OASDI COST ESTIMATES AND VALUATIONS

BY

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The need of our labor force for economic security upon retirement, forcefully brought to public attention by the depression of the '30s, led President Roosevelt to appoint a study committee which suggested a retirement program limited initially to industrial and commercial employees. The system enacted by Congress in 1935 was extended in 1939, following study by an Advisory Council, to include dependents of retired workers and survivors of workers covered by the program. After two further extensive Congressional studies, coverage was extended in 1950 to most non-farm self-employed persons and to certain domestic workers, farm laborers, and employees of the Federal, State, and local governments and of non-profit institutions. In 1954, further legislation extended coverage to self-employed farmers. The scope has since been extended to include benefits for disabled workers and their dependents, so that the official title of the system is "Old-Age, Survivors, and Disability Insurance," abbreviated to OASDI.

This paper discusses the general nature of long-range actuarial cost estimates for the OASDI and similar programs, with a history of the estimates made in the past quarter century and the actuarial basis of the program now and in the past. The effect of the cost estimates on the development of the program is also discussed.

The term "reserve" is not used here for the accumulated assets of the system since, to a certain extent, this might imply that full actuarial reserve financing is practiced or attempted, whereas—quite properly—this is by no means the case. However, in this respect, mention should be made that in the original Social Security Act of 1935, the accumulated assets of the system were referred to as the "Old-Age Reserve Account;" this term was replaced in the 1939 Amendments by "Trust Fund."

VALUATION METHODS

Two different methods of presenting actuarial valuations are in common use. Many systems make use of the "balance sheet" method, which to some extent follows standard accounting procedures. This involves the setting up of assets and liabilities, both actual and potential, as of a given date. Under one approach the future assets are valued in accordance with the actual scheduled contribution rates and are compared with the computed liabilities; the resulting deficit or surplus (in monetary units or as related to payroll) is then derived. Under another approach the assets and liabilities are "balanced" by determining the contribution rate needed to achieve this result.

The nomenclature "balance sheet method" is used here for any valuation following this general procedure—using service tables

and commutation columns—even though the results may not be presented in an actual balance sheet, but rather in dollar or percentage-of-payroll cost figures.

The other procedure, the "projection" method, has been used consistently for OASDI cost estimates. This method involves a presentation of year-by-year figures in the future (perhaps at quinquennial or decennial intervals) of such statistics as covered workers, beneficiaries, covered payroll, contribution income, interest income, benefit disbursements, administrative expenses, and balance in the fund.

The main advantage of the "balance sheet" method is its ease of preparation. In most cases well-established actuarial techniques which permit the use of existing tables and computational short-cuts are followed. This is particularly important when dealing with small systems, for which extensive work is not warranted, but only when "static" assumptions are made as to the various cost factors. If "dynamic" assumptions such as continuously improving mortality are used, the "projection" method might well prove less difficult for any system.

It is sometimes claimed that under the "balance sheet" method there is no need to make assumptions for experience extending many years into the future. Actually, this is not so. Under either method, the costs for a social insurance plan are figured into perpetuity because of the assumption of continuing new entrants. In fact, the "balance sheet" method may be less realistic because it generally assumes static future conditions as to new entrants, mortality and retirement rates, etc.

Most laymen look upon "balance sheet" valuations with complete mystification, perhaps even scepticism. Often, they comment that figures from such valuations are "only actuarial costs and do not represent real costs." This probably occurs because cost figures in regard to total long-range benefit disbursements are much higher than current costs. Under the "projection" method, such criticism is greatly lessened. The immediate and near-future situation is clearly recognized, lending credibility to the figures as extended into the more distant future by easily understood processes.

An argument often made in favor of the "balance sheet" method over the "projection" method is that the former must be used when there is a sparsity of experience data. Under such circumstances the actuary often must use previously prepared tables and rates from the experience of other systems. This argument is not valid—with sufficient ingenuity, the "projection" method can be used under any circumstances where a "balance sheet" valuation is possible.

