Old-Age and Survivors Insurance: Financing Basis and Policy Under 1956 Amendments

by Robert J. Myers*

In the 1956 amendments to the Social Security Act, Congress continued its policy of making the old-age and survivors insurance program self-supporting. The amendments included provisions increasing the cost of the program, but the greater cost—except for the new disability insurance benefits—is roughly offset by cost-reduction factors. To finance the disability benefits, the tax rate was increased and a separate trust fund established. The effects of the 1956 legislation are included in the consideration of program financing that follows.

CONGRESS has always strongly believed that the old-age and survivors insurance program should be actuarially sound, and it has therefore carefully studied the cost aspects of any new benefit provisions when amendments to the law are being considered. At the time of the 1950 amendments, Congress expressed its belief that the program should be completely self-supporting from contributions of covered individuals and employers; accordingly, it repealed the provision permitting appropriations to the program from the general revenues of the Treasury. In the amendments of 1952 and 1954, and again in the Social Security Amendments of 1956,[1] Congress continued to indicate 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.

The concept of actuarial soundness as it applies to old-age and survivors insurance differs considerably from its application to private insurance, although there are certain points of similarity—especially among the private pension plans.

The most important 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. Accordingly, it may be said that the old-age and survivors insurance program is actuarially sound if it is in actuarial balance because future income from contributions and interest earnings on the accumulated trust fund will, in the long run, support the disbursements for benefits and administrative expenses. Obviously, 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, can be expressed in the law by using a contribution schedule that, according to an intermediate-cost estimate, results in the system being in balance, or in approximate balance.

The Social Security Amendments of 1956 showed again the conviction of Congress that the program should be kept on an actuarially sound basis. To finance the disability benefits provided by the 1956 law, the contribution rate was increased and a trust fund separate from that for old-age and survivors insurance benefits was established. The amendments affecting the eligibility age for women and providing for payments of benefits to adult, disabled children raised the cost of the old-age and survivors insurance benefits, but this increase was roughly offset by factors reducing the cost—extension of coverage, the change in the interest basis of the trust fund, and higher earnings levels.

The program's actuarial balance under the 1952 act was estimated, at the time the legislation was adopted, to be virtually the same as in the estimates made at the time of the 1950 amendments; the reason was that the rise in earnings levels in the 3 years preceding the enactment of the 1952 law had been taken into consideration in the 1952 estimates. New cost estimates made after the enactment of the 1952 law indicated that the level-premium cost (that is, 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 one-half of 1 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 as passed by the House of Representatives contained an adjusted contribution schedule that not only met the increased cost of the benefit changes in the bill but also reduced the lack of actuarial balance to the point where, for all practical purposes, it was sufficiently provided for. The Senate, however, added several liberalized benefit provisions without any offsetting increase in contribution income. Accordingly, although the bill met the increased cost of the new benefit provisions, it left the "actuarial insufficiency" of the 1952 act substantially unchanged. The benefit costs for the 1954 amendments as finally enacted fell between those of the House-approved and Senate-approved bills. Thus, it may be said that under the 1954 act the increase in the contribution schedule met all the additional cost of the benefit changes made and also at the same time reduced substantially the "actuarial insufficiency" that the estimates had indicated in the financing of the 1952 act.

Recent operating experience of the program has indicated that earnings levels have risen by about 15 percent

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[1] For a summary of the amendments affecting the old-age and survivors insurance program see pages 3–15.

from those used in the previous actuarial estimates, which were based on 1951–52 levels. With this factor taken into account, the "actuarial insufficiency" under the 1954 act was reduced to the point where, for all practical purposes, it may be said to have been nonexistent. Accordingly, the system was in approximate actuarial balance. It is recognized that future cost estimates, particularly if earnings continue to rise, may indicate that a schedule of lower contribution rates would provide for a self-supporting program. Despite this possibility, the House Ways and Means Committee stated in its report on the 1956 amendments that the policy should be one of utmost prudence to assure the program's continuing actuarial soundness.

