tory 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 conditions 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.

The long-range actuarial cost estimates which have been presented here were developed in late 1968, subsequent of course to the 1968 report of the Board of Trustees. These new estimates show a much more favorable actuarial balance than the previous ones—namely, for the entire old-age, survivors, and disability insurance system, according to the intermediate-cost estimate, a positive balance of 0.53 percent of taxable payroll as compared with the previous positive balance of 0.01 percent.

The increase in the positive actuarial balance according to the new cost estimates arises because of several revised assumptions. The breakdown of the increase of 0.52 percent of taxable payroll on a level-cost basis is as follows:

Item	*Effect (in percent of taxable payroll)*
Use of 1968 earnings assumption (instead of 1966)	+0.33
Use of 4¼ percent interest assumption (instead of 3¾ percent)	+0.11
Increased female labor force participation rates	+0.06
Other factors	+0.02
Total	+0.52

NOTE.—With regard to the changes in assumptions, it may be pointed out that the earnings assumption was updated from 1966 to 1968 in accordance with the customary actuarial practice for periodic revision in the cost estimates of using the earnings level of the year in which the revision is prepared. Also, the interest-rate assumptions were increased over those used previously, so as to recognize in a gradual manner the drastically higher interest rates of recent years; this procedure of partial, gradual recognition is followed so that the long-term interest-rate assumption will not fluctuate as widely as short-term interest rates do.

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 22 and 23 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 3½ percent (somewhat higher increases are assumed in the first few years).

In the first projection (table 22), the maximum taxable earnings base is assumed to remain at $7,800 per year, while for the second one (table 23), the base is assumed to be kept up-to-date—that is, changed periodically so as to cover about the same proportion of total earnings that was covered in 1970 by the $7,800 base. These assumptions imply that, for the first projection, only about three-sevenths of the 70-percent increase in average earnings that is estimated to occur in 1970–85 will be taxable under the program, due to the dampening effect of the fixed maximum taxable earnings base. For the second projection, the entire 70-percent increase will be taxable because of the assumed constant up-dating of the taxable earnings base.

TABLE 22.—ESTIMATED PROGRESS OF TRUST FUNDS, INCREASING EARNINGS ASSUMPTION, FIXED-EARNINGS BASE, AND EQUIVALENT 4.25-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	$44,434	$29,804	$609	$435	$3,726	$101,890
1980	52,284	35,026	744	428	8,010	208,053
1985	59,736	41,085	889	386	13,704	348,945
	Disability insurance trust fund					
1975	$4,661	$3,420	$170	$10	$469	$12,359
1980	5,501	4,164	206	11	825	21,198
1985	6,289	4,816	242	4	1,282	32,548

[1] On the same basis as used to develop the trust funds for the long-range intermediate cost estimates in tables 20 and 21.

[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 23.—ESTIMATED PROGRESS OF TRUST FUNDS, INCREASING EARNINGS AND BENEFITS ASSUMPTIONS, VARIABLE EARNINGS BASE, AND EQUIVALENT 4.25-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	$48,327	$36,620	$674	$552	$3,480	$94,989
1980	62,353	51,351	894	712	6,572	171,067
1985	78,828	71,410	1,173	836	9,785	249,861
	Disability insurance trust fund					
1975	$5,068	$4,264	$198	$19	$401	$10,553
1980	6,558	6,073	254	27	582	14,988
1985	8,294	8,221	319	27	705	17,971

[1] On the same basis as used to develop the trust funds for the long-range intermediate-cost estimates in tables 20 and 21.

[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 service.

[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 17-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 1969–85 are the same as those shown in the long-range intermediate-cost estimates prepared on level-earnings assumptions. The cost estimate shown in table 23 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 22 and 23, according to the medium-range estimates, the old-age and survivors insurance trust fund grows steadily through the 17-year period—reaching $208 billion in 1980 in the first projection and $171 billion in the second one. For 1985, the corresponding figures for the balance in the trust fund are $349 billion and $250 billion, respectively. In 1985, estimated contribution income exceeds benefit outgo by about 45 percent under the assumptions of dynamic earnings-level conditions and static benefit provisions, but by only 10 percent under the "double dynamic" assumptions basis.

The disability insurance trust fund, according to the first projection, increases rapidly—reaching about $21 billion in 1980 and about $33 billion in 1985. According to the second projection, with the "double dynamic" assumptions, the fund increases less rapidly reaching $15 billion in 1980 and $18 billion in 1985.

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

Effective January 1957, monthly benefits have been 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. Effective February 1968, reduced monthly benefits have been payable from this trust fund 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 24 to show the past experience in each of the calendar years 1957–67.

Table 24 also shows the expected future experience in calendar years 1968–73. The estimates take into account the payment, beginning in 1968, of benefits 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 $214 million (or 0.059 percent of taxable payroll) in calendar year 1968, to $337 million (or 0.075 percent) in 1973.

TABLE 24.—BENEFITS PAYABLE FROM THE OLD-AGE AND SURVIVORS INSURANCE TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES, CALENDAR YEARS 1957–73

[Beneficiaries in thousands; benefit payments in millions]

Calendar year	Disabled beneficiaries, end of year			Amount of benefit payments [1]			Benefit payments [1] as a percentage of taxable earnings [2]		
	Total	Children [3]	Widows and widowers	Total	Children [3]	Widows and widowers	Total	Children [3]	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	282	260	22	214	199	$15	.059	.055	0.004
1969	318	280	38	254	222	32	.066	.058	.008
1970	340	295	45	279	238	41	.069	.059	.010
1971	357	310	47	298	255	43	.071	.061	.010
1972	374	325	49	318	273	45	.073	.063	.010
1973	391	340	51	337	290	47	.075	.064	.010

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

[2] 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 contribution is payable on tips taxable as wages.

