	.350	.525
1967	6,600	3.900	5.900	.350	.525

[1] Included in total OASDI rate.

Credits for military service.—The Social Security Act Amendments of 1946 provided survivor-insurance protection to certain World War II veterans for a period of 3 years following their discharge from the Armed Forces. Federal appropriations were authorized to reimburse the old-age and survivors insurance trust fund for such sums as were withdrawn to meet the additional cost (including administrative expenses) of such payments.

The 1950 amendments, which provided noncontributory $160 monthly wage credits to persons who served in the Armed Forces during World War II, and the 1952, 1953, 1955, and 1956 amendments, which provided similar noncontributory credits on account of active military or naval service from July 25, 1947, through December 31, 1956, charged to the old-age and survivors insurance trust fund not only the additional costs arising from these credits but also, beginning September 1950, those additional costs arising under the 1946 amendments.

The 1956 amendments provided contributory coverage for military personnel beginning January 1, 1957. In addition, these amendments authorized that the old-age and survivors insurance trust fund and, where appropriate, the disability insurance trust fund be reimbursed from the general fund of the Treasury for expenditures after August 1950, resulting from the provisions that granted noncontributory $160 monthly wage credits to persons who served in the Armed Forces from September 16, 1940, through December 31, 1956, and from the provisions enacted in 1946.

The 1965 amendments provided a new basis of reimbursement to the trust funds from the general fund of the Treasury for the foregoing expenditures. Under the new basis, annual appropriations to the trust funds from the general fund of the Treasury are authorized, beginning with fiscal year 1966, that will amortize, over a 50-year period, both the accumulated backlog of expenditures resulting from such military service and the additional amounts that will accrue through fiscal year 2015. After 2015, annual appropriations are authorized to meet the currently accruing additional costs of subsequent benefit payments. The existing statutory provisions that authorize the granting of noncontributory credits for military service and the financing of these credits are set forth in appendix III.

Payments to certain noninsured persons aged 72 and over.—Public Law 89–368, the Tax Adjustment Act of 1966, approved March 15. 1966, amended the Social Security Act to provide monthly payments, effective with benefits for October 1966, to certain noninsured persons aged 72 and over. Under the legislation, all payments are made initially from the old-age and survivors insurance trust fund. Provision is made for reimbursement from the general fund of the Treasury to the trust fund in each fiscal year, beginning in fiscal year 1969, on account of payments during the second preceding fiscal year to persons with less than 3 quarters of coverage. The reimbursement also includes the additional administrative expenses resulting from such payments and the loss of interest resulting from such payments and expenses. The statutory provisions authorizing payments to noninsured persons aged 72 and over and the financing of these payments are set forth in appendix III.

Coordination of old-age, survivors, and disability insurance and railroad retirement programs.—Public Law 234, approved October 30, 1951, amended the Railroad Retirement Act to provide a basis for coordinating the railroad retirement program with old-age and survivors insurance. This legislation provides that the railroad wage credits of workers who die or retire with less than 10 years of railroad employment shall be transferred to the old-age and survivors insurance system. These amendments did not affect workers who acquire 10 years or more of railroad service. That is, the survivors of over-10-year railroad workers will, as under the 1946 amendments to the Railroad Retirement Act, receive benefits under one program or the other based on combined wage records, while retirement benefits will be payable under both systems to individuals with 10 or more years of railroad service who also qualify under old-age and survivors insurance.

With respect to the allocation of costs between the two systems, Public Law 234 required the Railroad Retirement Board and the Secretary of Health, Education, and Welfare to—

> "determine, no later than January 1, 1954, the amount which would place the Federal old-age and survivors insurance trust fund in the same position in which it would have been at the close of the fiscal year ending June 30, 1952, if service as an employee after December 31, 1936, had been included in the term 'employment' as defined in the Social Security Act and in the Federal Insurance Contributions Act."

The two agencies completed a series of joint actuarial studies and analyses required by this provision. The results show that the addition of $488 million to the old-age and survivors insurance trust fund would place it in the same position as of June 30, 1952, as it would have been if railroad employment had always been covered under the Social Security Act.

There is no authority in the law that would have permitted the transfer of the $488 million from the railroad retirement account to the trust fund, but the legislation provides that beginning with fiscal year 1953, and for each fiscal year thereafter, annual interest payments on this amount were to be transferred from the railroad retirement account to the trust fund.

