Old-Age, Survivors, and Disability Insurance: Financing Basis and Policy Under the 1958 Amendments

by ROBERT J. MYERS*

WHENEVER the congressional committees concerned with old-age, survivors, and disability insurance have considered amendments to the program, they have thoroughly studied the cost aspects of both the proposed benefit provisions and the current provisions from the point of view of maintaining its actuarial soundness. At the time the 1950 amendments were adopted, Congress expressed its belief that the program should be completely self-supporting from the contributions of covered individuals and employers, and it repealed the provision permitting appropriations to the program from the general revenues of the Treasury. In the amendments of 1952, 1954, and 1956, Congress again indicated its conviction that the tax schedule in the law should make the program as nearly self-supporting as can be foreseen or, in other words, actuarially sound.

In the Social Security Amendments of 1958,[1] Congress strongly reaffirmed this principle and acted to strengthen the financial basis of the program [2] by providing, in balance, for contribution income higher in the long run than the increased outgo due to the benefit changes.

The concept of actuarial soundness as it applies to old-age, survivors, and disability insurance differs considerably from its application to private insurance, although there are certain points of similarity—especially in comparison with private pension plans. The principal difference stems from the fact that a social insurance system can be assumed to be perpetual in nature, with a continuous flow of new entrants as a result of its compulsory character. It may therefore be said that the old-age, survivors, and disability insurance program is actuarially sound if the estimates show that future income from contributions and from interest earnings on the accumulated trust funds will, in the long run, support the disbursements for benefits and administrative expenses. Future experience may be expected to vary from the actuarial cost estimates made now, but the intent that the program be self-supporting, or actuarially sound, is expressed in the law by using a contribution schedule that, according to an intermediate-cost estimate, results in the actuarial balance or approximate balance of the system.

It was estimated at the time of the 1952 amendments that the actuarial balance under that legislation would be virtually the same as in the estimates made for the 1950 amendments (table 1). The rise in earnings levels in the 3 preceding years was believed to about offset the increased cost resulting from the benefit liberalizations being made. Cost estimates prepared 2 years later—in 1954—indicated that the level-premium cost (the average long-range cost, based on discounting at interest, in relation to payroll) of the benefit disbursements and administrative expenses was somewhat more than 0.5 percent of payroll higher than the level-premium equivalent of the scheduled taxes (including allowance for interest on the existing trust fund). The 1954 amendments contained an ad-

Table 1.—*Actuarial balance of the old-age, survivors, and disability insurance program [1] under various acts, based on intermediate-cost estimates*

[Percent]

Legislation	Date of estimate	Level-premium equivalent [2]		
		Benefit costs [3]	Contributions	Actuarial balance [4]
		Old-age, survivors, and disability insurance		
1950 act	1950	6.05	5.95	−0.10
1952 act	1952	5.85	5.75	−.10
1952 act	1954	6.62	6.05	−.57
1954 act	1954	7.50	7.12	−.38
1954 act	1956	7.45	7.29	−.16
1956 act	1956	7.85	7.72	−.13
1956 act	1958	8.25	7.83	−.42
1958 act	1958	8.76	8.52	−.24
		Old-age and survivors insurance		
1956 act	1956	7.43	7.23	−0.20
1956 act	1958	7.90	7.33	−.57
1958 act	1958	8.27	8.02	−.25
		Disability insurance		
1956 act	1956	0.42	0.49	+0.07
1956 act	1958	.35	.50	+.15
1958 act	1958	.49	.50	+.01

[1] The disability insurance program was established by the 1956 act; data for earlier years are for the old-age and survivors insurance program only.
[2] Percent of taxable payroll.
[3] Includes adjustments to reflect (a) the lower contribution rate for the self-employed, compared with the combined employer-employee rate, (b) interest earnings on the existing trust funds, and (c) administrative expenses.
[4] A negative figure indicates the extent of lack of actuarial balance; a positive figure indicates more than sufficient financing (according to the estimate).

* Chief Actuary, Social Security Administration.

[1] For a summary of the amendments, see pages 3–14.

[2] One of the stated purposes of the legislation, given in the title of the law, is "to improve the actuarial status of the Trust Funds."

Table 2.—*Changes in estimated level-premium cost of benefit payments as percent of taxable payroll, by type of change, based on intermediate-cost estimate at 3-percent interest, 1956 act and 1958 act*

[Percent]

Item	Old-age and survivors insurance	Disability insurance
Lack of balance (−) or surplus (+) under 1956 act	−0.57	+0.15
Increase of ½ percent in tax schedule	+.50	------------
Acceleration of tax schedule (3-year rises)	+.19	------------
Increased income from higher earnings base	+.52	+.03
Additional benefit cost from higher earnings base	−.30	−.02
Increase of benefit level by 7 percent (or $3, if more)	−.57	−.03
Dependents' benefits for disability beneficiaries	------------	−.06
Elimination of disability benefit offset provision	------------	−.03
Modification of insured-status requirements	------------	−.03
Liberalizing retirement test	−.01	------------
Paying parent's benefits in all cases	−.01	------------
Lack of balance (−) or surplus (+) under 1958 act	−.25	+.01

justed contribution schedule that not only met the cost of the benefit changes but also reduced susbtantially the actuarial insufficiency that the then current estimates had indicated in the financing of the 1952 provisions.