Estimates of the future cost of the old-age and survivors insurance program (including the cost of the new disability insurance benefits) are affected by many factors that are difficult to determine. The assumptions used in the actuarial cost estimates may therefore differ widely and yet be reasonable. Benefit payments

Table 1.—*Estimated progress of old-age and survivors insurance trust fund under 1956 amendments, based on high-employment assumptions*

[In millions]

Year	Contributions	Benefit payments	Administrative expenses	Interest[1]	Balance in fund
	Low-cost estimate				
1960	$9,055	$7,639	$140	$676	$27,333
1970	14,389	11,867	157	1,227	49,594
1980	18,614	15,987	186	2,368	94,667
1990	20,278	19,322	215	3,508	138,818
2000	22,519	20,550	232	4,850	192,242
2020	26,455	26,394	287	9,372	369,722
	High-cost estimate				
1960	$8,976	$8,589	$177	$619	$24,524
1970	14,241	13,418	206	728	29,030
1980	18,138	18,017	248	1,109	43,692
1990	19,027	21,978	285	952	35,942
2000	20,299	23,906	308	134	3,346
2020	21,013	31,489	371	(2)	(2)

1 At 2.6-percent rate.
2 Fund exhausted in 2001.

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 that is inherent in any retirement program, public or private, that has been in operation for only a relatively short period.

The cost estimates are shown first within a range, to indicate the possible variation 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 nearly full employment, with average annual earnings at about the level prevailing in 1955. Intermediate estimates developed by averaging the low- and high-cost estimates are then shown to indicate the basis for the financing provisions.

In general, the costs are shown as a percentage of covered payroll. This is the best measure of the financial cost of the program. Dollar figures taken alone are misleading. A higher earnings level, for example, will increase not only the outgo but also, and to a greater extent, the income of the program. As a result, the cost in relation to payroll will decrease. The low- and high-cost assumptions therefore relate to the cost as a percentage of payroll in the aggregate and not to the dollar costs. The two cost assumptions are based on possible variations in fertility rates, mortality rates, retirement rates, remarriage rates, labor-market withdrawal rates, and so forth.

An important measure of long-range cost is the level-premium contribution rate required to support the system in perpetuity, based on discounting at interest. It is assumed here that benefit payments and taxable payrolls remain level after the year 2050. (Actually, the relationship between benefits and payroll is virtually constant after about 2020.) If a level rate under such an assumption were adopted, relatively large accumulations in the old-age and survivors insurance trust fund would result, and in consequence there would eventually be a sizable income from interest. Even though this method of financing is not followed, the concept may nevertheless be used as a convenient measure of long-range costs. This cost concept has a special value in comparing possible alternative plans and provisions, since it takes into account the heavy deferred load.

The cost estimates have not taken into account the possibility of a rise in earnings levels, although such a rise has characterized the history of this country. If this assumption were

Table 2.—*Estimated progress of disability insurance trust fund under 1956 amendments, based on high-employment assumptions*

[In millions]

Year	Contributions	Benefit payments	Administrative expenses	Interest[1]	Balance in fund
	Low-cost estimate				
1957	$724	$73	$14	$8	$645
1958	902	239	18	25	1,315
1959	910	306	21	42	1,940
1960	918	375	25	57	2,515
1965	972	483	19	133	5,468
1970	1,036	572	23	213	8,633
1975	1,094	644	25	302	12,119
	High-cost estimate				
1957	$718	$160	$30	$7	$535
1958	894	520	40	18	887
1959	901	657	45	26	1,112
1960	908	796	52	30	1,202
1965	959	989	39	33	1,278
1970	1,023	1,136	46	22	804
1975	1,078	1,255	50	(2)	(2)

1 At 2.6-percent rate.
2 Fund exhausted in 1975.

used in the cost estimates, along with the unlikely assumption that there would be no accompanying change in benefits, 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, however, would be higher, especially for the old-age and survivors insurance benefits, since under such circumstances the relative importance of the interest receipts of the trust funds would gradually diminish. If earnings do rise consistently, the financing basis of the program will need thorough consideration because then the interest receipts of the trust funds will meet a smaller proportion of the benefit costs than would otherwise be anticipated.