The legislation further provides that at the close of the fiscal year 1953, and each fiscal year thereafter, annual reimbursements are to be effected between the railroad retirement account and the trust fund in such amounts as would, taking into consideration the amount determined for the period through June 30, 1952, place the trust fund at the end of the year in the same position in which it would have been if railroad employment were covered under the Social Security Act. If the reimbursement is from the trust fund to the railroad retirement account, the Secretary of Health, Education, and Welfare may offset the amount of such reimbursement against the amount determined for the period through June 30, 1952.

The Social Security Amendments of 1956 amended Public Law 234 to provide for similar annual determinations and financial interchanges between the railroad retirement account and the newly created disability insurance trust fund, beginning with the fiscal year ending June 30, 1958.

Payments for costs of vocational rehabilitation services.—The Social Security Amendments of 1965 provided for payments from the old-age and survivors insurance and disability insurance trust funds for the cost of vocational rehabilitation services furnished to disability insurance beneficiaries and to disabled adults receiving benefits on the basis of disabilities that have continued since childhood. The total amount of funds that may be made available for purposes of reimbursement for such services may not, in any fiscal year, exceed 1 percent of the benefits certified for payment to these types of beneficiaries in the preceding year. The statutory provisions authorizing payments from the trust funds for the cost of vocational rehabilitation services are set forth in appendix III.

Investments.—Since the inception of the program, provision has been made for the investment of funds which are not required to meet current disbursements. As provided in the Social Security Act, the funds may be invested only in interest-bearing obligations of the U.S. Government or in obligations guaranteed as to both principal and interest by the United States; or the funds may be invested in certain federally-sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. These obligations may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price. In addition, the Social Security Act authorizes the issuance of public-debt obligations for purchase by the trust funds. (These public-debt obligations, issued for purchase by the trust have been referred to in the law in the past as special obligations; more popularly they are referred to as special issues.)

The Social Security Act of 1935 specified that special issues should bear interest at the rate of 3 percent per annum, and that other obligations could be acquired only on such terms as to provide an investment yield of at least 3 percent per annum. The Social Security Act Amendments of 1939 provided that the special issues should bear interest at a rate equal to the average rate of interest, computed as of the end of the calendar month next preceding the date of their issue, borne by all interest-bearing obligations of the United States forming a part of the public debt, such average rate being rounded down to the next lower one-eighth of 1 percent. The 1939 amendments also eliminated the requirement that obligations other than special obligations could be acquired only on such terms as to provide an investment yield of at least 3 percent per annum.

In recognition of the long-term character of the commitments of the trust funds, the Social Security Amendments of 1956 provided that the special issues should have maturities fixed with due regard for the needs of the funds, and that they should bear interest at a rate equal to the average rate of interest borne by all marketable interest-bearing obligations of the United States forming a part of the public debt which are not due or callable for 5 or more years from the date of original issue, such average rate being rounded to the nearest one-eighth of 1 percent. For several years preceding the enactment of the 1956 amendments, the special issues had a maximum duration from issue to maturity of 1 year. As a result of the provisions of the 1956 amendments described above, the maximum duration to maturity of the special issues was lengthened to 15 years.

The Social Security Amendments of 1960 provided that special issues acquired after enactment should bear interest at a rate equal to the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding their issue) on all marketable interest-bearing obligations of the United States forming a part of the public debt which are not due or callable for 4 or more years from the time the special obligations are issued, such average market yield being rounded to the nearest one-eighth of 1 percent.

Appendix III.—Selected Statutory Provisions Relating to the Trust Funds, as of January 2, 1968

(Sec. 201, sec. 217, sec. 218(e)(1), (h), and (j), sec. 222(d), sec. 228, sec. 229, and sec. 706 of the Social Security Act as amended)

FEDERAL OLD-AGE AND SURVIVORS INSURANCE TRUST FUND AND FEDERAL DISABILITY INSURANCE TRUST FUND

SEC. 201. (a) There is hereby created on the books of the Treasury of the United States a trust fund to be known as the "Federal Old-Age and Survivors Insurance Trust Fund". The Federal Old-Age and Survivors Insurance Trust Fund shall consist of the securities held by the Secretary of the Treasury for the Old-Age Reserve Account and the amount standing to the credit of the Old-