It may perhaps be helpful to give a concrete illustration of these two different methods of presenting actuarial valuations, using as a basis the cost estimates for the OASDI system made at the time of the enactment of the 1958 Amendments. The cost estimates are prepared primarily and fundamentally by the "projection method", but through certain approximate and short-cut computational procedures

it was possible to prepare a "balance sheet" valuation. The figures presented are for the intermediate-cost estimate, although low-cost and high-cost estimates have also been prepared and are—as indicated in the next section—of great importance.

Table 1 summarizes the cost analysis by the "balance sheet" method, giving information separately for present members and new entrants (into perpetuity). The percentage-of-payroll cost figures are developed on the basis of the employer-employee tax rate, taking into account that the self-employed pay only 75% thereof. More detailed data could, of course, be presented to show the present value of the disbursements by type. For example, the subdivision of the cost of 8.99% of payroll for benefits and administrative expenses combined for the total coverage is as follows:

Item	*Cost*
Old-Age Benefits (retired workers)	5.92%
Disability Benefits (disabled workers)	.43
Wife's Benefits (in respect to retired workers)	.57
Wife's Benefits (in respect to disabled workers)	.03
Child's Benefits (in respect to retired workers)	.05
Child's Benefits (in respect to disabled workers)	.03
Widow's Benefits (aged 62 or over)	1.23
Mother's Benefits (widows of deceased workers)	.11
Child's Benefits (in respect to deceased workers)	.38
Parent's Benefits (in respect to deceased workers)	.02
Lump-Sum Death Payments	.12
Administrative Expenses	.10
Total	8.99

The type of presentation in Table 1 clearly shows what might be said to be the almost obvious fact, from a quantitative standpoint, that the present members do not "pay their own way" from their contributions and those that employers make on the wages of covered employees. Rather, this deficiency must be made up by the contributions of, or in respect to, new entrants. In actuality this situation can be rationalized by saying that a portion of the employer contributions in respect to new entrants is used to meet the deficiency cost for present members. Thus, it can be said that the employee contribution rate in respect to new entrants is 4.44% of payroll (obviously quite close to the ultimate tax rate of 4½%, but slightly lower because, until 1969, some new entrants will pay a lower rate), or well below the new-entrant benefit cost of 5.23% of payroll. The difference between these two figures is, of course, met by part of the employer contributions for new entrants, with the remainder thereof going to meet the deficiency for present members.

It will be observed from Table 1 that the system as a whole shows an actuarial deficit of about ¼% of payroll according to this estimate, but it is considered that because of the variability of such long-range

actuarial cost estimates, the system is substantially in actuarial balance. In fact, an informal yardstick has been developed by the Congressional committees concerned that a variation in the actuarial balance of about ¼% of payroll is considered permissible, at least for a temporary period, pending further experience, study, and analysis. Likewise, this balance sheet shows the system to have a deficit in monetary terms of $26 billion, or slightly more than the existing fund. Again, for a long-range social insurance program intended to operate into perpetuity, this is not a dangerous matter since this actuarial lack of balance, being a residual item, can fluctuate very considerably, depending upon the long-range cost assumptions made.

The "balance sheet" analysis set forth in Table 1 was prepared under the method that is described as the "deficit for present members" basis. This merely means the amount required at the present time, that together with the existing fund and the present value of future contributions from present members, will support future benefits for those on the roll, for present members, and for survivors of previously deceased members who have not reached the minimum eligibility age for survivor benefits. In other words, this is a "closed group" concept under which the system would be continued for present members, but would have no new entrants and no employer contribution income in respect to new entrants.

Another possible concept and one that is widely used in valuations of private pension plans is the "entry-age-normal-cost" method. Under this basis, the normal contribution rate is that which is just sufficient to support the benefits for new entrants so that, in essence, this group can be disregarded in all further consideration. It is then assumed that this rate is applicable in the future to the present members, and the accrued liability is then computed, part of which, of course, is funded by the monies already on hand. The remaining unfunded accrued liability can be met in varying ways—by amortization over a fixed period of years or by level payments (either in monetary terms or as a percentage of payroll) into perpetuity. The latter procedure would seem to be appropriate for a long-range national social insurance program.