Under the provision for financial interchange between the railroad retirement program and the old-age and survivors insurance program, the old-age and survivors insurance trust fund and the disability insurance trust fund are to be placed in the same financial position as if railroad employment had always been covered under the old-age and survivors insurance program. The long-range costs developed here are for the operation of the trust funds on the basis, as provided in the law, that all railroad employment will be (and beginning in 1937, has been) covered employment. The balance in the funds thus corresponds exactly to the actual situation arising. The contribution income and benefit disbursements shown are, however, slightly higher (by about 5 percent) than the payments that will actually be made directly to the trust funds from contributors and the payments that will actually be made from the trust funds to the individual beneficiaries. The reason is that these amounts include both the additional contributions that would have been collected and the additional benefits that would have been paid if railroad employment had always been covered. The balance for these two elements is to be accounted for in actual practice by the operation of the financial interchange provisions.

Results of High- and Low-Cost Estimates

The level-premium cost of the benefits provided as a result of the 1956 amendments, on the basis of 2.6-percent interest, ranges from approximately 7.0 percent to 9.1 percent of payroll (including disability benefits as well as old-age and survivors insurance benefits).[2]

Table 1 shows the estimated operations of the old-age and survivors insurance trust fund, and table 2 relates to the new disability insurance trust fund set up by the 1956 amendments. Under the low-cost estimate, the old-age and survivors insurance trust fund builds up rapidly; by the

[2] For more details on the cost estimates see *Actuarial Cost Estimates for the Old-Age, Survivors, and Disability Insurance System as Modified by Amendments to the Social Security Act in 1956*, prepared for the use of the House Committee on Ways and Means by Robert J. Myers, Actuary to the Committee, July 23, 1956.

Table 3.—*Changes under 1956 amendments in estimated level-premium cost*[1] *of benefit payments as percent of payroll, based on intermediate-cost estimate and high-employment assumptions*

Item	Level-premium cost [1]
Cost of 1954 act (2.4-percent interest):	
1954 estimate (based on 1951–52 earnings level)	7.77
Current estimate (based on 1955 earnings level)	7.45
1956 changes:	
Lowering minimum eligibility age for widows and dependent mothers to 62	+.19
Lowering minimum eligibility age for women workers and wives to 62	+.03
Payment of monthly disability benefits after age 50 [2]	+.42
Payment of disabled child's benefits	+.01
Extension of coverage	−.11
Revised interest basis for trust-fund investments	−.14
Total effect of changes	+.40
Cost of program as amended in 1956 (2.6-percent interest)	7.85

[1] Level-premium contribution rate for benefit payments after 1955 and in perpetuity; takes into account (a) the lower contribution rate for the self-employed, compared with the employer-employee rate, (b) the existing trust fund, and (c) administrative expenses.
[2] Includes administrative expenses.

year 2000 it is growing at a rate of about $7 billion a year and amounts to about $190 billion. The disability insurance trust fund is estimated to grow steadily, reaching about $12 billion in 1975, at which time its annual rate of growth is about $700 million. For both trust funds, benefit disbursements do not exceed contribution income in any year shown.

Under the high-cost estimate, on the other hand, the old-age and survivors insurance trust fund builds up to a maximum of $45 billion in about 25 years (although it remains virtually level at about $25 billion during the 1960's) but decreases thereafter until it is exhausted shortly after the year 2000. Benefit disbursements from this fund are smaller than contribution income during most of the years before 1980. (The exceptions are the years shortly before the several scheduled rises in the contribution rate, and even then, interest receipts are usually sufficient to offset such deficits.) Under the high-cost estimate for the disability insurance trust fund, in the early years of operation contribution income materially exceeds benefit outgo. The difference is especially great in 1957 because contributions will be collected during most of the year and benefits will be payable only for the latter half of the year; actually only 5 months' disbursements will come out of the trust fund because benefits are payable after the end of the month to which they apply. The disability insurance trust fund, as shown in this estimate, amounts to about $500 million by the end of 1957 and then slowly increases, reaching a maximum of about $1.3 billion between 1960 and 1965; from that point the fund slowly diminishes until in 1975 it is exhausted. Obviously, if actual operating experience were less