The estimates for the 1954 act were revised in 1956 to take into account the rise in the earnings level that had occurred since 1951–52, the period used as the basis for the 1954 estimates. As the result, the lack of actuarial balance under the 1954 act was reduced to the point where, for all practical purposes, it was nonexistent, and the system was in approximate actuarial balance. The benefit changes made by the 1956 amendments were fully financed by the increased contribution income provided; the actuarial balance of the system was thus unaffected, and the program remained actuarially sound.

The new cost estimates made in 1958 take into account recent experience and modified assumptions concerning future trends. In the 2 preceding years, there were many retirements among the groups newly covered by the 1954 and 1956 amendments, and as a result benefit expenditures ran appreciably higher than the amounts previously estimated. Moreover, analysis of operating experience for recent years indicates that retirement rates have risen or, in other words, that the average retirement age has dropped significantly. This change may be the result in large part of the liberalizations made in the retirement test, under which aged persons are better able than before to effect a smooth transition from full employment to full retirement. These new cost estimates indicate that the program, as it operated under the provisions of the 1956 act, was out of actuarial balance by more than 0.4 percent of payroll.

The Senate Committee on Finance, in its report on the 1958 amendments, stated its belief that "not only should any liberalizations in benefit provisions be fully financed by appropriate changes in the tax schedule or through other methods, but also that the actuarial status of the system should be improved in similar manner so that the actuarial insufficiency is reduced to the point where it is virtually eliminated, namely below one-fourth of 1 percent of payroll, as has been the case generally in the previous legislation." [3]

Basic Assumptions for Cost Estimates

Estimates of the future cost of the old-age, survivors, and disability insurance program are affected by many factors that are difficult to determine. Accordingly, the assumptions used in the actuarial cost estimates may differ widely and yet be reasonable. Benefit payments may be expected to increase continuously for at least the next 50–70 years because of such factors as the aging of the population and the slow but steady growth of the benefit rolls—a growth inherent in any retirement program, public or private, that has been in operation for a relatively short period.

The cost estimates are given within a range to indicate likely variations in future costs, depending on the actual trend developing for the various cost factors. Both the low- and high-cost estimates are based on high economic assumptions, intended to represent almost full employment, with average annual earnings at about the level prevailing in 1956. Intermediate estimates, developed by averaging the low- and high-cost estimates, are also shown, to indicate the basis for the financing provisions.

The costs are shown, in general, as a percentage of covered payroll, which is the best measure of the program's financial cost. Dollar figures taken alone are misleading. A higher earnings level, for example, will increase not only the outgo of the program but also, and to a greater extent, its income. The result is that the cost in relation to payroll will decline.

The assumptions used in connection with the disability benefits are essentially the same as those used in the original cost estimates when these benefits were first incorporated in the law in 1956, although certain minor modifications of methodology have been made that result in a somewhat lower cost than that originally estimated. The actual cost to date, under the strict definition of "disability" in the law, has been significantly less than the intermediate-cost assumptions would indicate. Nevertheless, it is believed that, until somewhat more experience is available and can be analyzed, these cost bases for the monthly disability benefits should be maintained. Disability incidence and termination rates can vary widely—much more than mortality rates, which are a basic factor in the cost calculations for retirement and survivor benefits.

The cost estimates are extended beyond the year 2000 since the aged population itself cannot mature by then. The reason is that, since the number of births in the 1930's was very low compared with subsequent experience, there will be a dip in the relative number of aged persons from 1995 to about 2010 and benefit costs for that period would tend to be low. The year 2000 is by no

[3] S. Rpt. No. 2388 (85th Cong., 2d sess.).

means, therefore, a typical ultimate year.

An important measure of long-range costs is the level-premium contribution rate required to support the system into perpetuity, based on discounting at interest. It is assumed that benefit payments and taxable payrolls remain level after the year 2050. If a level rate based on these assumptions were adopted, relatively large accumulations in the trust fund and eventually sizable income from interest would result. Even though such a method of financing is not used, the concept has value as a convenient measure of long-range costs—especially in comparing various possible alternative plans and provisions—since it takes into account the heavy deferred benefit costs.

The estimates are based on level-earnings assumptions. Covered payrolls are not assumed, however, to be the same each year but rather to rise continuously with the estimated increase in the population of working age. Thus, the total taxable payroll under the 1958 amendments is estimated at about $210 billion in 1960, about $240 billion in 1970, $275 billion in 1980, $365 billion in the year 2000, and eventually at almost $500 billion. If in the future the earnings level should be considerably above that now prevailing, and if the benefits for persons on the rolls are adjusted upward so that the estimated relation of annual costs to payroll under the 1958 legislation remains unchanged, then the increased dollar outgo resulting will offset the increased dollar income. This is an important reason for considering costs in relation to payroll rather than in dollars.

Table 3.—*Estimated level-premium cost of benefit payments, administrative expenses, and interest earnings on existing trust funds under 1958 act as percent of taxable payroll,*[1] *by type of benefit, based on intermediate-cost estimate at 3-percent interest*

[Percent]

Item	Old-age and survivors insurance	Disability insurance
Old-age (primary) benefits	5.92	0.43
Wife's benefits	.57	.03
Widow's benefits	1.23	(2)
Parent's benefits	.02	(2)
Child's benefits	.43	.03
Mother's benefits	.11	(2)
Lump-sum death payments	.12	(2)
Total benefits	8.40	.49
Administrative expenses	.09	.01
Interest on existing trust funds [3]	−.22	−.01
Net total level-premium cost	8.27	.49

[1] Includes adjustment to reflect the lower contribution rate for the self-employed, compared with the combined exployer-employee rate.
[2] Not payable under this program.
[3] Offsets costs of benefits and administrative expenses.