In the particular example considered here, the normal cost of the OASDI system, as shown by Table 1, is 5.23% of payroll. If present members were to pay this level contribution rate instead of the graded schedule now in the law (5% as the combined employer-employee rate in 1959, 6% in 1960-62, 7% in 1963-65, 8% in 1966-68, and 9% thereafter), there would be less income to the system since for present members the level-premium equivalent of the present contribution schedule is 7.65%. As a result, under this method of valuation, the accrued liability is higher than under the "deficit for present members" basis, being $385 billion, of which $362 billion is unfunded. The level-premium equivalent of such unfunded accrued liability is 3.54% of payroll, representing in essence the portion of future employer contributions (in respect to both present members and new

entrants) that must be used to support the value of the benefits paid to present members which is in excess of the normal cost.

It should not be assumed, however, as indicated previously, that present members (taking into account also the employer contributions on their wages) pay only the new entrant cost. In fact, it might be considered under this "entry-age-normal-cost" method that an "average" present member contributes 3.83% and that the other 1.40% of the normal cost comes from his employer, with all remaining employer contributions being used to help finance the unfunded accrued liability.

Table 2 presents the corresponding cost analysis according to the "projection" method, which is the normal type of presentation of the cost estimates for this system. By showing the year-by-year picture, a much clearer display of the problems involved in the rising cost trend is given. Table 3 makes a summary presentation of the actuarial balance of the OASDI system as derived from the "projection" cost analysis. The old-age and survivors insurance portion of the program has an actuarial deficit of about ¼% of payroll, while the disability insurance portion of the program is in almost exact balance.

The interesting and important fact is brought out that the OASI Trust Fund, despite being not in exact actuarial balance, will grow for many years and will not reach a peak until about 70 years from now, although thereafter it will decline fairly rapidly, as must naturally follow. This indicates that the demonstration of an actuarial deficiency—the only available analysis under the "balance sheet" method—is not of sole significance, but rather also it is important (and perhaps even much more important) to consider the year-by-year progress so as to determine when and to what extent the future cost impact will be.

The DI Trust Fund, on the other hand, grows steadily and levels off eventually since the system is, by coincidence, almost exactly self-supporting according to this particular estimate. In this respect, it may be noted that cost estimates made in the latter part of 1959 indicate that the costs of the disability insurance program are somewhat lower than has been indicated in the preceding paragraphs—largely because of lowered estimates as to the number of persons having the necessary insured status requirements and because of assuming lower disability incidence rates for women (on the basis of experience to date, although loaded upward to some extent as a safety factor).

VARIABILITY OF ACTUARIAL COST ESTIMATES

Long-range actuarial cost estimates and valuations cannot be precise no matter how accurately and meticulously they are made. Considerable differences will inevitably arise between future actual experience and the assumptions. Nonetheless, such estimates must be made to portray future cost trends.

Since it is inevitable that the actual experience will differ from

the actuarial assumptions, cost estimates and valuations for social insurance plans can best serve their purpose when presented on a range basis. This procedure does involve enough extra work that its use is not always practicable. Even where the "range" procedure is adopted, a single "intermediate" estimate is sometimes required for establishing long-range contribution rates. This is not necessarily any more accurate or "probable" than either of the "range" estimates.

HISTORY OF COST ESTIMATES FOR OASDI

This section is concerned with the nature of the cost estimates that have been developed for the OASDI system over the years. Emphasis is on the general methods of development and presentation and on the over-all results, rather than on specific figures, which can be obtained from official documents.

ORIGINAL COST ESTIMATES

In 1934-35, the Committee on Economic Security made the studies underlying the original Social Security Act. The financing philosophy recommended was that a contingency fund should be established with the income from a graded tax schedule and that eventually the system should be financed in part by a Federal contribution. Ultimately, some 40 years after the inception of the system, the Federal contribution was estimated to be about two-thirds as large as the combined contributions (or taxes) from employers and employees. The cost estimate was a "single" one of the year-by-year projection type, showing both income and outgo separately by source and carrying forward the accumulated fund.