Table 4.—*Estimated cost of benefit payments under 1954 and 1956 acts, based on intermediate-cost estimate and high-employment assumptions*

Year	Amount (in millions)		Percent of payroll [1]	
	1954 act	1956 act [2]	1954 act	1956 act [2]
1957	$6,344	$6,945	3.61	3.83
1958	6,714	7,648	3.79	4.18
1959	7,084	8,182	3.97	4.43
1960	7,454	8,699	4.14	4.67
1970	12,057	13,496	5.92	6.42
1980	16,236	17,988	7.28	7.83
1990	19,789	21,609	8.28	8.80
2000	21,370	23,369	8.19	8.73
2020	27,833	30,192	9.60	10.18
Level-premium rate [3]			7.45	7.85

[1] Takes into account lower contribution rate for the self-employed, compared with the employer-employee rate.
[2] Includes monthly disability benefits.
[3] For benefit payments after 1955 and in perpetuity; takes into account (a) lower contribution rate for the self-employed, compared with the employer-employee rate, (b) the existing trust fund, and (c) administrative expenses. Assumes that benefits and payrolls remain level after the year 2050. Based on 2.4-percent interest rate for 1954 act and on 2.6-percent interest rate for 1956 act.

favorable than under the high-cost estimate, the fund would rise to a lower maximum and would be exhausted earlier.

These results are consistent and reasonable, since on an intermediate-cost estimate basis the program is intended to be approximately self-supporting. Accordingly, a low-cost estimate should show that the program is more than self-supporting, whereas a high-cost estimate should show that a deficiency would arise later on. In actual practice, under the philosophy embodied in the 1950, 1952, and 1954 acts, set forth in the reports of the Congressional Committees and continued in the 1956 amendments, the tax schedule would be adjusted in future years so that neither of the developments of the trust funds shown in tables 1 and 2 would ever eventuate. If experience followed the low-cost estimate, the contribution rates would probably be adjusted downward or perhaps would not be increased according to schedule in the future. If the experience followed the high-cost estimate, the contribution rates would have to be raised above those scheduled. The high-cost estimate does indicate that under the tax schedule adopted there would be ample funds to meet old-age and survivors insurance benefit disbursements for several decades, even under relatively high-cost experience.

Results of Intermediate-Cost Estimates

The intermediate-cost estimates are developed from the low-cost and high-cost estimates by averaging them (using the dollar estimates and developing from them the corresponding estimates related to payroll). The intermediate-cost estimate is not necessarily the closest to what actual costs will be—a figure impossible to develop. It is set down as a convenient and readily available single set of figures to use for comparative purposes.

Congress, in enacting the 1950, 1952, 1954, and 1956 acts, has indicated its belief that the old-age and survivors insurance program should be on a completely self-supporting basis or, in other words, actuarially sound. A single estimate is necessary in developing a tax schedule intended to make the system self-supporting. Any one 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 of the program cannot be attained through a specific 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 schedules for the contribution rates contained in the 1954 act and in the 1956 amendments are shown below.

Year	Employee rate [1]		Rate for the self-employed	
	1954 act	1956 act	1954 act	1956 act
1957–59	2	$2\frac{1}{4}$	3	$3\frac{3}{8}$
1960–64	$2\frac{1}{2}$	$2\frac{3}{4}$	$3\frac{3}{4}$	$4\frac{1}{8}$
1965–69	3	$3\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{7}{8}$
1970–74	$3\frac{1}{2}$	$3\frac{3}{4}$	$5\frac{1}{4}$	$5\frac{5}{8}$
1975 and after	4	$4\frac{1}{4}$	6	$6\frac{3}{8}$

[1] Employer and employee pay the same rate.

Table 3 gives an estimate of the level-premium cost of the 1954 amendments and shows the increase in cost resulting from each of the major changes enacted in 1956. These level-premium costs are based on benefit payments from 1956 on.