Table 4.—*Progress of old-age and survivors insurance trust fund under the 1958 act, high-employment assumptions, based on intermediate-cost estimate at 3-percent interest*

[In millions]

Year	Contributions	Benefit payments	Administrative expenses	Railroad retirement financial interchange [1]	Interest on fund [2]	Balance in fund [3]
Actual data:						
1951	$3,367	$1,885	$81	----------	$417	$15,540
1952	3,819	2,194	88	----------	365	17,442
1953	3,945	3,006	88	----------	414	18,707
1954	5,163	3,670	92	----------	468	20,576
1955	5,713	4,968	119	----------	461	21,663
1956	6,172	5,715	132	----------	531	22,519
1957	6,826	7,347	[4] 162	----------	557	22,393
Estimated data:						
1958	$7,297	$8,318	$156	−$124	$565	$21,656
1959	8,632	9,504	161	−219	567	20,971
1960	10,621	10,027	166	−196	590	21,794
1961	11,106	10,618	169	−195	634	22,552
1962	11,256	11,207	172	−199	672	22,902
1963	13,124	11,678	175	−156	704	24,722
1964	13,652	12,016	178	−156	761	26,784
1965	13,830	12,333	181	−160	820	28,762
1970	19,404	15,030	201	−70	1,406	50,330
1975	20,880	17,766	222	−59	2,185	76,432
1980	22,301	20,874	246	12	2,856	98,678
2000	29,695	29,672	332	192	4,762	163,448
2020	36,124	40,716	426	192	8,379	285,282

[1] A positive figure indicates payment to the trust fund from the railroad retirement account, and a negative figure indicates the reverse.
[2] Assumed interest rate was 2.6 percent in 1958, 2.7 percent in 1959, 2.8 percent in 1960, and 2.9 percent in 1961.
[3] Excludes amounts in the railroad retirement account creditable to the old-age and survivors insurance trust fund—$377,000,000 for 1953, $284,000,000 for 1954, $163,000,000 for 1955, and $60,000,000 for 1956.
[4] Figure is artificially high because reimbursements of about $14 million from the disability insurance trust fund had not been made in 1957.

The cost estimates have not taken into account the possibility of a rise in earnings levels, although such a rise has characterized the past history of this country. If such an assumption were used in the cost estimates, along with the unlikely assumption that the benefits would nevertheless not be changed, the cost in relation to payroll would, of course, be lower. If benefits were to be adjusted to keep pace with rising earnings trends, the year-by-year costs as a percentage of payroll would be unaffected. The level-premium cost would then, however, be higher, since under such circumstances the relative importance of the interest earned by the trust funds would gradually diminish. If earnings do consistently rise, further consideration will need to be given to the financing basis of the program because the interest receipts of the trust funds will then meet a smaller proportion of the benefit costs than would otherwise be anticipated.

An important element in old-age, survivors, and disability insurance costs has resulted from amendments made to the Railroad Retirement Act in 1951. These amendments provide for a combination of railroad retirement compensation and earnings covered by the Social Security Act in determining benefits for workers with less than 10 years of railroad service (and also for all survivor benefits).

Under the financial interchange provisions then established, the old-age and survivors insurance trust fund and the disability insurance trust fund are to be maintained in the same financial position in which they would have been if there never had been a separate railroad retirement program. It is estimated that, in the long run, the net effect of these provisions will be a relatively small gain to the old-age, survivors, and disability insurance program, since the reimbursements from the railroad retirement system will be somewhat larger than the net additional benefits paid on the basis of railroad earnings.

Results of Intermediate-Cost Estimates

The intermediate-cost estimates are developed by averaging the low-cost and high-cost estimates (using the dollar estimates and deriving from them the corresponding estimates related to payroll). The intermediate-cost estimate cannot be considered the "most probable" estimate —a figure impossible to develop. Rather, it is presented as a convenient and readily available single set of figures to use for comparative purposes.

Congress, in enacting the 1950 amendments and subsequent legislation, has indicated its belief that the old-age, survivors, and disability insurance program should be on a completely self-supporting basis or, in other words, actuarially sound. A single estimate is required in the development of a tax schedule intended to make the system self-supporting. Any specific schedule will necessarily be somewhat different from what will actually be required to obtain an exact balance between contributions and benefits. This procedure, however, does make the intention specific, even though in actual practice future changes in the tax schedule may be necessary. Likewise, exact self-support cannot be obtained from any one set of integral or rounded fractional tax rates, increasing in orderly intervals, but the principle of self-support is aimed at as closely as possible.

The contribution schedules in the 1956 and 1958 amendments are shown below. Under each law, ¼ of 1 percent of the employer contribution and ¼ of 1 percent of the employee contribution are used for monthly disability benefits, and ⅜ of 1 percent of the self-employed person's contribution goes for this purpose.

[Percent]

Year	Employee rate [1]		Rate for the self-employed	
	1956 act	1958 act	1956 act	1958 act
1958	2¼	2¼	3⅜	3⅜
1959	2¼	2½	3⅜	3¾
1960–62	2¾	3	4⅛	4½
1963–64	2¾	3½	4⅛	5¼
1965	3¼	3½	4⅞	5¼
1966–68	3¼	4	4⅞	6
1969	3¼	4½	4⅞	6¾
1970–74	3¾	4½	5⅝	6¾
1975 and after	4¼	4½	6⅜	6¾

[1] Employee and employer pay the same rate.