[3] 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.

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 1957–73 are presented in table 25.

The long-range level-cost of benefits to disabled workers and their dependents under the disability insurance program is estimated at 0.97 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 0.12 percent of taxable payroll (table 26), or about 11 percent of the combined level-cost of 1.09 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 25.—BENEFIT PAYMENTS UNDER THE OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM WITH RESPECT TO DISABLED BENEFICIARIES, BY TRUST FUND, CALENDAR YEARS 1957–73

[In millions]

Calendar year	Benefit payments [1] from—			
			Old-age and survivors insurance trust fund	
	Total [1]	Disability insurance trust fund [2]	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	2,526	2,312	214	8.5
1969	2,802	2,548	254	9.1
1970	2,992	2,713	279	9.3
1971	3,148	2,850	298	9.5
1972	3,295	2,977	318	9.7
1973	3,436	3,099	337	9.8

[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 24), and, beginning in 1968, to disabled widows and widowers.

TABLE 26.—ESTIMATED COSTS OF DISABILITY BENEFIT PAYMENTS UNDER OLD-AGE AND SURVIVORS INSURANCE PROGRAM AS PERCENT OF PAYROLL,[1] 1968 LEVEL-EARNINGS ASSUMPTION

[In percent]

	Low-cost estimate	High-cost estimate	Intermediate-cost estimate [2]
Disabled children aged 18 or over [3]	0.09	0.09	0.09
Disabled widows and widowers aged 50 or over	.02	.04	.03
Total	.11	.13	.12

[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 1968 level of 0.05 percent of taxable payroll to an ultimate level of 0.10 percent. No significant difference is projected between the low-cost 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 childhood disabilities 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) benefit 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 program as a whole indicate that the program is overfinanced by a substantial amount.

According to the intermediate-cost estimate, the old-age and survivors insurance program has a substantial favorable actuarial balance of 0.56 percent of taxable payroll on a level-cost basis computed over the next 75 years. The disability insurance program has a small actuarial imbalance of 0.03 percent of taxable payroll, which is within an acceptable margin of variation for the intermediate-cost estimate considering the long-range nature of the estimates.

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 average percentages for 1962–66 for males were projected to increase slightly (so as to reflect some decrease in the unemployment rate over that prevailing in the period), 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 assumptions as to the average unemployment rate in the future. A depression lasting several years could substantially increase the cost, but it is believed that any periods of low employment would be of relatively short duration and would have virtually no long-range cost effect.

[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 1968 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, although other factors such as hours worked and unemployment have also had an effect. 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 taxable 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-premium 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 estimate. 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 thereby they do or do not 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 1967 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 1967 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 for 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
1967	7,161	4,859	2,645	2,770	34	17,469
	Low-cost estimate					
1980	9,078	7,648	2,889	3,660	30	23,305
1985	9,897	8,745	2,989	3,881	29	25,541
1990	10,643	9,801	3,094	3,869	28	27,435
1995	11,078	10,572	3,037	3,963	27	28,677
2000	11,191	11,077	2,897	3,892	26	29,083
	High-cost estimate					
1980	9,573	8,166	3,000	3,415	31	24,185
1985	10,592	9,386	3,136	3,643	30	26,787
1990	11,590	10,785	3,276	3,583	29	29,263
1995	12,243	11,750	3,289	3,679	28	30,989
2000	12,571	12,438	3,127	3,852	27	32,015

[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

The future number of persons receiving monthly disability benefits based on their own earnings is estimated by the application of incidence and termination rates. These rates were developed from the most recent experience data available from the operations of the disability insurance system. The population insured for disability (by sex, age, and cost assumption) is multiplied by the incidence rates to arrive at the number of new cases of disabled workers. These in turn are projected through the use of mortality and recovery rates to obtain the number of beneficiaries.

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 1968 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 20 and 21 and as a percentage of payroll in table 19.

The combined cost of old-age, survivors, and disability benefits (expressed as a percentage of taxable payroll) in 1968 as shown in tables 15 and 18 is projected to increase by about 50 percent in the low-cost estimate and by about 100 percent in the high-cost estimate, according to table 19. The significant upward cost trend is temporarily reversed around the year 2000, at which time a significant part of the aged population consists 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.

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
1967	2,873	496	1,194	235	713	5,511	1,218
			Low-cost estimate				
1980	3,420	514	1,604	281	909	6,728	1,550
1985	3,532	537	1,722	286	925	7,002	1,671
1990	3,846	594	1,802	297	929	7,468	1,791
1995	4,062	633	1,942	317	961	7,915	1,912
2000	4,229	660	2,211	356	1,051	8,507	2,037
			High-cost estimate				
1980	3,301	483	1,975	348	1,125	7,232	1,529
1985	3,261	476	2,152	359	1,161	7,409	1,622
1990	3,342	491	2,268	372	1,203	7,676	1,761
1995	3,419	496	2,455	396	1,280	8,046	1,871
2000	3,415	494	2,801	445	1,438	8,593	1,979

[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 62-64, 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.

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 higher average wage of railroad employees and the increasing proportion of 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 4.25 percent was assumed. This is somewhat above the average yield of the total investments of the old-age and survivors insurance trust fund as of December 31, 1968 (3.98 percent), but is below the corresponding rate for the disability insurance trust fund (4.64 percent); the rate applicable for new investments for both trust funds for December 1968 was 5⅝ percent. The interest rates for the low- and high-cost estimates were assumed at 4.75 and 3.75 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 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,

[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 appendix 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.