



**Long-Range Cost  
Estimates for Old-Age,  
Survivors, and  
Disability Insurance  
System, 1969**

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LONG-RANGE COST ESTIMATES FOR OLD-AGE, SURVIVORS,  
AND DISABILITY INSURANCE SYSTEM, 1969

A. Introduction

This report is the tenth in a series of Actuarial Studies dealing with the actuarial costs of the Old-Age and Survivors Insurance program, and the fourth to give detailed actuarial cost estimates for the Disability Insurance program established by the 1956 Amendments. The estimates given here relate to the OASDI cash-benefits program as it was after the 1967 Amendments, valued as of January 1, 1970. No estimates are presented here for the Hospital Insurance and Supplementary Medical Insurance programs.

The first cost estimates for the Old-Age and Survivors Insurance program were developed at the time the legislation introducing survivor benefits was enacted (1939) and were subsequently presented in Actuarial Study No. 14. In the second of this series (developed in 1942 and presented in Actuarial Study No. 17), estimates were made on the basis of a certain amount of actual operating data, as well as more complete demographic data from the 1940 census and the 1935 Family Composition Study.

The third in this series of cost estimates was developed in 1943-44, and was published as Actuarial Study No. 19. This differed from the previous study in that, not only were there available more experience data, but also a differential average wage between the low-cost and high-cost illustrations was introduced. Because Actuarial Study No. 19 considered the terms "low-cost" and "high-cost" as indicating absolute dollar costs, rather than percentage costs relative to payroll, certain difficulties of interpretation and analysis arose. Thus, by coincidence, the average cost of the benefits from 1945 to 2000 without interest was 5.6% of payroll for both estimates, which led some to believe erroneously that, although the dollar costs might have a range, the relative costs were fairly closely predictable, a matter of importance in estimating the necessary contribution rates.

Actuarial Study No. 23 was the fourth in this series of estimates. It was published in 1947 and used more current data on population, wage levels, etc. Two further studies were prepared for and printed by the House Committee on Ways and Means,

dated July 27, 1950 and July 21, 1952, relating to the 1950 Amendments and 1952 Amendments, respectively.

The cost estimates presented in Actuarial Study No. 36 (published in 1953), the fifth in the series, related to the 1952 Amendments and correspond to those in the House Committee on Ways and Means print of July 21, 1952, but differ considerably because of the use of the new population projections (Actuarial Study No. 33) and revised cost factors. In order to have appropriate ranges in benefit costs, both as to dollar amounts and relative to payroll, there were developed, in effect, four separate cost illustrations. On the one hand, the low-employment assumptions basis which was used was somewhat lower than full employment and corresponded roughly, on the average, to the 1940-41 conditions as to proportion of population in covered employment, combined with wage rates prevailing in the same period. On the other hand, the high-employment assumptions basis was near-full employment, corresponding closely to conditions just before the recession that was then occurring.

When cost estimates were made for the 1954 legislation as it was being considered by the Congress, only the high-employment assumptions were used, because the low-employment assumptions were too much below actual experience to appear to be realistic. The subsequent cost estimates have used only one employment assumption.

Following the Conference Committee agreement on the 1954 Amendments, cost estimates were developed in the short time available before the President signed the bill and were published as a committee print of the House Committee on Ways and Means, dated August 20, 1954. Subsequently, these cost estimates were carried out on a more complete basis, rather than using certain approximations and short cuts that were necessary in the rapid development of the original cost estimates. The figures in this more complete cost estimate differed only slightly from the original estimates and were presented in Actuarial Study No. 39, the sixth in the series.

The development of the actuarial cost estimates relating to the 1956 Amendments followed a similar pattern. Cost estimates were prepared on an approximate preliminary basis immediately after agreement was reached by the Conference Committee and were published as a committee print of the House Committee on Ways and Means, dated July 23, 1956. The more refined cost estimates presented in Actuarial Study No. 48, the seventh in the series,

differed from the preliminary ones to a greater extent than was the case in 1954 because of the use of revised population projections (Actuarial Study No. 46), the use of somewhat higher earnings assumptions (reflecting approximately 1956 earnings levels, whereas the figures in the committee print assumed earnings at about the level prevailing in 1955), and a considerable number of other changes in basic assumptions and methodology.

Within the single employment assumption of Actuarial Study No. 48, there were two separate estimates: (1) using "low-cost" factors (i.e., low cost relative to payroll) as to fertility, mortality, retirement rates, etc.; and (2) using "high-cost" factors. As in the previous studies, the terms "low-cost" and "high-cost" apply in the aggregate, since in some of the component parts (e.g., child's and mother's benefits) the costs were shown to be higher for the "low-cost" factors than for the "high-cost" factors.

The actuarial cost estimates for the 1958, 1960, and 1961 Amendments were contained in various committee prints of the House Committee on Ways and Means. In addition, the annual reports of the Board of Trustees of the Old-Age and Survivors Insurance and the Disability Insurance Trust Funds present actuarial cost estimates for the program; these incorporate changes as a result of using different assumptions based on the developing experience. Also, it should be pointed out that Actuarial Study No. 49 (issued in May 1959) gave an extensive description of the methodology involved in the long-range cost estimates then current.

New OASDI cost estimates were prepared in 1963 for the use of the 1963 Advisory Council on Social Security Financing. These were published in Actuarial Study No. 58 and were based on the population projections of Actuarial Study No. 46. Some minor changes were made in the methodology. Basically, the estimates reflected a revision of the earnings-level assumption and the retirement-rates assumption, as well as all the other factors involved in the cost analysis. Specifically, actual experience data was used for the first time for disability benefits at ages below 50 and for male retirement benefits claimed before age 65.

Detailed cost estimates were prepared at the time that the 1965 Amendments were being considered. The estimates for the final bill were prepared for the House Ways and Means Committee and were published as a committee print, dated July 30, 1965. These estimates were based on the calculations that had previously been published in Actuarial Study No. 58.



New cost estimates for the 1965 Act were prepared in 1967 (as of January 1, 1967) and published as Actuarial Study No. 63. These estimates were based on the new population projections that were presented in Actuarial Study No. 62, and they incorporated the experience that had developed under the 1965 Act since its enactment. On the basis of these estimates, the Congress approved the 1967 Amendments, which included substantial changes in the benefit structure of the OASDI program. The estimates for the final bill were based on the values in Actuarial Study No. 63. They were published as a committee print of the House Ways and Means Committee, dated December 11, 1967.

The 1969 OASDI Trustees Report presented a set of new estimates for the 1967 Amendments, valued as of January 1, 1969. These new estimates were the first that made direct use of the disabled-worker beneficiary termination rates that had been developed from the actual OASDI program experience. These termination rates were published in Actuarial Study No. 65.

The cost estimates in the present study, the third set of estimates prepared for the 1967 Act, are based on a complete updating of all the assumptions except for the population projections, which are those in Actuarial Study No. 62, and for the disability termination rates, which are those in Actuarial Study No. 65. A detailed description of the methodology followed (which does not differ greatly from that in Actuarial Study No. 49) will be published later, as an actuarial study.

An important element affecting Old-Age, Survivors, Disability, and Hospital Insurance (OASDHI) costs arose through amendments made to the Railroad Retirement Act beginning in 1951. These provide for a coordination of Railroad Retirement compensation and OASDHI covered earnings in determining all survivor benefits, and also retirement benefits for those with less than 10 years of railroad service and, in addition, hospital benefits to persons aged 65 and over. In fact, all future survivor and retirement cases involving less than 10 years of railroad service are to be paid by the OASDHI system.

Financial interchange provisions are established such that the Old-Age and Survivors Insurance Trust Fund, the Disability Insurance Trust Fund and the Hospital Insurance Trust Fund are to be placed in the same financial position as if there never had been a separate Railroad Retirement program and as if railroad employment had been covered under OASDHI. It is estimated that the net effect of these provisions will be a relatively small loss to the OASDHI system since the contributions from railroad work will be somewhat smaller than the net additional benefits paid on the basis of railroad earnings. The long-range costs

developed here for the operation of the OASI and DI Trust Funds are on the basis, as provided in the law, that all railroad employment be considered (beginning with 1937) covered employment, with the effect of the financial interchange provision being shown as a separate item within the transactions of the funds. All the figures in this study are for direct OASDI coverage and benefit payments and do not include the railroad experience. The values for the railroad financial interchange provisions are treated as separate items.

## B. Basic Assumptions

The various assumptions adopted for the cost estimates have been selected so as to be consistent with the actual operating data and with other assumptions, and at the same time so as to represent a reasonable range for the element under consideration. As in previous studies, the figures developed do not represent the widest possible range that could reasonably be anticipated, but rather our studied opinions as to a plausible range. For a more detailed analysis of items (1), (2), (3), and (4) below, see Actuarial Study No. 62. The various basic assumptions are:

### (1) Mortality

The low-cost and high-cost estimates are both based on decreasing rates of mortality to the year 2000 and level thereafter, with the decrease in the low-cost estimate being equal to 50% of the decrease in the high-cost estimate. Assumptions as to mortality declines are based on analysis of mortality data by age, sex, and major groups of causes of death.