Benefits are computed from a table set forth in the law. At first glance, it appears that an entirely new principle had been adopted, since the previous laws specified a definite benefit formula and minimum and maximum benefit provisions. Actually, however, this table is based on a definite formula and minimum and maximum benefit provisions, which are built into the table, and there is no change in the basic principle that has prevailed over the years. Certain approximations, however, have been made because of the necessary grouping involved in constructing a benefit table that, for facility of administration, is in terms of primary (old-age) benefits rounded to the nearest dollar.

The benefit formula for the primary insurance amount under the 1954 act was 55 percent of the first $110 of the average monthly wage, plus 20 percent of the next $240. The 1958 legislation, by increasing benefits 7 percent and raising the maximum earnings base to $4,800, in effect changed the formula to 58.85 percent of the first $110 of the average monthly wage, plus 21.40 percent of the next $290. When the average wage is less than $55, the primary insurance amount is raised to $33—the new minimum and also the minimum benefit for a survivor family consisting of only one beneficiary.

The maximum family benefit established by the 1954 act was also increased in 1958. The maximum was formerly the lesser of $200 or 80 percent of the average monthly wage, although the percentage maximum could not reduce the total family benefit to less than the larger of $50 or 1½ times the primary insurance amount. Under the 1958 amendments, the maximum family benefit is the lesser of $254 (twice the highest possible primary insurance amount, applicable when the average monthly wage is $400) or 80 percent of the average wage, except that the percentage maximum cannot reduce the total family benefit to less than the larger of 1½ times the primary insurance amount or the primary insurance amount plus $20 (in effect, not less than $53). In actual application, the 80-percent maximum will generally yield somewhat more than the mathematical result of taking 80 percent of the individual's average wage, since the benefit table provides for maximum family benefits on the basis of 80 percent of the upper end of the range of average wages that

Table 5.—*Progress of disability insurance trust fund under the 1958 act, high-employment assumptions, based on intermediate-cost estimate at 3-percent interest*

[In millions]

Year	Contributions	Benefit payments	Administrative expenses	Railroad retirement financial interchange [1]	Interest on fund [2]	Balance in fund
Actual data:						
1957	$702	$57	[3] $3	----------	$7	$649
Estimated data:						
1958	$914	$263	$19	----------	$25	$1,306
1959	980	431	21	$10	42	1,887
1960	991	492	23	−20	59	2,402
1961	1,004	555	23	−23	76	2,881
1962	1,018	613	24	−26	92	3,327
1963	1,032	675	24	−28	104	3,737
1964	1,046	736	25	−31	116	4,107
1965	1,059	796	25	−34	126	4,437
1970	1,141	1,052	27	−34	165	5,686
1975	1,227	1,249	30	−31	187	6,392
1980	1,311	1,380	30	−22	201	6,844
2000	1,745	1,649	40	−2	383	13,194
2020	2,125	2,330	51	1	521	17,764

[1] A positive figure indicates payment to the trust fund from the railroad retirement account, and a negative figure indicates the reverse.

[2] Assumed interest rate at 2.6 percent in 1958, 2.7 percent in 1959, 2.8 percent in 1960, and 2.9 percent in 1961.

[3] Figure is artificially low because reimbursements of about $14 million to the old-age and survivors insurance trust fund had not been made in 1957.

produce the rounded primary insurance amount. The maximum family benefits payable on the basis of various average monthly wages and primary insurance amounts are shown below.

Average monthly wage	Primary insurance amount	Maximum family benefit
$67 or less	$33-40	Primary insurance amount plus $20.
$68-127	41-68	1½ times the primary insurance amount.
$128-319	69-109	80 percent of average wage (approximately).
$320-400	110-127	$254.

The new law reduces the lack of actuarial balance for old-age and survivors insurance from 0.57 percent of payroll to 0.25 percent, or about the level under the 1956 amendments at the time they were enacted. For disability insurance there will be an actuarial surplus of 0.01 percent of payroll, compared with 0.15 percent under the provisions of the 1956 act. The effect of the new law on the combined old-age, survivors, and disability insurance program is to reduce the actuarial deficit from 0.42 percent of payroll to 0.24 percent, which is well within the margin of variation possible in actuarial cost estimates and about the same size as in the past when the program has been in substantial actuarial balance. If the cost estimates had been based on current earnings levels (instead of those for 1956), the lack of actuarial balance would have been somewhat less than 0.24 percent of payroll. Table 2 traces the change in the actuarial balance of the program from its situation under the 1956 act to that under the 1958 law.

It should be emphasized that in 1950 and in subsequent amendments Congress did not recommend that the system be financed by a high-level tax rate in the future but rather by an increasing schedule that, of necessity, ultimately rises higher than the level-premium rate. Nevertheless, this graded tax schedule will produce a considerable excess of income over outgo for many years so that sizable trust funds will develop, although not so large as those that would arise under a level-premium tax rate.

The revised contribution schedule has a twofold effect on the financing of the program. First, the uniform increase of ½ of 1 percent in the combined employer-employee rate, beginning in 1959, naturally has the effect of producing additional income equivalent to 0.50 percent of payroll on a level-premium basis (table 2). Second, the subsequent increases in the contribution rate, which are now scheduled to go into effect at intervals of 3 years (formerly 5 years), have the level-premium effect of increasing income by 0.19 percent of payroll.