The level-premium contribution rates equivalent to the graded schedules in the 1954 and 1956 acts may be computed in the same manner as level-premium benefit costs. These estimates are shown below for income and disbursements after 1955, computed on the basis of the intermediate-cost estimate, at 2.4-percent interest for the 1954 act and 2.6-percent interest for the 1956 act. (The higher rate for the 1956 act results from the revision of the interest basis for trust fund investments.)

Level-premium equivalent	1954 act		1956 act	
	Original estimate	Revised estimate	Old-age and survivor benefits	Disability benefits
Benefit costs [1]	7.77	7.45	7.43	0.42
Contributions	7.29	7.29	7.23	.49
Net difference [2]	.48	.16	.20	−.07

[1] Includes adjustments to reflect (a) lower contribution rate for the self-employed, compared with the employer-employee rate, (b) administrative expenses, and (c) for old-age and survivors insurance benefits, the existing trust fund.

[2] A positive figure indicates the extent of lack of actuarial balance. A negative figure indicates more than sufficient financing (according to the estimate).

Under the revised contribution schedule in the 1956 amendments the combined employer-employee rate is increased by one-half of 1 percent beginning in 1957. In the old-age and survivors insurance part of the program, the lack of actuarial balance is 0.20 percent of payroll—somewhat greater than that under the latest estimate for the 1954 act, although well below the estimate

Table 5.—*Estimated benefit payments as percent of taxable payroll* [1] *under 1956 amendments, by type of benefit, based on intermediate-cost estimate and high-employment assumptions*

Year	Monthly benefits						Lump-sum death payments	Disability freeze	Disability monthly benefits	Total benefits
	Old-age	Wife's or husband's	Widow's or widower's	Parent's	Mother's	Child's				
	Actual data [2]									
1951	0.97	0.15	0.13	0.01	0.07	0.23	0.05			1.61
1952	1.06	.16	.15	.01	.07	.25	.05			1.76
1953	1.43	.21	.19	.01	.09	.29	.07			2.28
1954	1.75	.25	.23	.01	.10	.34	.07			2.74
1955	2.07	.30	.25	.01	.10	.36	.07	(3)		3.16
	Under 1956 act									
1960	2.64	0.38	0.64	0.01	0.16	0.40	0.09	0.04	0.31	4.67
1970	3.68	.40	1.13	.01	.18	.43	.11	.06	.41	6.42
1980	4.75	.44	1.43	.01	.17	.41	.12	.07	.43	7.83
1990	5.64	.44	1.54	.01	.16	.39	.13	.08	.39	8.80
2000	5.70	.43	1.43	.02	.15	.37	.14	.08	.43	8.73
2020	6.96	.51	1.50	.01	.15	.37	.15	.10	.42	10.18
Level-premium rate [4]	5.06	.45	1.29	.01	.16	.39	.13	.07	.40	7.96

[1] Takes into account lower contribution rate for the self-employed, compared with the employer-employee rate.

[2] Excludes effect of railroad coverage under financial interchange provisions.

[3] Less than 0.005 percent.

[4] At 2.6-percent interest. For benefit payments after 1955 and in perpetuity, not taking into account (a) the existing trust fund and (b) administrative expenses. Assumes that benefits and payrolls remain level after the year 2050.

made when the 1954 law was enacted. At the same time, the disability insurance trust fund shows a slight actuarial surplus according to this intermediate-cost estimate. This situation occurs because the tax rate of one-half of 1 percent (which has a level-premium equivalent based on the period after 1955 of slightly less than 0.50 percent, since it is not effective until 1957) is higher than the level-premium equivalent of the benefit disbursements and administrative expenses combined. When old-age, survivor, and disability benefits are considered together, the program shows a lack of actuarial balance of only 0.13 percent of payroll, or slightly less than that under the 1954 act.