### (2) Birth Rates

The low-cost estimate assumes age-specific birth rates that decline gradually from the 1965 values to a level which is equivalent to a total fertility rate of 2,800 per 1,000 women in 1985. For the high-cost estimate, the decline is assumed to reach a level of 2,300 per 1,000 women in 2010. By "total fertility rate" is meant the number of babies that a woman will have had by the end of her child-bearing period if she were subject to the age-specific fertility rates specified. For a detailed discussion of how the fertility assumptions affect the cost estimates, see Actuarial Note No. 38.

### (3) Migration

For both the low-cost and high-cost estimates, it was assumed that there would be about 400,000 net immigrants per year for all years in the future.

### (4) Population

The above assumptions as to fertility, mortality, and migration--when applied to the existing population--yield the basic population projections. At the time that the study of the projections was being performed, estimates of the U.S. population

as of July 1, 1965, subdivided by age and sex, were available. These were used as the starting point for the projections, after an adjustment for net census underenumeration and for the difference in area coverage between the census and the OASDHI coverage.

Table 1 summarizes the two population projections. It will be observed that the population for all ages combined does not show a very wide range as between the low-cost and high-cost assumptions in the early years, but ultimately (in the year 2050) the low-cost population is about 40% higher than the high-cost one. The high-cost projection has nearly the same number of aged persons as the low-cost projection. Both projections have about the same population in the productive years during the early period, but due to lower fertility assumptions, the high-cost projection eventually has fewer people in this age group. For the year 2050, those aged 65 and over represent 10.4% of the total population for the low-cost projection, as contrasted with 14.6% for the high-cost projection. Thus, in contrast with 1950, when the corresponding figure was 8.0%, there is a relative increase in the proportion of the aged of about 30% for the low-cost projection and 82% for the high-cost one. In the 100-year period preceding 1950, the actual relative increase was about 225%. For a discussion of how the population projections affect the cost estimates, see Actuarial Note No. 37.

#### (5) Employment

In developing bases for estimating both payrolls and insured populations, it is necessary to have estimates of the proportion of the total population in covered employment in a given year, by age and sex. Valuable guides toward developing estimates of these proportions exist in the form of (a) the actual coverage data for recent years and (b) labor-force experience data and projections published by the Department of Labor. Roughly speaking, it has been assumed that, over the long range, the average unemployment rate will be about 3.8%.

Table 2 shows the assumed ratios of persons with earnings credits in the year to total population, for quinquennial age groups for three illustrative years (no changes are assumed after the year 2000). For male workers, the ratios are assumed to remain constant up to age 60. Decreases in the ratios are projected for persons above that age. For females, the ratios are projected to increase at ages under 65 and to decrease slightly above that age.

(6) Taxable Earnings for Male and Female Workers

Male workers are assumed to have average annual taxable earnings of \$5,180. For women, the corresponding figure is \$2,875. As in previous studies, no age differential in earnings is used, because the relatively small variations existing for the vast majority of employees (those between ages 25 and 65) do not warrant the additional computations. It will be observed from Table 3 that, due to a projected higher participation of females in the labor force, the average taxable earnings for both sexes combined shows a tendency to decrease.

These assumed average earnings by sex correspond to the estimated averages for 1969 and are assumed to remain level into the future. In a subsequent section, the use of an increasing-earnings assumption will be discussed.

(7) Taxable Payroll

By applying the previous assumptions as to covered employment and average earnings to the population projections, there are obtained the total numbers of persons with credited earnings in various years and the aggregate amounts of taxable earnings. The resulting data for selected years are shown in Table 3, along with the developed averages for persons with any taxable earnings in the year. The numbers of persons with earnings in the year are somewhat lower for the high-cost assumptions than for the low-cost ones. This results from the fact that under the low-cost assumptions higher fertility is assumed, which eventually produces greater numbers of persons in the productive ages.

(8) Insured Population

From the most recent actual data on insured workers and the assumptions as to the proportions of the population in covered employment, there may be developed, by cohort projection and general reasoning, the assumed proportions of the total population who are insured. As generally used here, the term "insured" includes both "fully insured" and "currently insured only", but the latter category is relatively unimportant costwise and has been disregarded in this study.

Although only a single set of assumptions was used as to covered employment at most ages, a range is necessary in the proportions having insured status (resulting from the cumulative effect of employment), because of the uncertainty involved in

the extent of the year-by-year pattern of covered employment as between individuals. Table 4 shows, for selected years, the resulting percentages of the total population who are insured. The lower figure of the range in each case applies to the low-cost estimate, while the higher figure is used in the high-cost estimate. A constant figure at all ages is reached by 2005 for males and by 2045 for females.

By applying the assumed proportions insured to the population projections, there are obtained the estimated insured populations shown in Table 5 (note that the term "insured population" includes only persons who are "insured" as a result of their own earnings credits, and not wives and widows of "insured" workers who do not have insured status based on their own earnings record). It should be observed that the insured population aged 65 and over is projected to increase faster than the total insured population and that the increments are higher for females than for males.

(9) Marital Status

Assumptions as to marital status are necessary in estimating the costs of the various supplementary and survivor benefits. The various assumptions, both for men and women, are based on census data and on actual claims data. The assumed proportion married in the future is adjusted upward at the older ages to allow for the effect of assumed improved mortality (resulting in fewer early broken marriages); the adjustment in the high-cost estimate is larger. Assumptions as to relative ages of husband and wife are based on census data and on actual claims data.

(10) Child's and Mother's Benefits

Projected numbers of child survivor beneficiaries are obtained from projections of the population under age 22 by estimating the proportion of such children in each future quinquennial year who will be orphans of insured workers. For those aged 18-21, an adjustment is made to take into account the requirement that they be full-time students. The method used for estimating benefit payments to child survivors and their mothers involves the implicit assumption that both the distribution of family patterns reflected in recent claims statistics and the current remarriage rates of mothers will continue to prevail in the future. Mother beneficiaries are obtained by multiplying the number of child beneficiaries under age 18 or disabled by a factor which is based on current experience.

### (11) Parent's Benefits

This relatively minor category is difficult to estimate. As more and more of the aged become eligible for old-age, wife's, or widow's benefits, the number eligible for parent's benefits will be relatively lower. Because of the relative unimportance of this category, its size has been roughly estimated by assuming that the number of parent beneficiaries will bear a constant ratio to the number of persons aged 62 and over who are not eligible for any other OASDI benefit.

### (12) Proportion of Eligible Persons Who are Beneficiaries

For the various beneficiary categories, a considerable reduction in disbursements occurs because individuals who are otherwise eligible for monthly benefits are engaged in substantial employment and do not receive benefits (or do not receive full benefits) because of the earnings test. In some instances, benefits are withheld from beneficiaries who are "entitled", while in other cases the potential beneficiary never files (notably in the case of mother's benefits in families where there are sufficient children to obtain a maximum or near-maximum benefit anyhow).

The effect of employment in reducing benefit costs is most important in connection with old-age benefits and wife's benefits. Table 6 shows the percentages of aged insured workers actually receiving old-age benefits in selected years. The increase in these percentages in the past is due to the fact that there was a growing proportion of persons who were past the age at which the earnings test is not applicable (age 72). In addition, there had been a tendency for earlier retirement. Table 7 shows some such percentages by age groups (including ages 62-64). It will be observed that the retirement rates have leveled off in recent years; for a discussion of this subject, see Actuarial Note No. 59.

It is assumed that, in the future, all eligible aged widows who are not insured on their own account will receive benefits and that no children and no wives will lose dependent's benefits because of their own work (wives who have larger benefits based on their own earnings record than their wife's benefits are not shown as receiving wife's benefits, and it is this category that is most likely to be working beyond the minimum retirement age). Implicitly, it is assumed that the proportion of eligible mothers who receive benefits remains at the present level.

### (13) Alternative Receipt of Benefits

A very important cost element several decades hence, although not so important currently, is the provision that women may not receive full old-age benefits in their own right and full wife's, widow's or parent's benefits (also applicable to men with respect to their corresponding benefits). In effect, in such cases the larger of the two benefits is payable. For the cost estimates, it was assumed that these women will file for the widow's benefits only after filing for the old-age benefit. For wives, it is a legal requirement that they file for old-age benefits upon filing for their wife's benefit. In all cases, it is assumed that they receive the excess of such benefits over their old-age benefits as a supplement.

The number of women qualified for both old-age benefits and wife's or widow's benefits has been estimated by assuming that, in the ultimate year, 90% of all the females who are neither married nor widowed are eligible for old-age benefits and that, with the increasing participation of married women in the labor force, their proportion insured at any particular age will eventually reach the same levels as for widows of the same age. For the early years, it was assumed that widows are between two and three times as likely as married females to be insured. Then, based on claims data, with certain modifications to allow for changes in future distributions, estimates have been made as to the proportions of the cases in which the female old-age benefit will be smaller than the widow's benefit or the wife's benefit, as the case may be, and then for such cases what will be the average excess of the dependents benefit over the primary benefit.