Another change also has the effect of increasing income. The advance from $4,200 a year to $4,800 in the maximum taxable and creditable earnings base in effect increases income by a gross amount equivalent to 0.55 percent of payroll on a level-premium basis, but this rise is partially offset by the additional benefits that will be paid on the higher earnings credited (that is, 0.32 percent of payroll on a level-premium basis). Accordingly, the net effect is equivalent additional income of 0.23 percent of payroll on a level-premium basis.

The level-premium cost of the old-age and survivors insurance benefits (without considering administrative expenses and the effect of interest earnings on the existing trust fund) under the 1956 act was about 8.0 percent of payroll; the corresponding figure under the 1958 law is 8.4 percent. The figures for the disability benefits are 0.35 percent under the 1956 act and 0.49 percent under the 1958 amendments.

To summarize the changes in the program's actuarial balance, the increased revenue that results from the changes in the tax schedule and from the net effect of the increase in the maximum earnings base amounts to 0.91 percent of payroll on a level-premium basis as far as the old-age and survivors insurance aspect of the program is concerned. The total cost of the old-age and survivors insurance benefit changes amounts to 0.59 percent of payroll. Thus, there is an estimated excess of long-range income over outgo representing 0.32 percent of payroll on a level-premium basis. Since it is estimated that under the 1956 act the actuarial deficit was 0.57 percent of payroll, the net result of the revisions is to place the program in a position where it has an estimated actuarial deficit of 0.25 percent of payroll. This substantial improvement in the financial basis of the program brings the anticipated deficit well within the range that will permit the program to be considered actuarially sound.

Table 3 shows the costs for each of the various types of benefits under the 1958 amendments. The level-premium contribution rates equivalent to the graded schedule in the 1956 act and in the 1958 amendments may be computed in the same manner as level-premium benefit costs, as shown in table 1.

The amendments will increase disbursements for old-age and survivors insurance benefits during the calendar year 1958 by less than $1 million and result in no additional income to the trust fund. In 1959, disbursements for these benefits will total about $9.5 billion, or about $650 million more than they would have under the 1956 act, and contribution income will amount to about $8.6 billion, or $1.1 billion more than under the 1956 law. Thus, the excess of benefit outgo over contribution income is reduced from $1.4 billion to $900 million. The decreases in the old-age and survivors insurance trust fund will not be so large as those shown above because the interest receipts will exceed outgo for administrative expenses and transfers to the railroad retirement account.

In 1960, old-age and survivors insurance benefit disbursements will, according to the intermediate-cost estimate, be $10.0 billion, or an increase of $700 million from the amount under the 1956 law; contribution income will be $10.6 billion, or $1.5 billion more. Accordingly, in 1960 there should be an excess of contribution income over benefit outgo of about $600 million; a deficit of about $300 million would have developed under the 1956 law. The excess of contribution income will be about $500 million in 1961, about $50 million in 1962, and about $1.5 billion a year in 1963 and 1964. In contrast, under the 1956 law, during each of the 4 years 1961–64 there would have been deficits of contribution income ranging as high as $1 billion.

Disbursements for disability benefits for the calendar year 1958 are increased by the amendments by about $18 million, and there will be no additional income to the trust fund during the year. In 1959, disbursements for disability benefits will be about $200 million higher than they would have been under the 1956 law and will total about $430 million. Contribution income for disability insurance for 1959 will amount to about $980 million—a slight increase, resulting solely from the rise in the taxable earnings base, since no change was made in the amount of contributions assignable to this part of the program. Neverthless, in 1959 contribution income will exceed benefit outgo by about $550 million. Similarly, in 1960 and the years immediately following, contribution income will be well in excess of benefit outgo —by as much as $250 million in 1965 and by somewhat larger amounts in the earlier years.

Table 4 shows the estimated operation of the old-age and survivors insurance trust fund in the long-range future, based on the intermediate-cost estimate. It wil be recognized that the figures for the next 2 or 3 decades are the most reliable (under the assumption of level-earnings trends in the future) since the populations concerned — both covered workers and beneficiaries — are already born. For later years, there is much more uncertainty—if for no reason other than the relative difficulty in predicting future birth trends —but it is desirable and necessary to consider these long-range possibilities under a social insurance program that is intended to operate in perpetuity.

For 1960 and for most of the next 30 years, contribution income is estimated to be greater than old-age and survivors insurance benefit disbursements. Even after benefit outgo exceeds contribution income in 1985, the trust fund will continue to increase because of the effect of interest earnings, which more than meet the administrative expense disbursements and any financial interchanges with the railroad retirement program. It is estimated that, as a result, this trust fund will grow continuously, reaching $50 billion in 1970, $99 billion in 1980, and $163 billion at the end of the century. Estimates show that, in the distant future—that is, in about the year 2030—the trust fund will reach a maximum of about $295 billion and then decrease slowly. Nevertheless, even 90 years from now, the estimate shows a trust fund of about $200 billion. The fact that according to these estimates the trust fund will not become exhausted until somewhat more than a century hence indicates that, although the tax schedule is not fully self-supporting, it is for all practical purposes sufficiently close to self-support that the program may be said to be actuarially sound. This was also the general situation under the 1950 act and subsequent amendments, according to the estimates made when they were being considered.