In 1935, the House of Representatives, after considering the recommendations of the Committee on Economic Security, enacted somewhat different legislation. The appropriations authorized to the fund were, by statute, not specifically measured by the taxes collected, but rather were amounts "determined on a reserve basis in accordance with accepted actuarial principles." Constitutional reasons made a definite division between the taxes collected and the benefits paid seem desirable. In actual practice, however, this language was interpreted as meaning that the net tax receipts, after deduction of administrative expenses, would be appropriated to the fund.

The House bill did not mention a Government contribution although according to its language there would be this Governmental responsibility. The estimated size of the fund, without any allowance for Government contribution, was shown to increase for a number of years, to reach a peak in about 1970, and then to decline.

The legislation finally enacted followed the House bill, except that benefits were limited to those who retired from covered employment, rather than being payable automatically at age 65. No pertinent ex-

perience was available as to retirement rates. It was computed that if the average effective retirement age were 67½, the system would be in balance; this seemed to be a reasonable assumption. Such procedure in the estimates emphasized the Congressional philosophy that the system be self-supporting. Thus, the estimated fund built up gradually to an ultimate level in 1980 of almost $47 billion, a figure that received much attention from the general public.

After the system went into effect in 1937, several actuarial cost estimates using different assumptions were prepared. The projection method continued to be used and has been used in all subsequent cost estimates, except for a few "balance sheet" estimates made by the Treasury Department before 1940. One of these new alternative cost estimates was termed a "probable maximum cost estimate" since it combined assumptions producing relatively high costs — for example, an assumption of an average retirement age of 66. When this estimate and the original one were considered concurrently, a range, of course, was present. Ever since this time, a range in cost estimates has been shown. The terminology, however, has been changed to "low-cost" and "high-cost" estimates.

COST ESTIMATES FOR 1939 AMENDMENTS

The 1939 Amendments made several important financing changes. The appropriation basis was revised so that an amount equal to the tax income goes into the trust fund; benefit payments continue to be paid from the trust fund, while the administrative expenses too are made payable directly from the trust fund, instead of indirectly by deducting them from the tax receipts before determining the appropriation to the trust fund. This practice has since been followed. No specific provision was made for any Federal contribution to the system.

The presentation of the actuarial cost estimates was on a range basis, and it was pointed out that this was done because of the belief that precision in such long-range estimates was impossible. The low-cost estimate indicated that the system was practically self-supporting, while the high-cost estimate showed that additional financing would eventually be necessary. As in all previous cost estimates, it was assumed that maturity of the program — the point when income and outgo would stabilize — would come in 1980.

With the drastic economic changes during and after World War II and with the refinements possible as operating data became available, new cost estimates were prepared from time to time. These differed somewhat from the earlier ones in that — following intensive study — the point at which "maturity" was assumed to be reached was advanced to the year 2000. According to the estimates made in the late 1940's, the system was more than self-supporting under the low-cost assumptions, but a need for additional financing eventually was indicated under the high-cost assumptions.

COST ESTIMATES FOR 1950 AMENDMENTS

The 1950 legislation made several important changes in the financing basis, one of which has had a lasting, significant effect on the cost estimates. In the Congressional hearings and committee reports, the intent was expressed that the system should be completely self-supporting from the contribution income developing from the tax schedule contained in the law. Consequently, the amendments eliminated a provision for potential Government contributions, incorporated in 1943. It was necessary, accordingly, to modify the procedure of presenting the actuarial cost estimates on a range basis since obviously the contribution schedule in the law could not be on a range basis. Therefore, an intermediate cost estimate was developed for measuring the actuarial balance of the program on the basis of the benefits to be provided and the contributions scheduled. This intermediate-cost estimate was obtained by a simple arithmetic average of the low-cost and high-cost estimates.

Following this practice, a contribution schedule was developed for the 1950 Amendments that made the system self-supporting, according to the intermediate-cost estimate. As would be anticipated, the system was shown to be more than self-supporting for the low-cost estimate and not nearly self-supporting for the high-cost estimate.

The Congressional committee reports recognized that long-range cost estimates cannot be precise and that, therefore, future adjustments in the tax schedule may be necessary. Further, it was accepted that, while the actuarial cost estimates should be continued on a range basis because of the uncertainties involved in the underlying assumptions, an intermediate estimate was necessary for determination of the tax schedule.