### (14) Average Benefits

An estimate, by sex, was made of the average monthly wage of insured workers who retire far enough in the future so that the 1969 earnings level and the ultimate percentages of the population in covered employment will have been in effect throughout their working life. The effects of the 5-year dropout and the disability freeze were taken into account. The ultimate average PIA for each sex was then calculated from the benefit formula, using the estimated AMW.

The resulting PIA's were then subdivided into two groups-- one for those who retire with a full benefit after age 65, and the second for those who retire with a reduced benefit before age 65. It was assumed, based on current statistics, that 45% of the



males and 60% of the females will retire before age 65 with actuarially-reduced benefits. The average PIA for the early retirees was assumed, according to recent data, to be lower than that for the retirees at age 65 and over by 10% for females and 15% for males. The larger difference for males is principally due to the fact that their AMW is computed to age 65 (assuming no earnings for years not yet lived), while for females the computation point is age 62. The average benefits for those retiring before age 65 were determined by estimating the average reduction factor, taking into account the age distribution at time of retirement.

The ultimate average annual PIA's and old-age benefits are as follows:

<u>Item</u>	<u>Low-Cost</u>		<u>High-Cost</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Age 65 and over, PIA	\$2,125	\$1,400	\$2,115	\$1,355
Age 62-64, PIA	1,805	1,260	1,795	1,220
Age 62-64, old-age benefit	1,480	1,021	1,472	988

The high-cost figures are slightly lower than the low-cost ones because, since there is a relatively larger number of insured workers in the high-cost estimate, they have a smaller average amount of coverage.

In obtaining the ultimate average benefits for survivors and dependents, the reductions in benefits because of the family maximum and because of their early retirement were taken into account.

For all beneficiary categories, average benefits were graded from presently prevailing figures into the ultimate ones.

#### (15) Benefit Payments

The benefit payments for each category of benefits were calculated as the product of the number of beneficiaries and their average benefit. An adjustment was made for the retroactive payment of benefits. In accordance with the law, benefits can be claimed with up to 12 months of retroactivity. Also, in many cases a new beneficiary receives a first check for two or more months of benefits due to a delayed award or to the normal time that it takes to process a claim.

(16) Administrative Expenses

After study of the various elements involved, it is believed desirable to base the assumed administrative expenses on only two factors--the number of persons having any covered employment in a given year and the number of monthly beneficiaries. The estimated annual administrative expenses for future years were obtained from the following relationships:

Low-cost estimate--\$14.00 per monthly beneficiary,  
plus \$1.75 per covered person;

High-cost estimate--\$14.50 per monthly beneficiary,  
plus \$2.20 per covered person.

(17) Contributions

The previous discussion as to earnings and payroll dealt solely with taxable earnings. However, the effective payroll on which contributions are based is slightly lower for several reasons. Although taxes are collected up to the annual earnings base (\$7,800 from 1968 on) from each employer and employee, there are cases in which an employee has more than one employer during the course of a year, and taxes on wages in excess of \$7,800 are withheld from his pay. In such cases, the employee contributions for wages in excess of \$7,800 are refundable, but the matching amounts collected from his employers are not. Also, in the coverage of tips, the taxes are collected only from the employees, there being no tax on the employer for the tips. According to an analysis of past experience of multiple-employer employment and according to estimates of covered tips, it was assumed that 1.8% of the taxable wages will be taxable at half the combined employer-employee rate. In addition, it was assumed, after an analysis of recent trends, that 6.9% of the taxable earnings will be due to self-employed workers, who contribute at a rate equal to 1½ times the employee rate up to 1972 and somewhat less than this in 1973 and after. Allowance was also made for the fact that a portion of the contributions collected in a given year are based on the earnings of the preceding year.

(18) Disability Benefits

The numbers of disabled-worker beneficiaries were estimated by applying disability incidence rates to the populations insured for disability and by projecting these disabled workers using termination rates due to death and recovery from the disability.

For males, it is estimated that about 90% (with minor variations by age) of the "fully insured" workers are also insured for disability. For females, the ratio is lower due to their lower labor-force participation and varies from about 45-70% in the early years to about 65-90% ultimately.

The disability incidence rates used are those in Actuarial Note No. 58, after adjustment for the effect of the 1965 Amendments, which changed the definition of disability from "long-term duration" to an "expected duration of at least 12 months" and for the increase in awards observed in 1967-68. The future numbers of disabled-worker beneficiaries were estimated on the basis of the termination rates published in Actuarial Study No. 65. The numbers obtained from the assumed incidences and terminations were adjusted to reflect the experience of the early part of calendar year 1969.

The numbers of dependent-child beneficiaries and of wife beneficiaries with respect to disability beneficiaries were estimated as ratios of the disabled male workers. These ratios were based on recent actual experience of the program.

The average benefits for disabled workers were projected, based on actual experience, to be ultimately 100% of the average male old-age benefit and 104% of the average female old-age benefit. However, since disabled workers are younger than retired workers, their ultimate values were assumed to be reached earlier--namely, in the year 2000 for males and 2010 for females. The average benefits for children and wives were obtained as ratios of the disabled male worker benefit, after an adjustment for the family maximum benefit limitation.

#### (19) Interest Rate

The interest rate for the special issues to the OASDI Trust Funds is based on the average yield of all marketable obligations of the United States Government not due or callable for at least 4 years.

As a result of the lower interest rates prevailing in the past, the average yield of the total investments currently held by the trust funds is about 4.5%, but for new investments the trust funds are currently obtaining about 6.5%.

An interest rate of 4.75% has, therefore, been assumed for the intermediate-cost estimate, while the rates for the low-cost and high-cost estimates are assumed at 5.25% and 4.25%, respectively.

### C. Results of Cost Estimates under Level Earnings Assumption

Table 8 shows the actual and estimated numbers of aged monthly beneficiaries (including females aged 62-64, males aged 62-64 in 1962 and after, and widows aged 60-61 in 1966-67 and aged 50-61 in 1968 and after) in current payment status. During the next 55 years, such beneficiaries are shown to increase from the present level of 17.9 million to a range of from 45.9 to 51.4 million ultimately. At that time, male old-age beneficiaries (retired workers) made up somewhat over 40% of the total, female old-age beneficiaries somewhat over 42%, wife beneficiaries not eligible for old-age benefits about 7%, widow beneficiaries not eligible for old-age benefits about 11%, and parent beneficiaries only .1%. The proportion of old-age beneficiaries who are women increases from 41% in 1969 to about 51% in the year 2025.

In Tables 8-11, the projected numbers of beneficiaries in current payment status are based on the assumption that there will be a reduction in the extent of retroactivity of the first payments. Currently, the benefit payments in each month include substantial amounts of retroactive payments to beneficiaries to whom awards were made subsequent to the month of entitlement to benefits. Thus, current data as to the number of beneficiaries in current payment status in a given month significantly understate the number of persons who will eventually receive benefits for that month.

Table 9 relates the estimated total number of monthly beneficiaries aged 65 and over to the total population aged 65 and over, by sex. Whereas at the beginning of 1969, about 81% of all aged men and 86% of all aged women were actually drawing benefits, eventually this proportion is shown to range from 86% to 90%, depending on the age structure of the population. The difference between these figures and 100% is accounted for by (a) persons not eligible for benefits and (b) persons eligible for benefits, but not receiving them because of the earnings test.

Table 10 shows for various future years the estimated OASI monthly beneficiaries under retirement age who are in current payment status, as well as the actual data for 1960-69, while Table 11 gives corresponding figures for the DI program. All categories show increases in future years. Table 10 also gives the estimated numbers of lump-sum death payments, which for both estimates increases steadily as the insured population grows and becomes older on the average.

Table 12 shows the estimated amount of overlapping for female beneficiaries as between old-age benefits and wife's or widow's benefits. In the early years there are fewer cases of such overlapping, since relatively few of the current older married women worked sufficiently in covered employment to become insured for old-age benefits. However, in later years many aged married women will possess insured status for old-age benefits on account of employment at the younger ages, either before or shortly after marriage. Likewise, eventually many widows will qualify for old-age benefits by reason of employment, generally while single or after the death of their husbands.

Ultimately, about 32.6% to 36% of the female old-age beneficiaries are estimated to be also qualified for wife's benefits. However, since the unreduced wife's benefit is only 50% of the husband's old-age benefit, in only about 20% of such cases is the wife's benefit estimated to be larger than her old-age benefit. Likewise, ultimately, about 43.1% to 45.6% of the female old-age beneficiaries are estimated as also being qualified for widow's benefits. Since the unreduced widow's benefit is 82½% of the husband's old-age benefit, a relatively large proportion of such women (about 35%) have a widow's benefit that is larger than their old-age benefit. It should be emphasized again that these figures are particularly subject to fluctuations and uncertainty.

Table 13 gives the estimated average annual benefits in current payment status for old-age beneficiaries and their dependents. Also shown are the average additional wife's benefits payable for those women who receive an old-age benefit which is smaller than the wife's benefit otherwise payable. The averages for all types of beneficiaries tend to be slightly higher under the low-cost assumptions than under the high-cost assumptions, because the latter assume a greater proportion to be insured; thus, the total covered wages are spread among more persons and result in lower average benefits. The average old-age benefit for males gradually rises as the effect of lower earnings levels prior to 1969 diminishes. The average old-age benefit for females rises less rapidly because of an increasing proportion of insured females.