The estimates indicate that the disability insurance trust fund will show

Table 6.—*Estimated progress of old-age and survivors insurance trust fund under the 1958 act, high-employment assumptions, based on low-cost and high-cost estimates at 3-percent interest*

[In millions]

Year	Contributions	Benefit payments	Administrative expenses	Railroad retirement financial interchange [1]	Interest on fund [2]	Balance in fund [3]
	Low-cost estimate					
1965	$13,866	$12,055	$167	−$145	$883	$31,076
1970	19,458	14,663	186	−49	1,542	55,226
1975	21,072	17,217	206	−32	2,441	85,607
1980	22,773	19,965	228	39	3,328	115,570
2000	32,137	26,835	310	218	8,071	279,701
	High-cost estimate					
1965	$13,794	$12,609	$195	−$176	$758	$26,447
1970	19,351	15,398	216	−91	1,270	45,434
1975	20,688	18,315	239	−85	1,929	67,256
1980	21,829	21,782	263	−14	2,385	81,786
2000	27,253	32,511	354	167	1,454	47,194

[1] A positive figure indicates payment to the trust fund from the railroad retirement account, and a negative figure indicates the reverse.
[2] Assumed interest rate at 2.6 percent in 1958, 2.7 percent in 1959, 2.8 percent in 1960, and 2.9 percent in 1961.
[3] Fund exhausted in 2010.

Table 7.—*Estimated progress of the disability insurance trust fund under the 1958 act, high-employment assumptions, based on low-cost and high-cost estimates at 3-percent interest*

[In millions]

Year	Contributions	Benefit payments	Administrative expenses	Railroad retirement financial interchange [1]	Interest on fund [2]	Balance in fund
	Low-cost estimate					
1965	$1,063	$535	$22	−$32	$164	$5,876
1970	1,144	699	23	−32	259	9,099
1975	1,239	834	25	−29	360	12,527
1980	1,339	930	27	−20	474	16,449
2000	1,889	1,110	36	-----------	1,310	45,372
	High-cost estimate					
1965	$1,056	$1,059	$28	−$35	$88	$2,998
1970	1,138	1,407	30	−35	71	2,272
1975	1,216	1,666	33	−33	15	258
1980	1,283	1,828	35	−24	(3)	(3)
2000	1,602	2,189	44	−4	(3)	(3)

[1] A positive figure indicates payment to the trust fund from the railroad retirement account, and a negative figure indicates the reverse.
[2] Assumed interest rate at 2.6 percent in 1958, 2.7 percent in 1959, 2.8 percent in 1960, and 2.9 percent in 1961.
[3] Fund exhausted in 1976.

a continuous growth and amount to $5.7 billion in 1970, $6.8 billion in 1980, and $13.2 billion in the year 2000 (table 5). There is an excess of contribution income over benefit disbursements for every year up to about 1975, and even thereafter the trust fund continues to grow because of interest earnings. This trust fund shows no decline in any future year because the level-premium cost of the disability benefits—according to the intermediate-cost estimate—is slightly lower than the level-premium income of ½ of 1 percent of payroll.

Cost Estimates on Range Basis

As indicated earlier, the excess of (1) the level-premium contribution rate equivalent to the graded schedule in the law over (2) the level-premium cost of benefit payments and administrative expenses (after appropriate adjustment for the effect of interest earnings on the existing trust fund) is used to indicate the program's actuarial balance. The following tabulation shows these figures according to the low-cost, high-cost, and intermediate-cost estimates for old-age and survivors insurance and disability insurance (computed as of the beginning of 1958).

[Percent]

Item	Low-cost estimates	High-cost estimates	Intermediate-cost estimates
Old-age and survivors insurance:			
Contributions	8.05	7.98	8.02
Benefit cost [1]	7.29	9.42	8.27
Net difference [2]	.76	−1.44	−.25
Disability insurance:			
Contributions	0.50	0.50	0.50
Benefit cost [1]	.33	.67	.49
Net difference [2]	.17	−.17	.01

[1] Includes adjustments to reflect (a) the lower contribution rate for the self-employed, compared with the combined employer-employee rate, (b) interest earnings on the existing trust fund, and (c) administrative expenses.
[2] A negative figure indicates the extent of lack of actuarial balance; a positive figure indicates more than sufficient financing (according to the estimates).

Table 6 shows the estimated operations of the old-age and survivors insurance trust fund for the low-cost and high-cost estimates, and table 7 gives corresponding figures for the disability insurance trust fund. Under the low-cost estimate, the old-age and survivors insurance trust fund builds up rapidly and in the year 2000, when it will amount to about $280 billion, is growing at a rate of about $14 billion a year. Likewise, the disability insurance trust fund grows steadily under the low-cost estimate, reaching about $45 billion in the year 2000, when its annual rate of growth is about $2 billion. For both trust funds, after 1959, benefit disbursements do not exceed contribution income in any year in the foreseeable future.

Under the high-cost estimate, the old-age and survivors insurance trust fund builds up to a maximum of about $85 billion in about 25 years but decreases thereafter until it is exhausted in the year 2010. Benefit disbursements are estimated to be smaller than contribution income during all the years before 1980 except 1959 and 1962 (in the latter year a relatively small deficit is shown). In the disability insurance trust fund during the early years of operation, contribution income materially exceeds outgo until 1965. Accordingly the fund, as shown by this estimate, would be about $3 billion in 1965 and would then slowly decline until its exhaustion in 1976.