Under the philosophy adopted in the law and set forth in the committee reports, the tax schedule would be adjusted in the future so that the development of the trust fund in the direction indicated by either the low-cost or high-cost estimate would not occur. Thus, if actual experience tended toward the low-cost estimate, the contribution rates would probably be adjusted downward, or perhaps would not be increased in future years according to schedule. On the other hand, if the experience followed the high-cost estimate, the rates would have to be raised above those scheduled.

COST ESTIMATES FOR AMENDMENTS SUBSEQUENT TO 1950

The same basis of presenting the actuarial cost estimates has been followed in years subsequent to 1950. Revisions have been prepared from time to time as additional operating experience became available and also as the program was revised (with significant amendments occurring every second year). Beginning with cost estimates made in 1953, the projections were extended 50 years, to the year 2050. Upon analysis and consideration, especially when viewing the long-range effects of the "baby boom" that began in World War II

and has continued ever since, it was decided that demographic maturity could not occur before 2050, although it might conceivably be closely approached from a cost standpoint some 25 years earlier.

When the cost estimates were revised in 1958, and the result indicated a significant actuarial deficit — somewhat more than ½% of payroll on a level-premium basis — Congress took note of this fact. Thus, in the 1958 Amendments, the contribution schedule was revised upward, in part to finance certain benefit liberalizations and in part — as stated in the title of the legislation — "to improve the actuarial status of the Trust Funds."

ECONOMIC ASSUMPTIONS FOR COST ESTIMATES

Throughout the entire history of the program, the cost estimates have been based on level economic conditions, except for experimental calculations not used as the basis for legislative consideration. At first glance, this might seem unrealistic — some criticism of this procedure has come from economists — since earnings levels have increased so significantly during the 25 years of operation of the program (as well as before its inception). It does not seem appropriate to use rising earnings assumptions in the cost estimates, rather than level ones, since the system of benefits and also the earnings base for contributions has been established on the economic foundation of the existing level. If the earnings level changes, the program can be adjusted correspondingly — as it has been in a number of instances. Of course, instead of this *ad hoc* procedure, a system could be established with automatic adjustments as has been done in the West German program in 1957 and in the Swedish program in 1959.

It does not seem proper to make assumptions inconsistent with the provisions in effect at the time the valuation is made. This is precisely what is done if rising earnings are assumed because, after some years, the benefit adequacy would be seriously impaired or completely destroyed, assuming that there are certain maximum limits on benefits and on earnings or income subject to contributions. Thus, if static conditions are assumed as to the provisions of the system — and it does not seem possible to do otherwise because the future action of Congress cannot reasonably be predicted — static economic assumptions must likewise be assumed. Such considerations, of course, do not prevent having a reasonable range in the other cost factors used — namely, those based primarily on demographic considerations.

The OASDI system has a weighted benefit formula since those with lower earnings receive proportionately larger benefits than those with higher earnings. Accordingly, as the earnings level rises, the average benefit represents a relatively lower proportion of the average earnings, and the cost of the system — expressed as a percentage of payroll — is lower than anticipated. A certain margin of reduced cost is thus available to adjust benefits upward when the earnings

level changes, both for existing beneficiaries and for those who will come on the roll in the future. Hence, costs relative to payroll may remain the same. The increased monetary income resulting from the larger payroll is not entirely offset by the increased monetary outgo for higher benefits resulting from the higher earnings, leaving a margin to be utilized for liberalization of benefits.

The text accompanying actuarial estimates that are based on a level earnings assumption should contain sufficient safeguards. The reader should realize that the actuary is familiar with economic trends and not ignoring them, but setting them aside because their inclusion is not appropriate under the circumstances.

Any savings or reductions in cost due to rising earnings or taxable income can, and no doubt will, be utilized to maintain the relative benefit adequacy. Conversely, a rising earnings or income assumption will result in *apparent* low costs not likely to be realized. If economic conditions change as assumed, the benefit level will lose its relative adequacy and will have to be adjusted upward, thus absorbing the original apparent reduction in costs.