Table 14 shows estimated average annual survivor benefits and lump-sum death payments, while Table 15 shows average disability benefits. As in the case of the average old-age and supplementary benefits in Table 13, the average benefits shown in Tables 14 and 15 increase gradually in future years and are somewhat higher under the low-cost assumptions than under the high-cost assumptions.

Table 16 summarizes the estimated benefit payments for the OASI portion of the system, along with the actual data for the years 1960-68. The total benefit payments increase from about \$22.6 billion in 1968 to \$49 to \$51 billion in the year 2000. Old-age benefits constitute from 67% to 71% of the total benefit payments in the year 2000; the total benefits for those who have reached retirement age make up about 89% of the total. In the actual 1968 data, old-age benefits were 63%, other benefits for the aged were 23%, and younger survivor benefits and lump-sum death payments were 14%.

Table 17 similarly summarizes the estimated benefit payments for the DI portion of the system. The total benefit payments increase from \$2.3 billion in 1968 to \$5.7 to \$7.2 billion in the year 2000. Payments to disabled workers represented 79% of the total outgo in 1968, with wife's benefits being 6% and child's benefits being 16%. In the future, the proportion of the outgo for disabled workers is estimated to rise slightly, as the proportion for dependents declines (due to the assumed lower fertility).

Since the Congress has adopted the principle of establishing in the law a contribution schedule designed to make the system self-supporting, it is necessary to select a single set of estimates as the basis for determining and evaluating the contribution schedule. The intermediate-cost estimate, which is derived as the average of the low-cost and high-cost estimates, is used for this purpose. Quite obviously, any specific schedule may require modification in the light of experience, but the establishment of the schedule in the law does make clear the congressional intent that the system be self-supporting. Further, exact self-support cannot be obtained from a specific set of integral or rounded fractional rates, but rather this principle of self-support has been aimed at as closely as possible by the Congress in 1950 and on subsequent occasions when developing the tax schedule in the law.

The low-cost and high-cost estimates result from two carefully considered series of assumptions. The intermediate-cost estimate represents an average of the low-cost and high-cost estimates of benefit disbursements and total taxable payroll. The corresponding estimates of benefits relative to payroll are developed from these dollar figures.

Table 18 relates the estimated benefit payments to taxable payroll by type of benefit for the OASI and DI portions of the programs. The level-costs of the total benefits are 7.82% and

.96% of taxable payroll, respectively. The net total level-cost for OASI is 7.76%. The additional costs for administrative expenses and the railroad financial interchange are more than offset by the reimbursements due to non-contributory credits for military service and the interest income produced by the present trust fund. For DI, the net total level-cost is also .96%, since the additional costs for administrative expenses are offset by the interest income produced by the present trust fund.

Table 19 shows the yearly cost as percent of taxable payroll for the most recent 9 years of actual experience and also for the projected intermediate-cost estimate. It should be observed that the OASI cost increases up to the year 1995. Then, the system is projected to have a 15-year period of relatively level cost, due to a low number of aged persons in the population. This effect is directly related to the low birth rates in the 1930's.

Table 20 deals with the level-costs of the system under the three cost assumptions (low, high, and intermediate), taking into account administrative expenses and the accumulated fund on hand at the end of 1969. The resulting net level-cost, if actual experience is the same as the particular estimate, would be the level contribution rate payable by the employer and employee combined (with the self-employed paying the appropriate reduced rate) which, if in effect hereafter, would result in an exactly self-supporting system; then, funds accumulating at interest would supply income sufficient to offset any annual excesses of outgo for benefit payments and administrative expenses over contribution income for the next 75 years. In addition, an amount equal to one year's outgo would be available in the fund at the end of the 75-year period.

The net level-cost for the OASI system ranges from 7.35% to 8.27% of taxable payroll. In other words, for this system, a level employer-employee contribution rate of as little as 7.35% might be sufficient. On the other hand, a rate of 8.27% might be necessary under adverse circumstances. Using a higher interest rate results in somewhat lower costs, and vice versa. A differential of  $\frac{1}{2}\%$  in the interest rate has a net effect on the level-cost of about .11% of taxable payroll.

Table 20 also shows the level-equivalents of the contribution income to the OASDI system based on the following graded schedule in the Act:

<u>Period</u>	<u>Combined employer- employee rate</u>	<u>Self-employed rate</u>
1970	8.4%	6.3%
1971-72	9.2	6.9
1973 and after	10.0	7.0

For the DI portion of the system, the employer-employee rate is .95% and the self-employed rate is .7125% in all years. The remainder of the above rates is applicable to the OASI portion.

The OASI program is over-financed under all three cost assumptions, while the DI program is under-financed under the high-cost estimates, overfinanced under the low-cost estimate and in close actuarial balance under the intermediate-cost estimate. It will be noted that the OASDI system as a whole is over-financed under all three cost assumptions. The excess financing is of a considerable magnitude in all three cost estimates (1.16% of taxable payroll under the intermediate-cost estimate, 1.71% under the low-cost estimate, and .42% under the high-cost estimate).

It is important to note that these estimates are made on the assumption that earnings will remain at about the level prevailing in 1969. If earnings levels rise, as they have in the past, the benefits and the taxable earnings base under the program will undoubtedly be modified. If such changes are made concurrently and proportionately with changes in general earnings levels, and if the experience follows all the other assumptions, the future year-by-year costs of the system as a percentage of taxable payroll would be the same as those shown. However, the existing trust funds accumulated in the past, and their interest earnings, will represent a smaller proportion of the future taxable payrolls than if earnings were not to increase in future years. As a result, since interest earnings of the trust funds will play a relatively smaller role in the financing of the system, the "net" level-cost--taking into account benefit payments, administrative expenses, and interest on the existing trust funds--would be somewhat higher. However, the level-cost would not rise this much, or might even decline, depending on the degree to which benefits are adjusted to reflect rising earnings. The effect of such events can be observed in ample time to make any needed changes in the contribution schedule or any other appropriate changes in the system.

Table 21 presents the estimated cost of benefit payments as percentages of taxable payroll for selected future years under the low-cost and high-cost assumptions. It should be



observed that, for the next 30 years, the OASI cost stays below 8.0% of taxable payroll under the low-cost estimate and below 8.6% of taxable payroll under the high-cost estimate; however, it is possible for such cost to go above 11% of taxable payroll after this period.

Table 22 presents the estimated progress of the OASI Trust Fund under the contribution schedule in the 1967 Act. The contribution income includes reimbursements to the trust fund by the General Treasury for the cost of the "gratuitous" wage credits allowed for military service, as well as for special benefits to persons aged 72 or over. The effect (positive or negative) of the Railroad Retirement financial interchange provisions is shown separately.

Under all three estimates, the trust fund is projected to increase continuously, reaching a level of about \$450 billion in the year 2000 under the high-cost estimate, and higher levels under the intermediate-cost and low-cost estimates. These high levels result from the fact that the OASI portion of the system has a significant positive actuarial balance under all three cost estimates (i.e. it is over-financed).

Table 23 shows the corresponding progress of the DI Trust Fund. As would be anticipated from the data on the actuarial balance of this system, as shown in Table 20, the DI Trust Fund increases steadily under the low-cost estimate, is exhausted before the year 2000 in the high-cost estimate, and lasts almost 70 years under the intermediate-cost estimate.

#### D. The Effect of an Increasing Earnings Assumption

A factor mentioned earlier, but not assumed in the actuarial projections, is the past observed trend of an irregular but upward movement in earnings, both on a dollar basis and in the form of real wages. If this secular trend continues, then--other things being equal--the curves of benefits and contributions would both be more steeply ascending than shown. The upward trend in the contribution curves, however, would be far more accentuated than would be such trend in the benefit curves. The main reasons are:

(1) The benefits are determined by the average monthly earnings up to the maximum of \$650; in essence, 71.16% is applied to the first \$110 thereof, 25.88% to that part between \$110 and \$400, and 24.18% to that part between \$400 and \$550, and 28.43% to the excess over \$550. As average earnings increase, and as more persons approach or reach the \$650 maximum, a larger portion of such earnings falls in the brackets of the benefit formula to which the lower rates apply. Thus, benefits become smaller in relation to earnings, and consequently in relation to contributions.

(2) Any year's contributions are substantially based on the covered earnings of that year, while any year's benefits in force are based on weighted composite earnings of all previous years in which the insured persons on whose account the benefits are paid worked in covered employment, thus including--in far-distant future years--earnings of as much as 80 years previous.

The assumption of steadily-rising earnings in conjunction with an unamended benefit formula would have an important bearing in considering the long-range cost of the program. With such an assumption, the future rises in earnings would seem to offer significant financial help in the financing of benefits because contributions at a fixed percentage rate would increase steadily relative to benefit disbursements; but the benefits paid to beneficiaries would steadily diminish in relation to current earnings levels. Under such circumstances, offsetting this apparent savings in cost, it is likely that, from the long-range point of view, the present benefit formula would not be maintained. Rather, revisions would probably be made by the Congress (perhaps with some delay) that would make average benefits as adequate relative to the then-existing covered earnings level as average benefits under the present formula are in relation to the level prevailing when the 1967 Amendments were enacted.