These results are consistent and reasonable, since the program on the basis of intermediate-cost estimates is intended to be approximately self-supporting. Accordingly, a low-cost estimate should show that the system is more than self-supporting, and a high-cost estimate should show that a deficiency would arise later on. In actual practice, under the philosophy set forth in the congressional committee reports on the 1950 and subsequent acts, the tax schedule would be adjusted in future years so that neither of the developments described above would ever eventuate. Thus, if experience followed the low-cost estimate, and if the benefit provisions were not changed, the contribution rates would probably be adjusted downward or perhaps not be increased in future years according to schedule. If, however, the experience followed the high-cost estimate, the contribution rates would have to be raised above those scheduled. At any rate, the high-cost estimate does indicate that, under the tax schedule adopted, there would be ample funds to meet benefit disbursements for several decades, even under relatively high-cost experience.

Table 8.—*Estimated cost of benefits of old-age, survivors, and disability insurance program as percent of payroll,*[1] *under 1958 act*

[Percent]

Year	Low-cost estimate	High-cost estimate	Intermediate-cost estimate [2]
	Old-age and survivors insurance benefits		
1970	6.47	6.84	6.66
1980	7.46	8.49	7.96
1990	7.83	9.91	8.82
2000	7.06	10.06	8.44
2025	7.96	13.23	10.15
2050	10.08	15.09	12.02
Level-premium cost [3]	7.29	9.42	8.27
	Disability insurance benefits		
1970	0.32	0.63	0.48
1980	.36	.72	.53
1990	.30	.64	.46
2000	.30	.68	.47
2025	.37	.81	.55
2050	.43	.87	.60
Level-premium cost [3]	.33	.67	.49

[1] Takes into account the lower contribution rate for the self-employed, compared with the combined employer-employee rate.
[2] Based on the average of the dollar costs under the low-cost and high-cost estimates.
[3] Level-premium contribution rate, at 3-percent interest, for benefits after 1957, taking into account (a) interest on the trust funds as of Dec. 31, 1957, (b) future administrative expenses, and (c) the lower contribution rate payable by the self-employed.

Table 8 shows the estimated costs of the old-age and survivors insurance benefits and of monthly disability benefits as a percentage of payroll through the year 2050 and also the level-premium cost of the two programs for the low-cost, high-cost, and intermediate-cost estimates.

Summary

The old-age, survivors, and disability insurance program, as amended in 1958, has a benefit cost that is closely in balance with contribution income; it is, in fact, significantly closer to actuarial balance, according to the intermediate-cost estimate, than it was under the 1956 law. The program as amended in 1958 and also as modified by the earlier amend-

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Table 13.—*Aid to dependent children: Recipients and payments to recipients, by State, July 1958*[1]

[Includes vendor payments for medical care and cases receiving only such payments]