ACTUARIAL BASIS OF OASDI

Understandably, the question of the actuarial soundness of the system has provoked much discussion (and confusion, too) over the years. There is not agreement among actuaries as to whether the term "actuarial soundness" can be applied to a national compulsory system with virtually universal coverage.

At one extreme, a plan may be said to be "actuarially sound" if the existing fund is at least as large as the value of all accrued benefit rights. This basis is, of course, satisfied by legal reserve life insurance companies but not by many private pension plans that have assumed considerable liabilities for prior service. Some actuaries define an "actuarially sound" private pension plan as one "where the employer is well informed as to the future cost potential and arranges for meeting those costs through a trust or insured fund on a scientific, orderly program of funding under which, should the plan terminate at any time, the then pensioners would be secure in their pensions and the then active employees would find an equity in the fund assets reasonably commensurate with their accrued pensions for service from the plan's inception up to the date of termination of plan."[1] This definition permits a long period before all the past-service credits are fully funded.

Other actuaries have a less stringent definition of an actuarially sound system: "One which sets forth a plan of benefits and contribu-

[1] Dorrance C. Bronson, "Pension Plans—The Concept of Actuarial Soundness," *Proceedings of Panel Meeting, "What is Actuarial Soundness in a Pension Plan,"* sponsored jointly by the American Statistical Association, American Economic Association, American Association of University Teachers of Insurance, and Industrial Relations Research Association, Chicago, December 29, 1952.

tions to provide these benefits, so related that the amount of the present and contingent liabilities of the plan as actuarially computed as of any date will at least be balanced by the amount of the present and contingent assets of the plan actuarially computed as of the same date."[2]

How do these concepts apply to OASDI? The first definition means that it is not actuarially sound, but rather that it is indeterminate from this standpoint; the second definition would say that it is actuarially sound. My personal view is that the second definition can be used and that it is the intent and understanding of Congress that the program has been developed, and should continue, on this basis.

Even though it is generally agreed by actuaries that the first and more restrictive definition of actuarial soundness does not apply to OASDI, it may be of interest to compute certain quantities pertinent to it.

Such calculation can readily be made, and this has been done on an approximate basis, even though it is recognized that the resulting figures can be misunderstood and misused. One concept of measuring the actuarial condition of a pension plan is to develop the "deficit for present members." Under this concept, as of the end of 1958, based on the intermediate-cost estimate at 3% interest, the following situation existed for the OASDI program:

Item	*Amount (billions)*
1. Present Value of Future Benefits and Expenses	$544
2. Present Value of Future Contributions	232
3. Existing Trust Fund	23
4. Net Balance, (2) + (3) − (1)	−289

Under this concept there was thus an actuarial deficit of almost $300 billion (some 12½ times the amount of the existing trust fund), which, it should be realized, is only of theoretical interest and not of true significance under a long-range social insurance program.

Still another concept of actuarial soundness applicable to private pension plans may be considered in respect to the OASDI system, namely, the present value of all benefits in current payment status. In a sense, this corresponds to the terminal funding concept of private pension plans. At the beginning of 1959, after the benefit increases provided in the 1958 Amendments had become effective, benefits in current payment status were running at the rate of $760 million a month. These had a present value of about $75 billion, somewhat more than 3 times the then-existing trust fund. But it should be kept in mind that this relationship has no direct bearing on the actuarial soundness of the program, although it is an interesting summary measure of the obligations incurred and does facilitate comparisons with other systems.

[2] George B. Buck, "Actuarial Soundness in Trusteed and Governmental Retirement Plans," *ibid.*

The original 1935 legislation did not provide for any Federal contribution to the system even though this had been the recommendation of the Presidential committee that studied the matter. The "single" cost estimate indicated that the system would be self-supporting from the contributions of employers and employees. There was—and still is—considerable misunderstanding of the financing basis since many people believed that a full actuarial reserve system was being developed—especially since the estimated ultimate fund of $47 billion seemed so large, slightly greater than the national debt at that time. Such was not the case, however, because the cost estimates showed the system to be self-supporting only when it was considered as operating into perpetuity. At any particular date, the fund available would by no means be sufficient to meet the accrued liabilities without the help of the scheduled future contributions.