In revising the benefit schedule to conform with the altered earnings level, the changed cost and contribution picture would have to be considered. This is especially true as to

changes resulting from the fact that benefits would be based on earnings prevailing at the time of such change and thereafter, while the accumulated trust funds at that time would have developed from contributions on the lower earnings prevailing during the past. The trust funds thus would not play as important a role in financing the program as would have been the case if the earnings level had not changed.

Accordingly, because of the diminution of the value of the existing trust funds in the financing of the program, the level-cost of the program would be increased if the benefit level were adjusted in exact proportion with the increase in the covered earnings level. For small rates of increase in the earnings level, the increase in cost may be partially counterbalanced by the time lag that would undoubtedly occur between the rise in the earnings level and the amendment of the benefit provisions. However, for large annual rates of increase in earnings levels (i.e., for rates equal to or in excess of the assumed valuation interest rate), the system would be financed practically on a pay-as-you-go basis, since the trust funds would be continually losing their real value and would become more of a contingency reserve than a source of interest income.

It is estimated that the "savings" to the system due to increased earnings are equivalent to about half of the increase in earnings. Thus, if average taxable earnings per worker were to increase at 4% per year, the system would generate enough "savings" to finance a benefit increase of about 2% per year. It can, therefore, be concluded that if the cost of living increases at half the rate of increase in average total earnings (including amounts above the taxable base) it would be possible to finance automatic increases in benefits to keep up with the cost of living if the taxable base were periodically adjusted according to changes in average total earnings.

## E. Comparison with Previous Estimates

Prior to the cost estimates prepared for the 1965 Act, the actuarial procedures assumed that the financing of the system would be into perpetuity. Projections were prepared for the necessary factors for many years--up to a far-distant point in the future, when all factors were assumed to level off. The 1963-65 Advisory Council on Social Security Financing recommended that the financing period be changed to 75 years (roughly, the life span of current new entrants). This recommendation was adopted and, starting with the 1965 Act, the cost estimates for OASDI have covered only a period of 75 years into the future. Any shorter period than about 75 years would not give a realistic picture of the true cost of a long-range social insurance program like OASDI.

The cost estimates prepared from 1939 until 1953 contained the assumption that the system would mature in the year 2000--or, in other words, assumed that benefit payments and contributions would be level thereafter. In the cost estimates of 1953 and thereafter, a different assumption was made by maturing all trends, such as mortality, in the year 2000, but going on with the estimates for another 50 years. In one sense, this seems necessary because the aged population itself cannot mature by the year 2000. The reason for this is that the number of births in the 1930's was very low as compared with subsequent and previous periods. As a result, a dip in the relative proportion of the aged occurs from 1995 to about 2010, which would be reflected in relatively low OASI benefit costs for that period. Accordingly, the year 2000 is by no means a typical "ultimate year".

Table 24 presents a historic summary of the results of the intermediate-cost estimates that have been prepared in previous years. In comparing level-cost estimates, account should be taken of several factors, such as different interest rates, different periods covered, different assumptions as to when "maturity" would occur, and the different time elements involved. In regard to the last point, the level-cost in a given estimate for a particular plan will shift over the course of time if a graded contribution schedule is involved. Thus, for instance, consider a plan beginning in 1937 and remaining unchanged thereafter, with the experience exactly following the cost assumptions originally used. Under such circumstances, if the level-cost were 5% of taxable payroll at the inception of the plan, and if a graded combined employer-employee contribution schedule beginning at 2% and running up to 6% over a period of years were

established (being equivalent to the level rate of 5%), then the level-cost determined in later years would be higher than 5% of taxable payroll, because this amount had not been collected in the early years of operation. In fact, ultimately the level-cost would be 6% of taxable payroll (by the time the contribution schedule reached 6%).

Table 1

ACTUAL AND PROJECTED U. S. POPULATION, 1950-2050  
(in millions)

Calendar Year	Aged 20-64			Aged 65 and Over			All Ages		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Actual Data <sup>a/</sup>									
1950	44.2	44.9	89.1	5.9	6.5	12.4	76.8	77.4	154.2
1960	47.0	48.7	95.7	7.6	9.1	16.7	90.5	92.7	183.2
Projection for Low-Cost Assumptions <sup>b/</sup>									
1970	55	57	112	9	12	20	106	109	214
1980	65	67	132	10	14	24	121	125	246
1990	74	75	149	12	17	28	140	144	284
2000	87	88	175	12	18	30	160	164	323
2025	120	120	240	20	27	47	222	225	447
2050	162	161	322	26	36	62	297	301	598
Projections for High-Cost Assumptions <sup>b/</sup>									
1970	55	57	112	9	12	20	105	108	214
1980	65	67	132	10	14	25	119	123	242
1990	74	75	149	12	17	29	134	138	272
2000	85	86	171	13	19	32	149	153	301
2025	105	105	210	22	29	51	185	189	374
2050	121	121	241	27	36	63	213	219	432

a/ From Census (as of April 1). These data relate to the total United States and not merely to the continental United States. Figures for 1970 and after incorporate a correction for under-enumeration (see Actuarial Study No. 62).

b/ As of July 1, estimated.

Note: Figures are individually rounded and, in some instances, do not add exactly to totals shown.

Table 2

PROJECTED RATIOS OF PERSONS WITH EARNINGS CREDITS IN YEAR  
TO TOTAL POPULATION IN AGE GROUP<sup>a/</sup>

Age Group	Male			Female		
	1970	1980	2000	1970	1980	2000
15-19	60.4%	58.0-62.8%	58.0-62.8%	43.8%	43.4-48.0%	43.4-48.0%
20-24	99.3	99.3	99.3	72.0	75.1-77.9	75.7-79.9
25-29	99.3	99.3	99.3	53.7	56.4-58.2	59.9-61.9
30-34	94.9	94.9	94.9	47.1	50.9	54.2
35-39	91.5	91.5	91.5	49.2	52.7	56.8
40-44	90.3	90.3	90.3	51.9	55.3	59.8
45-49	89.7	89.7	89.7	52.7	55.1	59.0
50-54	88.0	88.0	88.0	50.8	53.7	57.5
55-59	85.7	85.7	85.7	47.4	50.7	55.0
60-64	74.8	73.7-74.1	73.7-74.1	37.8	40.3-42.5	43.2-46.6
65-69	46.6	38.3-46.1	36.4-45.8	19.5	15.8-21.0	15.8-21.0
70+	18.4	14.6-18.2	14.6-18.2	6.1	5.2-7.0	5.2-7.0

<sup>a/</sup> When two figures are shown, the lower figure was used in the high-cost estimate, and the higher figure was used in the low-cost estimate.

Table 3

ESTIMATED PERSONS WITH TAXABLE EARNINGS, TOTAL TAXABLE EARNINGS,  
AND AVERAGE TAXABLE EARNINGS<sup>a/</sup>

<u>Calendar Year</u>	<u>Persons with Taxable Earnings in Year (in millions)</u>			<u>Total Taxable Earnings in Year (in billions)</u>	<u>Average Taxable Earnings</u>
	<u>Male</u>	<u>Female</u>	<u>Total</u>		
Actual Data					
1960	47.9	24.6	72.5	\$207	\$2,854
1961	48.0	24.8	72.8	210	2,879
1962	48.7	25.6	74.3	219	2,948
1963	49.3	26.3	75.5	225	2,985
1964	50.3	27.2	77.5	236	3,050
1965	52.0	28.6	80.6	251	3,110
1966	53.8	30.9	84.7	313	3,691
1967	55.0	32.0	87.0	330	3,794
1968 <sup>b/</sup>	56.2	33.2	89.4	376	4,200
Low-Cost Assumptions					
1980	69.8	44.7	114.5	490	4,279
1985	74.1	47.9	122.0	522	4,276
1990	79.0	51.4	130.4	557	4,271
1995	85.2	56.3	141.5	603	4,263
2000	92.5	61.7	154.2	656	4,257
2025	127.9	84.0	211.9	904	4,266
High-Cost Assumptions					
1980	69.0	43.3	112.2	482	4,292
1985	73.2	46.3	119.4	512	4,288
1990	77.4	49.3	126.7	543	4,284
1995	82.6	53.3	135.9	581	4,276
2000	88.4	57.5	145.9	623	4,272
2025	108.7	69.8	178.5	764	4,278

<sup>a/</sup> The total taxable earnings and the average taxable earnings are both affected by the maximum taxable earnings base. This base was \$4,200 in 1955, and was increased to \$4,800 in 1959, to \$6,600 in 1966, and to \$7,800 in 1968.

<sup>b/</sup> Preliminary data.

Note: Figures are individually rounded and, in some instances, do not add exactly to totals shown.