State	Number of families	Number of recipients		Payments to recipients			Percentage change from—			
				Total amount	Average per—		June 1958 in—		July 1957 in—	
		Total [2]	Children		Family	Recipient	Number of recipients	Amount	Number of recipients	Amount
Total	729,385	2,737,601	2,095,090	$74,323,231	$101.90	$27.15	+0.2	−0.3	+14.5	+19.2
Alabama	23,027	91,430	70,988	505,710	21.96	5.53	+.3	−34.3	+10.9	−42.5
Alaska	1,161	4,068	3,015	99,298	85.53	24.41	−2.3	−16.8	−7.9	−9.1
Arizona	5,926	23,233	17,676	623,327	105.19	26.83	+1.0	+.8	+11.4	+11.1
Arkansas	7,632	29,218	22,852	456,761	59.85	15.63	−10.7	−9.8	+.4	+3.7
California	65,076	229,576	177,752	10,308,002	158.40	44.90	+.8	+.1	+22.9	+42.5
Colorado	6,688	25,840	20,083	824,718	123.31	31.92	+.3	+.2	+11.5	+19.9
Connecticut	6,485	21,315	15,795	998,939	154.04	46.87	+2.0	+6.2	+19.9	+29.9
Delaware	1,582	5,895	4,516	138,815	87.75	23.55	−.1	−.4	+13.2	+17.7
District of Columbia	3,177	13,859	10,873	393,639	123.90	28.40	+2.7	+3.2	+29.0	+30.0
Florida	25,038	91,093	70,364	1,486,059	59.35	16.31	+1.1	+1.3	+12.5	+12.2
Georgia	15,453	57,510	44,162	1,277,560	82.67	22.21	−.2	−.1	+7.6	+6.9
Hawaii	2,661	10,355	8,256	314,083	118.03	30.33	−3.1	(3)	−2.6	−1.5
Idaho	1,878	6,873	5,056	267,889	142.65	38.98	−.3	+1.0	+4.7	+8.7
Illinois	31,496	127,497	97,653	4,746,558	150.70	37.23	+2.7	+2.5	+18.7	+22.5
Indiana	10,527	38,207	28,580	1,080,785	102.67	28.29	+.7	+1.0	+13.2	+15.1
Iowa	8,081	29,618	22,110	1,034,318	127.99	34.92	+.9	+1.0	+11.4	+22.8
Kansas	5,363	19,775	15,384	653,074	121.77	33.03	−.9	−2.1	+10.3	+11.3
Kentucky	20,419	74,230	55,980	1,456,207	71.32	19.62	+.5	+.4	+4.8	+4.3
Louisiana	24,600	98,855	76,223	2,058,970	83.70	20.83	−.2	−.6	+13.8	+12.5
Maine	5,195	18,156	13,349	482,781	92.93	26.59	−1.2	−1.3	+13.1	+11.8
Maryland	7,397	30,522	23,840	815,243	110.21	26.71	+.2	+.5	+12.1	+21.9
Massachusetts	13,721	46,238	34,219	2,017,846	147.06	43.64	(3)	+.2	+9.6	+15.6
Michigan	24,438	87,341	64,215	3,276,150	134.06	37.51	+1.2	+1.2	+17.4	+17.7
Minnesota	8,828	30,127	23,277	1,309,482	148.33	43.47	−.2	+6.0	+7.1	+16.7
Mississippi	16,973	64,200	50,666	671,490	39.56	10.46	+.3	−16.3	+22.3	+69.9
Missouri	24,502	91,837	69,424	2,027,811	82.76	22.08	−.2	−.2	+17.4	+10.6
Montana	2,024	7,333	5,685	237,204	117.20	32.35	−1.7	−2.6	−9.3	−10.4
Nebraska	2,919	10,822	8,182	295,305	101.17	27.29	−2.0	−2.5	+5.4	+7.4
Nevada	878	2,964	2,277	80,930	92.18	27.30	−1.7	−1.9	+38.4	+39.3
New Hampshire	1,014	3,783	2,833	141,183	139.23	37.32	−3.1	−4.4	+13.7	+17.4
New Jersey	9,068	29,925	22,596	1,300,703	143.44	43.47	+.3	+.1	+22.8	+27.6
New Mexico	7,002	26,380	20,150	634,834	90.66	24.06	+.6	+.6	+3.0	−3.4
New York	65,918	251,644	187,782	10,001,134	151.72	39.74	+.7	−.2	+15.5	+21.3
North Carolina	24,106	95,041	73,218	1,750,391	72.61	18.42	−3.0	−2.7	+19.9	+23.7
North Dakota	1,645	6,230	4,829	226,573	137.73	36.37	−1.2	−1.2	+.7	+1.7
Ohio	21,570	84,127	64,451	[4] 2,042,086	94.67	24.27	+1.3	+1.3	+17.5	+15.6
Oklahoma	16,813	57,853	43,970	1,707,426	101.55	29.51	+.5	+1.2	+4.8	+6.7
Oregon	4,646	15,916	11,704	644,240	138.67	40.48	−15.6	−13.3	+28.4	+31.7
Pennsylvania	39,566	155,309	118,186	4,583,009	115.83	29.51	+1.1	−.1	+29.2	+29.1
Puerto Rico	47,795	176,265	141,666	656,862	13.74	3.73	+.9	+1.3	+11.1	+3.5
Rhode Island	4,436	15,934	11,894	557,333	125.64	34.98	−.6	+.3	+19.2	+22.2
South Carolina	9,495	37,714	29,621	530,221	55.84	14.06	+.1	(5)	+13.9	+13.3
South Dakota	3,079	10,521	7,974	297,365	96.58	28.26	+.1	+.2	+7.5	+15.4
Tennessee	20,216	74,586	56,202	1,395,016	69.01	18.70	+.4	−.1	+8.4	+13.6
Texas	26,222	108,216	82,327	1,799,317	68.62	16.63	−.6	−.8	+12.1	+7.6
Utah	3,195	11,310	8,425	402,448	125.96	35.58	−.5	+2.2	+14.3	+11.8
Vermont	1,153	4,032	3,027	106,306	92.20	26.37	−1.2	−1.3	+8.0	+10.3
Virgin Islands	220	761	648	7,079	32.18	9.30	−3.1	−2.9	−30.3	−24.4
Virginia	9,158	36,857	28,880	689,349	75.27	18.70	+.4	+.8	+6.0	+8.4
Washington	11,589	40,097	29,790	1,777,661	153.39	44.33	−.8	+.4	+22.9	+24.6
West Virginia	19,368	74,645	58,115	1,756,591	90.70	23.53	+.5	+.7	+9.4	+11.0
Wisconsin	8,258	29,994	22,487	1,285,994	155.73	42.88	−.2	−.7	+9.0	+11.9
Wyoming	708	2,474	1,863	91,156	128.75	36.85	−.9	+.4	+10.3	+18.3

[1] For definition of terms see the *Bulletin*, October 1957, p. 18. All data subject to revision.

[2] Includes as recipients the children and 1 parent or other adult relative in families in which the requirements of at least 1 such adult were considered in determining the amount of assistance.

[3] Decrease of less than 0.05 percent.

[4] In addition, supplemental payments of $252,423 were made from general assistance funds to 6,172 families.

[5] Increase of less than 0.05 percent.

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ments has been shown to be not fully self-supporting under the intermediate-cost estimate. It is, however, very close to an exact balance, especially since a range of error is necessarily present in the long-range actuarial cost estimates and rounded tax rates are used in actual practice. Accordingly, the old-age, survivors, and disability insurance program, as amended in 1958, is actuarially sound. The actuarial status of the program is actually much improved because the cost of the liberalized benefits is more than met by the increased contributions that are scheduled.

The disability insurance portion of the program—established under the 1956 act—shows a small favorable actuarial balance because the contribution rate allocated is slightly in excess of the cost for the disability benefits, based on the intermediate-cost estimate. When the variability of cost estimates for disability benefits is taken into consideration, this small actuarial excess is not significant.