The 1939 Amendments changed the financing basis to what was generally believed to be a pay-as-you-go basis, or more properly a contingency fund basis. The Advisory Council of 1937-38 had recommended the development of a relatively small contingency fund with Government contributions eventually. However, the law did not specifically adopt this recommendation, and the program has not developed in this pattern. The 1939 Amendments "froze" the tax rate for the 3 years 1940-42 at the initial level (2% for employer and employee combined), and subsequent Congressional action continued this freeze throughout the 1940's. This action further strengthened the belief of many persons that the system was being financed—or would be financed—on a pay-as-you-go basis despite the fact that, because of the economic situation due to the war, income was very considerably in excess of outgo and a sizeable fund accumulated.

No specific provision was made in the 1939 Act for any Federal contribution despite the fact that some individuals thought a contingency reserve approach had been adopted. However, the 1943 legislation continuing the 2% employer-employee tax rate incorporated a provision authorizing any appropriations to the trust fund from general revenue needed to finance the program. No appropriations were made under this provision since the trust fund grew rapidly and none seemed to be required.

The Advisory Council of 1947-48, somewhat paralleling the action of the previous Advisory Council, recommended a financing basis under which a relatively small contingency fund would develop, with eventual Federal contributions equal to half the combined employer-employee contributions. This Advisory Council also recommended an immediate increase in the contribution rates despite the fairly sizeable fund that was continuing to develop. This action was based, in large part, on "psychological" grounds, in order that the general public would realize that the considerably liberalized benefits recommended meant additional costs and consequently higher contribution rates.

Congress in enacting the 1950 Amendments did not concur in the

financing recommendations made by the Advisory Council but instead quite clearly and strongly expressed the intent that the system be completely self-supporting from the tax income provided. This basis has subsequently been maintained. The contribution schedule has been revised from time to time as additional benefits have been provided and in accordance with needs indicated by revised actuarial cost estimates.

The OASDI contribution schedule reaches its ultimate level within a decade (1969, under present law), while benefit disbursements rise for a number of decades. In accordance with the self-supporting financing basis of OASDI, this means that a sizeable fund will develop. In fact, in the intermediate-cost estimates made from time to time, the ultimate size of the trust fund is well in excess of $100 billion (it was about $23 billion at the end of 1958).

Up to the present point, reference has been made to "trust fund" in discussing the OASDI program. Actually, following the 1956 Amendments, there are two separate trust funds—one for the Old-Age and Survivors Insurance benefits and the other for the Disability Insurance benefits. This subdivision has no real significance in regard to the financing of the program but was adopted as a "guarantee and assurance" that the newly provided disability benefits would not bankrupt the OASI Trust Fund in the event that disability experience proved much less favorable than the intermediate-cost estimate.

USE OF COST ESTIMATES IN DEVELOPMENT OF OASDI SYSTEM

Over the years, the actuarial cost estimates prepared in the Social Security Administration have been used by the Congress as the basis for their consideration of changes in the OASDI program. Particularly, since the positive recognition and adoption of the self-supporting principle in 1950, the cost estimates have tended to play a very important role in its legislative development.

Before any legislative action, Congress carefully studies the cost of proposed benefit liberalizations in the light of the financial situation of the existing system and any additional financing necessary. At times Congress has determined that such liberalizations were too costly, and they have been trimmed down or eliminated. For example, in 1956, the House voted to pay full benefits at age 62 (instead of at age 65) to all categories of female beneficiaries and to provide monthly disability benefits beginning at age 50; this was to be financed by a 1% increase in the combined employer-employee contribution rate in all future years. Perhaps the controlling reason for restricting disability benefits to those aged 50 and over was the cost aspect. The Senate, however, was not in favor of an increase in the contribution schedule as large as 1% and so provided actuarially reduced, rather than full, benefits for women workers and wives (but

full benefits for widows) claiming them before age 65. This action, permitting the increase in the combined employer-employee contribution rate to be held to ½%, was agreed to by the House and was enacted.