Table 4

## PROJECTED INSURED POPULATION AS PERCENT OF TOTAL POPULATION

Age Group	Male				Female				
	1970	1980	1990	2010 and After	1970	1980	1990	2010	2045 and After
20-24	88%	88%	88%	88%	64%	66-68%	67-71%	67-72%	67-72%
25-29	98	98	98	98	76	79-81	80-83	80-84	80-84
30-34	97	96-98	96-98	96-98	69	73-75	75-78	75-80	75-80
35-39	94	96-98	96-98	96-98	63	67-69	69-72	70-75	70-75
40-44	94	96-97	96-98	96-98	63	67-69	69-72	70-75	70-75
45-49	95	96-97	96-98	96-98	66	69-70	71-73	73-77	73-77
50-54	95	96-97	96-98	96-98	64	68-69	72-73	75-79	75-79
55-59	95	96-97	96-98	96-98	60	64-66	68-70	73-76	73-77
60-64	94	96-97	96-98	96-98	55	59-61	63-66	69-73	70-75
65-69	90	95-96	96-98	96-98	53	57-58	61-64	68-72	70-75
70-74	89	94-95	96-97	96-98	50	56	59-61	67-70	70-75
75-79	90	91	94-97	96-98	44	53-54	57-58	65-68	70-75
80-84	87	89	91-95	96-98	37	50	56	63-66	70-75
85+	75	88	91	96-98	26	41	51-52	60-63	70-75

Note: In each case the lower figure was used in the low-cost estimate and the higher figure in the high-cost estimate.

Table 5

ESTIMATED INSURED POPULATION  
(in millions)

<u>Calendar Year</u>	<u>All Ages<sup>a/</sup></u>			<u>Aged 65 and Over</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Actual Data (as of January 1)						
1960	49.2	27.5	76.7	5.9	2.6	8.5
1961	52.1	32.3	84.4	6.2	2.9	9.0
1962	53.6	35.0	88.5	6.4	3.1	9.5
1963	54.2	35.6	89.8	6.6	3.4	10.0
1964	54.9	36.4	91.3	6.8	3.7	10.4
1965	55.7	37.1	92.8	6.9	3.9	10.8
1966	56.7	38.2	94.9	7.1	4.3	11.4
1967	57.9	39.3	97.2	7.2	4.5	11.8
1968	59.1	40.5	99.7	7.4	4.8	12.2
Low-Cost Assumptions (as of July 1)						
1980	71.2	53.5	124.7	9.4	7.5	16.9
1985	76.8	58.7	135.5	10.2	8.6	18.8
1990	81.5	63.1	144.6	11.0	9.7	20.7
1995	87.3	68.2	155.5	11.5	10.5	22.0
2000	94.0	74.2	168.2	11.5	10.9	22.4
2025	133.2	105.8	239.0	19.0	18.7	37.7
High-Cost Assumptions (as of July 1)						
1980	72.3	55.0	127.3	9.7	7.7	17.4
1985	78.6	61.1	139.7	10.7	9.0	19.7
1990	83.5	65.9	149.4	11.8	10.3	22.1
1995	87.9	71.3	159.2	12.5	11.4	23.9
2000	95.2	77.2	172.4	12.8	12.0	24.8
2025	122.7	102.6	225.3	21.7	21.5	43.2

<sup>a/</sup> The actual data are for all ages combined, but the projected data are for ages 20 and over.

Table 6

ESTIMATED OLD-AGE BENEFICIARIES AGED 65 AND OVER IN CURRENT PAYMENT  
STATUS AS PERCENT OF INSURED POPULATION AGED 65 AND OVER

<u>Calendar</u> <u>Year</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Actual Data (as of January 1)			
1960	84%	87%	85%
1961	85	87	85
1962	86	88	87
1963	89	89	89
1964	90	89	89
1965	89	89	89
1966	89	88	89
1967	90	90	90
1968	90	90	90
Low-Cost Assumptions (as of July 1)			
1980	90	91	91
1985	90	91	91
1990	91	92	91
1995	91	92	92
2000	92	93	92
2025	90	92	91
High-Cost Assumptions (as of July 1)			
1980	91	92	92
1985	92	92	92
1990	92	93	93
1995	92	94	93
2000	92	94	93
2025	91	93	92

Table 7

ESTIMATED OLD-AGE BENEFICIARIES IN CURRENT PAYMENT STATUS  
AS PERCENT OF INSURED POPULATION, BY AGE AND SEX

<u>Calendar Year</u>	<u>Aged 62-64</u>		<u>Aged 65-69</u>		<u>Aged 70-74</u>		<u>Aged 75 and Over</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Actual Data (as of January 1)								
1960	--	42%	69%	79%	90%	94%	98%	97%
1961	--	38	70	77	91	94	98	97
1962	13%	39	73	78	92	95	99	97
1963	22	42	76	78	95	97	99	98
1964	24	43	76	78	95	97	100	100
1965	25	44	75	77	96	96	100	100
1966	24	42	75	77	97	95	99	96
1967	24	42	76	79	99	96	100	100
1968	24	41	75	79	98	94	100	100
Low-Cost Assumptions (as of July 1)								
1970	24	42	75	79	98	95	100	100
1975	23	41	75	79	98	96	100	100
1980	23	41	75	79	98	97	100	100
1990	23	41	75	79	98	97	100	100
High-Cost Assumptions (as of July 1)								
1970	24	42	75	79	98	95	100	100
1975	25	43	76	80	99	96	100	100
1980	25	44	77	81	99	97	100	100
1990	25	45	77	81	99	98	100	100

Table 8

ESTIMATED NUMBER OF AGED<sup>a/</sup> MONTHLY BENEFICIARIES  
IN CURRENT PAYMENT STATUS  
(in thousands)

Calendar Year	Old-Age		Wife's <sup>b/</sup>	Survivors		Total
	Male	Female		Widow's <sup>c/</sup>	Parent's	
Actual Data (as of January 1)						
1960	4,937	2,589	2,057	1,394	35	11,012
1961	5,217	2,845	2,158	1,544	36	11,800
1962	5,765	3,160	2,252	1,697	37	12,911
1963	6,244	3,494	2,365	1,857	37	13,997
1964	6,497	3,766	2,409	2,011	37	14,720
1965	6,657	4,011	2,434	2,159	36	15,297
1966	6,825	4,276	2,444	2,371	35	15,951
1967	7,034	4,624	2,469	2,602	35	16,764
1968	7,161	4,859	2,477	2,770	34	17,301
1969	7,310	5,111	2,478	2,938	32	17,869
Low-Cost Assumptions (as of July 1)						
1980	9,027	7,662	2,653	3,651	33	23,026
1985	9,830	8,731	2,741	3,858	34	25,194
1990	10,575	9,753	2,838	3,858	35	27,059
1995	11,013	10,503	2,784	3,963	35	28,298
2000	11,128	10,994	2,652	3,909	34	28,717
2025	18,157	18,872	3,209	5,591	35	45,864
High-Cost Assumptions (as of July 1)						
1980	9,482	8,008	2,780	3,524	34	23,828
1985	10,513	9,329	2,902	3,657	35	26,436
1990	11,496	10,612	3,017	3,681	36	28,842
1995	12,176	11,626	3,014	3,723	34	30,573
2000	12,512	12,358	2,848	3,894	32	31,644
2025	21,105	22,042	3,290	4,944	29	51,410

a/ In 1960-61, this means men aged 65 and over and women aged 62 and over; in 1962 and after, persons aged 62 and over, except that for 1966-68 widows aged 60-61 are included and for 1969 and after widows aged 50-59 are included.

b/ Including husband beneficiaries, but excluding wife beneficiaries who are caring for an entitled child.

c/ Including widower's benefits.

Table 9

ESTIMATED NUMBER OF BENEFICIARIES AGED 65 AND OVER IN CURRENT PAYMENT  
STATUS AS PERCENT OF TOTAL POPULATION AGED 65 AND OVER

<u>Calendar</u> <u>Year</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Actual Data (as of January 1)			
1960	66%	57%	61%
1961	69	61	64
1962	71	64	67
1963	74	68	71
1964	75	70	73
1965	76	72	74
1966	77	74	76
1967	80	83	82
1968	81	85	83
1969	81	86	84
Low-Cost Assumptions (as of July 1)			
1980	84	87	85
1985	85	87	86
1990	86	87	86
1995	87	88	87
2000	88	88	88
2025	86	89	88
High-Cost Assumptions (as of July 1)			
1980	85	87	86
1985	87	87	87
1990	88	88	88
1995	90	89	89
2000	90	90	90
2025	89	90	90

Table 10

ESTIMATED NUMBER OF MONTHLY SUPPLEMENTARY AND SURVIVOR BENEFICIARIES  
 UNDER RETIREMENT AGE IN CURRENT PAYMENT STATUS  
 AND LUMP-SUM DEATH PAYMENTS IN YEAR  
 (in thousands)

Calendar Year	Supplementary Benefits <sup>a/</sup>		Survivor Benefits		Lump-Sum Payments <sup>c/</sup>
	Wife's <sup>b/</sup>	Child's	Mother's	Child's	
Actual Data (as of January 1)					
1960	103	246	376	1,508	779
1961	111	268	401	1,577	813
1962	140	338	428	1,650	865
1963	167	405	452	1,755	969
1964	170	418	462	1,811	1,011
1965	170	424	471	1,873	990
1966	169	461	472	2,074	1,047
1967	171	507	488	2,232	1,134
1968	167	510	496	2,362	1,218
1969	166	521	505	2,488	d/
Low-Cost Assumptions (as of July 1)					
1980	196	633	519	2,714	1,563
1985	207	669	542	2,802	1,652
1990	218	703	598	3,076	1,812
1995	219	705	639	3,314	1,923
2000	213	688	671	3,499	2,044
2025	374	1,206	899	4,672	3,063
High-Cost Assumptions (as of July 1)					
1980	207	669	489	2,566	1,519
1985	218	703	484	2,511	1,636
1990	227	733	500	2,593	1,748
1995	228	737	505	2,644	1,860
2000	223	720	500	2,644	1,970
2025	384	1,238	562	2,969	3,003

a/ Payable to dependents of old-age beneficiaries (retired workers).

b/ Wives under 65 with entitled children in their care.

c/ Number of decedents on whose account payments are made in the year.

d/ Not available.