Table 4 shows the year-by-year cost of the benefit payments according to the intermediate-cost estimate for the laws of 1954 and 1956. These figures are based on a future level-earnings assumption and do not reflect business cycles, which over a long period of years tend to cancel one another. The benefit disbursements for 1957 are estimated at about $6.9 billion for the intermediate-cost estimate, in contrast to contribution income amounting to approximately $8.0 billion.

The cost of the benefits under the 1956 amendments is shown in table 5 as a percentage of payroll for each of the various types of benefits.

Table 6 gives the estimated operation of the old-age and survivors insurance trust fund under the 1956 amendments (based on a 2.6-percent interest rate), as well as the estimated operation of the disability insurance trust fund. The old-age and survivors insurance trust fund has contribution income exceeding benefit disbursements during most of the next 30 years; in the few years immediately before the scheduled contribution increases this is not the case, but the interest received in those years covers the difference. As a result, this fund is estimated to grow steadily until it reaches a maximum of about $120 billion in about 60 years, and then to decrease. This slight decline in the distant future indicates that, although the present tax schedule is not fully self-supporting, for all practical purposes, it is so close to self-support that the program may be said to be actuarially sound. This general situation was also true for the 1950, 1952, and 1954 acts, according to estimates made when they were being considered.

Table 6.—*Estimated progress of trust funds under 1956 amendments, based on intermediate-cost estimate and high-employment assumptions*

[In millions]

Year	Contributions	Benefit payments	Administrative expenses	Interest [1]	Balance in fund
	Old-age and survivors insurance trust fund				
1956	$6,747	$6,068	$132	$533	$22,906
1957	7,259	6,829	149	599	23,786
1958	7,336	7,269	154	617	24,316
1959	7,450	7,700	156	627	24,537
1960	9,016	8,113	159	648	25,929
1965	11,503	10,465	170	780	31,216
1970	14,315	12,642	182	977	39,317
1975	17,317	14,787	200	1,297	52,346
1980	18,376	17,002	217	1,739	69,184
2000	21,409	22,228	270	2,492	97,802
2010	22,741	23,648	287	2,954	115,962
2020	23,734	28,940	330	2,868	110,410
	Disability insurance trust fund				
1957	$721	$116	$21	$8	$592
1958	898	379	29	22	1,104
1959	905	482	33	34	1,528
1960	913	586	38	43	1,860
1965	966	735	29	83	3,380
1970	1,030	854	34	118	4,729
1975	1,086	949	39	151	5,995

[1] At 2.6-percent rate.

The disability insurance trust fund, in contrast, grows steadily, with the excess of contribution income over outgo for benefits and administrative expenses gradually narrowing, until by 1975 the difference is only about 10 percent. The fund builds up slowly but steadily and reaches $6 billion at the end of 1975. This situation is to be expected since the estimated level-premium cost of the disability benefits, according to the intermediate-cost estimate, is about 0.4 percent of payroll, and the level-premium income is about 0.5 percent.

Summary of Actuarial Cost Estimates

The old-age and survivors insurance program, as amended by the 1956 legislation, has a benefit cost (assuming the 1955 earnings levels continue) that is closely in balance with contribution income. This also was the case at the time the 1950, 1952, and 1954 amendments were enacted. In fact, the program is even more nearly in actuarial balance, according to the intermediate-cost estimates, than it was when the previous laws were being considered by Congress. Although in every instance the program is shown to be not fully self-supporting under the intermediate-cost estimate, it is close to an exact balance, especially since a range of error is necessarily present in long-range actuarial cost estimates and rounded tax rates are used in actual practice. Accordingly, the program as amended by the 1956 amendments is actuarially sound. In fact, its actuarial status is improved by the amendments, since the cost of the liberalized benefits is more than met by the increased contributions scheduled, which become effective almost immediately on the inauguration of the new benefit provisions.

The separate disability insurance trust fund established by the 1956 amendments shows a small favorable actuarial balance because the contribution rate allocated to this fund is slightly in excess of the cost for the disability benefits, based on the intermediate-cost estimate. Considering the variability of cost estimates for disability benefits, this small actuarial excess is certainly no more than a moderate safety factor.