Although in some quarters there has been considerable criticism of the fact that every two years since 1950 legislative action has liberalized the OASDI system, there is one important point that should be kept in mind. Each time there has been legislative activity, the Congress—particularly, the important, controlling legislative committees concerned—has very carefully considered the cost aspects of all proposed liberalizations. Any changes made have been carefully financed according to the best actuarial cost estimates available. Thus, Congress has attempted to keep the system on a self-supporting basis by keeping benefit costs very closely in balance with contribution income. The Committees have always been anxious to be able to say that the program is "actuarially sound." In my opinion, this is true under the second, less restrictive definition of "actuarial soundness," which is fully satisfied by the self-supporting basis of the system. Certainly, the program can be said to have staunch financial safeguards as long as Congress continues to be cost-conscious, as it has been in the past, and to finance benefit liberalizations adequately.

TABLE 1

BALANCE SHEET COST ANALYSIS OF OASDI SYSTEM UNDER PROVISIONS OF 1958 AMENDMENTS, INTERMEDIATE-COST ESTIMATE AT 3% INTEREST, AS OF BEGINNING OF 1958

Item	*Amount (billions)*	*Equivalent Level Percentage of Payroll*
Present Value of Payrolls		
Present Members	$3,038	
New Entrants	7,202	
Total Coverage	10,240	
Present Value of Benefits and Administrative Expenses		
Present Members	$544	17.91%
New Entrants	377	5.23
Total Coverage	921	8.99
Present Value of Scheduled Contributions		
Present Members	$232	7.65%
New Entrants	640	8.88
Total Coverage	872	8.52
Existing Fund		
Present Members	$23	.75%
New Entrants	—	—
Total Coverage	23	.23%
Actuarial Balance, Surplus (+) or Deficit (−)		
Present Members	−$289	−9.51%
New Entrants	+ 263	3.65
Total Coverage	— 26	— .24

Note: Present members include beneficiaries on the roll at the beginning of 1958 and those who will come on the roll in the future on the basis of earnings credits obtained before 1958. New entrants include those participating in the system at any time in the future who had no earnings credits before 1958.

TABLE 2

PROJECTION COST ANALYSIS OF OASDI SYSTEM UNDER PROVISIONS OF 1958 AMENDMENTS, INTERMEDIATE-COST ESTIMATE

(in millions)

Calendar Year	*Contributions*	*Benefit Payments*	*Administrative Expenses*	*Financial Interchange*[a]	*Interest on Fund*[b]	*Fund at End of Year*
			Old-Age and Survivors Insurance Trust Fund			
1957[c]	$6,826	$7,347	$162	—	$557	$22,393
1960	10,621	10,027	166	—$196	590	21,794
1965	13,830	12,333	181	— 160	820	28,762
1970	19,404	15,030	201	— 70	1,406	50,330
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
			Disability Insurance Trust Fund			
1957[c]	$702	$57	$3	—	$7	$649
1960	991	492	23	—$20	59	2,402
1965	1,059	796	25	— 34	126	4,437
1970	1,141	1,052	27	— 34	165	5,686
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

[a] A positive figure indicates payment to the trust fund from the Railroad Retirement Account, and a negative figure indicates the reverse.

[b] At 3%, except 2.6% in 1958, 2.7% in 1959, 2.8% in 1960, and 2.9% in 1961.

[c] Actual data. The administrative expense figure for the OASI Trust Fund is artificially high—and that for the DI Trust Fund correspondingly low—because reimbursements between the funds to provide proper allocation of such costs were not made in the year.

TABLE 3

ACTUARIAL BALANCE OF OASDI SYSTEM UNDER PROJECTION COST ANALYSIS, FOR PROVISIONS OF 1958 AMENDMENTS, AS OF BEGINNING OF 1958, INTERMEDIATE-COST ESTIMATE AT 3% INTEREST

Item	*LEVEL-PREMIUM EQUIVALENT* *Old-Age and Survivors Insurance*	*Disability Insurance*
Contributions	8.02%	.50%
Benefit Payments[a]	8.40	.49
Administrative Expenses	.09	.01
Existing Trust Fund	.22	.01
Net Balance[b]	—.25	+.01

[a] Including the effect of the financial interchange provisions with the Railroad Retirement system.

[b] Contributions plus existing trust fund less benefit payments and administrative expenses.