Table 11

ESTIMATED NUMBER OF MONTHLY DISABILITY BENEFICIARIES<sup>a/</sup>  
 IN CURRENT PAYMENT STATUS  
 (in thousands)

<u>Calendar</u> <u>Year</u>	<u>Disabled</u> <u>Worker</u>	<u>Supplementary</u> <u>Benefits</u> <sup>b/</sup>	
		<u>Wife's</u>	<u>Child's</u>

## Actual Data (as of January 1)

1958	150	--	--
1959 <sup>c/</sup>	238	12	18
1960	334	48	78
1961	455	77	155
1962	618	118	291
1963	741	147	387
1964	827	168	457
1965	894	179	490
1966	988	193	558
1967	1,097	220	654
1968	1,193	235	713
1969	1,295	253	786

## Low-Cost Assumptions (as of July 1)

1980	1,702	291	929
1985	1,836	310	960
1990	1,947	325	977
1995	2,121	350	1,022
2000	2,409	393	1,117
2025	3,618	582	1,566

## High-Cost Assumptions (as of July 1)

1980	2,076	357	1,140
1985	2,278	374	1,197
1990	2,445	395	1,260
1995	2,692	426	1,360
2000	3,069	479	1,528
2025	4,395	675	2,155

a/ Includes only persons who receive benefits from the DI Trust Fund.

b/ Payable to dependents of disabled workers.

c/ As of December 1, 1958.



Table 12

ESTIMATED FEMALE BENEFICIARIES QUALIFIED FOR BOTH OLD-AGE BENEFITS<sup>a/</sup>  
AND WIFE'S OR WIDOW'S BENEFITS<sup>b/</sup>, IN CURRENT PAYMENTS STATUS<sup>c/</sup>  
(in thousands)

Calendar Year	Qualified for Old-Age and Wife's		Qualified for Old-Age and Widow's	
	Total Eligible	With Smaller Old-Age Benefit	Total Eligible	With Smaller Old-Age Benefit
Low-Cost Assumptions				
1980	1,826	475	4,201	1,029
1985	2,181	523	4,743	1,304
1990	2,529	556	5,238	1,571
1995	2,837	596	5,595	1,790
2000	3,026	620	5,837	1,955
2025	6,153	1,231	8,608	3,013
High-Cost Assumptions				
1980	2,015	524	4,339	1,063
1985	2,442	586	4,990	1,372
1990	2,893	636	5,529	1,659
1995	3,319	697	6,000	1,920
2000	3,683	755	6,254	2,095
2025	7,932	1,586	9,503	3,326

a/ I.e., benefits for retired workers.

b/ Does not include cases in which the woman has not become a beneficiary (has not retired). There are relatively few wives in this category, since generally they retire at the same time as their husbands, but the number of widows in this category are substantially higher. The number eligible for both old-age and parent's benefits is negligible.

c/ As of July 1.

Table 13

ESTIMATED AVERAGE ANNUAL BENEFITS IN CURRENT PAYMENT STATUS FOR  
OLD-AGE BENEFICIARIES AND THEIR DEPENDENTS

Calendar Year	Old-Age <sup>a/</sup>			Supplementary Wife's <sup>b/</sup>		Child's
	Male	Female	Total	With No Old-Age Benefit	With Smaller Old-Age <sup>c/</sup> Benefit	
Actual Data (as of January 1)						
1960	\$961	\$706	\$873	\$458	\$146	\$328
1961	982	716	888	465	149	339
1962	998	744	908	473	121	330
1963	1,005	751	914	475	130	329
1964	1,016	761	922	479	127	334
1965	1,027	771	930	483	131	337
1966	1,111	841	1,007	524	d/	385
1967	1,119	849	1,012	526	d/	394
1968	1,134	863	1,024	531	d/	401
1969	1,309	1,011	1,186	615	d/	460
Low-Cost Assumptions (as of July 1)						
1980	\$1,480	\$1,089	\$1,300	\$690	\$186	\$530
1985	1,567	1,112	1,353	727	196	563
1990	1,650	1,131	1,401	766	207	593
1995	1,717	1,147	1,439	796	215	617
2000	1,764	1,157	1,462	817	221	634
2025	1,822	1,175	1,493	839	228	656
High-Cost Assumptions (as of July 1)						
1980	\$1,479	\$1,081	\$1,296	\$690	\$186	\$530
1985	1,563	1,098	1,344	726	196	562
1990	1,644	1,112	1,388	763	206	591
1995	1,709	1,122	1,423	793	214	614
2000	1,755	1,129	1,444	814	220	631
2025	1,814	1,138	1,469	836	227	653

a/ I.e., benefits for retired workers.

b/ Including husband's benefits.

c/ Figures represent the average residual wife's benefit paid in addition to their own old-age benefit.

d/ Not available.

Table 14

ESTIMATED AVERAGE ANNUAL SURVIVOR BENEFITS IN CURRENT PAYMENT  
STATUS AND LUMP-SUM DEATH PAYMENTS

Calendar Year	Widow's <sup>a/</sup>		Mother's	Child's	Parent's	Lump-Sum <sup>c/</sup> Death Payments
	With No Old-Age Benefit	With Smaller Old-Age <sup>b/</sup> Benefit				
Actual Data (as of January 1)						
1960	\$681	\$246	\$688	\$570	\$706	\$211
1961	692	253	711	616	724	211
1962	779	291	712	633	806	212
1963	791	293	713	643	818	213
1964	802	301	713	652	829	214
1965	814	310	713	660	841	219
1966	885	d/	785	735	912	224
1967	889	d/	787	741	918	221
1968	900	d/	790	750	927	225
1969	1,037	d/	899	850	1,059	d/
Low-Cost Assumptions (as of July 1)						
1980	\$1,234	\$463	\$1,011	\$965	\$1,187	\$239
1985	1,329	498	1,073	1,022	1,262	242
1990	1,400	525	1,130	1,073	1,329	243
1995	1,456	546	1,176	1,112	1,382	244
2000	1,496	561	1,208	1,142	1,421	245
2025	1,548	581	1,250	1,182	1,470	244
High-Cost Assumptions (as of July 1)						
1980	\$1,234	\$463	\$1,011	\$965	\$1,187	\$238
1985	1,326	497	1,071	1,020	1,259	240
1990	1,395	523	1,126	1,069	1,325	240
1995	1,450	544	1,170	1,106	1,376	241
2000	1,488	558	1,201	1,136	1,413	241
2025	1,541	578	1,243	1,175	1,463	241

a/ Including widower's benefits.

b/ Figures represent the average residual widow's benefit paid in addition to their own old-age benefit.

c/ Average amount paid per deceased worker in calendar year.

d/ Not available.

Table 15

ESTIMATED AVERAGE ANNUAL DISABILITY BENEFITS<sup>a/</sup>  
 IN CURRENT PAYMENT STATUS

<u>Calendar Year</u>	<u>Disabled Worker</u>	<u>Supplementary Benefits<sup>b/</sup></u>	
		<u>Wife's</u>	<u>Child's</u>

## Actual Data (as of January 1)

1960	\$1,068	\$433	\$371
1961	1,072	413	363
1962	1,075	397	350
1963	1,080	389	343
1964	1,087	387	341
1965	1,093	387	342
1966	1,173	420	379
1967	1,177	414	376
1968	1,181	411	377
1969	1,342	459	417

## Low-Cost Assumptions (as of July 1)

1980	\$1,585	\$554	\$502
1985	1,665	589	534
1990	1,713	611	553
1995	1,744	625	566
2000	1,762	634	574
2025	1,762	634	574

## High-Cost Assumptions (as of July 1)

1980	\$1,579	\$553	\$501
1985	1,654	587	532
1990	1,698	608	551
1995	1,724	622	564
2000	1,740	630	571
2025	1,737	630	571

a/ With respect only to persons who receive benefits from the DI Trust Fund.

b/ Payable to dependents of disabled workers.

Table 16

ESTIMATED OASI BENEFIT PAYMENTS<sup>a/</sup>  
(in millions)

Calendar Year	Monthly Benefits to the Aged				Monthly Benefits to Younger Persons			Lump-Sum Death Payments	Total Benefits <sup>e/</sup>
	Old-Age <sup>b/</sup>	Wife's <sup>c/</sup>	Widow's <sup>d/</sup>	Parent's	Child's	Mother's			
Actual Data									
1960	\$7,053	\$1,051	\$1,057	\$28	\$1,037	\$286	\$164	\$10,677	
1961	7,802	1,124	1,232	31	1,186	316	171	11,862	
1962	8,813	1,216	1,470	34	1,304	336	183	13,356	
1963	9,391	1,258	1,612	34	1,368	348	206	14,217	
1964	9,854	1,277	1,754	33	1,425	354	216	14,914	
1965	10,984	1,383	2,041	35	1,691	388	217	16,737	
1966	11,728	1,429	2,351	35	2,028	415	237	18,267	
1967	12,374	1,456	2,545	34	2,076	420	252	19,468	
1968	14,279	1,673	3,117	37	2,461	478	269	22,643	
Low-Cost Assumptions									
1980	\$21,920	\$2,114	\$5,155	\$33	\$3,131	\$562	\$374	\$33,341	
1985	25,366	2,313	5,978	34	3,436	623	399	38,166	
1990	28,763	2,530	6,444	35	3,941	723	441	42,880	
1995	31,262	2,595	6,983	35	4,367	804	469	46,515	
2000	32,675	2,553	7,188	34	4,698	868	500	48,516	
2025	55,825	3,387	10,770	35	6,691	1,203	538	78,659	
High-Cost Assumptions									
1980	\$22,891	\$2,221	\$5,010	\$34	\$3,001	\$529	\$362	\$34,100	
1985	26,943	2,453	5,725	35	3,134	554	392	39,253	
1990	31,001	2,685	6,213	36	3,397	602	420	44,357	
1995	34,199	2,800	6,667	34	3,579	632	448	48,359	
2000	36,273	2,745	7,207	32	3,665	642	475	51,039	
2025	64,003	3,532	9,875	29	4,554	748	723	83,464	

a/ Includes cost of vocational rehabilitation services to disabled beneficiaries.

b/ I.e., for retired workers.

c/ Including husband's and young wife's benefits.

d/ Including widower's benefits.

e/ Includes special benefits for certain persons aged 72 and over (which are almost entirely financed by general revenues). These were first payable in 1966 and amounted to \$44 million in 1966, \$311 million in 1967, and \$329 million in 1968; the estimated amounts are \$52 million in 1980, \$17 million in 1985, and \$3 million in 1990.

Table 17

ESTIMATED DI BENEFIT PAYMENTS<sup>a/</sup>  
(in millions)

<u>Calendar Year</u>	<u>Disabled Worker</u>	<u>Wife's</u>	<u>Child's</u>	<u>Total Benefits</u>
Actual Data				
1960	\$489	\$32	\$48	\$568
1961	724	54	109	887
1962	888	68	149	1,105
1963	965	73	172	1,210
1964	1,044	79	186	1,309
1965	1,246	95	232	1,573
1966	1,394	108	280	1,781
1967	1,519	113	307	1,939
1968	1,804	131	360	2,295
Low-Cost Assumptions				
1980	\$2,966	\$189	\$534	\$3,689
1985	3,363	214	587	4,164
1990	3,669	232	619	4,520
1995	4,069	256	662	4,987
2000	4,669	292	734	5,695
2025	7,012	432	1,029	8,473
High-Cost Assumptions				
1980	\$3,607	\$231	\$654	\$4,492
1985	4,143	257	729	5,129
1990	4,567	281	795	5,643
1995	5,106	310	878	6,294
2000	5,874	353	999	7,226
2025	8,396	498	1,409	10,303

<sup>a/</sup> Includes cost of vocational rehabilitation services.

Table 18

ANALYSIS OF THE INTERMEDIATE-COST ESTIMATE FOR  
OASDI BY TYPE OF BENEFIT PAYMENT  
AS PERCENT OF TAXABLE PAYROLL<sup>a/</sup>

<u>Type of Payment</u>	<u>OASI</u>	<u>DI</u>
Primary benefits	5.36%	.78%
Wife's benefits	.44	.05
Widow's benefits	1.13	<u>b/</u>
Parent's benefits	.01	<u>b/</u>
Child's benefits	.68	.13
Mother's benefits	.12	<u>b/</u>
Lump-sum death payments	<u>.08</u>	<u>b/</u>
 Total benefits	 7.82	 .96
Administrative expenses	.13	.04
Railroad retirement financial interchange	.07	.00
Interest on existing trust fund <sup>c/</sup>	<u>-.26</u>	<u>-.04</u>
 Net total level-cost	 7.76	 .96

a/ Includes adjustment to reflect the lower contribution rate on self-employment, on tips, and on multiple employer excess wages.

b/ This type of benefit is not payable under this program.

c/ This item includes reimbursement for additional cost of non-contributory credits for military service.

Table 19

INTERMEDIATE-COST ESTIMATE OF BENEFIT PAYMENTS  
AS PERCENT OF TAXABLE PAYROLL<sup>a/</sup>  
FOR SELECTED YEARS

<u>Calendar Year</u>	<u>OASI</u>	<u>DI</u>	<u>OASDI</u>
Actual Data			
1960	5.33%	.28%	5.61%
1961	5.85	.44	6.29
1962	6.31	.52	6.83
1963	6.52	.55	7.07
1964	6.53	.57	7.10
1965	6.92	.65	7.57
1966	6.02	.59	6.61
1967	5.99	.61	6.60
1968	6.12	.63	6.75
Projection			
1980	7.15%	.87%	8.02%
1985	7.72	.92	8.64
1990	8.18	.95	9.13
1995	8.27	.98	9.25
2000	8.03	1.04	9.07
2005	7.83	1.12	8.95
2010	8.00	1.19	9.19
2015	8.59	1.21	9.80
2020	9.36	1.20	10.56
2025	10.03	1.16	11.19
2030	10.29	1.14	11.43
2035	10.20	1.17	11.37
2040	10.14	1.18	11.32
2045	10.19	1.17	11.36

a/ Including adjustment to reflect lower contribution rate on self-employment on tips, and on multiple-employer excess wages.

b/ Under this program, benefit payments started in 1957.



Table 20

ANALYSIS OF ESTIMATED LEVEL-COST (AS OF JANUARY 1<sup>a/</sup>/1970)  
OF OASDI SYSTEM AS PERCENT OF TAXABLE PAYROLL

<u>Level Equivalent of</u>	<u>Estimate</u>		
	<u>Low- Cost</u>	<u>High- Cost</u>	<u>Intermediate- Cost</u>
OASI System			
Benefit Payments	7.44%	8.30%	7.82%
Administrative Expenses	.12	.14	.13
Railroad Interchange	.07	.07	.07
Interest on 1969 Trust Fund <sup>b/</sup>	-.28	-.24	-.26
Net Level-Cost <sup>c/</sup>	7.35	8.27	7.76
Contributions <sup>d/</sup>	8.93	8.95	8.93
Actuarial Balance	1.58	.68	1.17
DI System			
Benefit Payments	.83%	1.10%	.96%
Administrative Expenses	.03	.05	.04
Railroad Interchange	.00	.00	.00
Interest on 1969 Trust Fund <sup>b/</sup>	-.04	-.04	-.04
Net Level-Cost <sup>c/</sup>	.82	1.11	.96
Contributions <sup>d/</sup>	.95	.95	.95
Actuarial Balance <sup>e/</sup>	.13	-.16	-.01

a/ Includes adjustment to reflect the lower contribution rate on self-employment, on tips, and on multiple employer excess wages.

b/ Interest on Trust Fund existing at end of 1969 as earned in future years. Includes reimbursement for additional cost of noncontributory credits for military service.

c/ Level-equivalent of benefit payments, plus administrative expenses, less interest on existing Fund at end of 1969 and including effect of the Railroad Retirement interchange and reimbursement from the general treasury of the additional cost for noncontributory credits for military service.

d/ Level contribution rate for employer and employee combined equivalent to the graded rates in the 1967 Act.

e/ A negative figure indicates the extent of lack of actuarial sufficiency.

Table 21

ESTIMATED OASDI BENEFIT PAYMENTS AS PERCENT  
OF TAXABLE PAYROLL<sup>a/</sup>, LOW-COST AND HIGH-COST ASSUMPTIONS

<u>Calendar Year</u>	<u>Low-Cost</u>	<u>High-Cost</u>
OASI System		
1980	7.01%	7.29%
1985	7.54	7.90
1990	7.94	8.43
1995	7.96	8.59
2000	7.63	8.45
2025	8.98	11.27
DI System		
1980	.77%	.96%
1985	.82	1.03
1990	.83	1.07
1995	.85	1.11
2000	.89	1.19
2025	.96	1.39

a/ Includes adjustment to reflect the lower contribution rate on self-employment, on tips, and on multiple-employer excess wages.

Table 22  
ESTIMATED PROGRESS OF OASI TRUST FUND  
(in millions)

Calendar Year	Contri- butions <sup>a/</sup>	Benefit Payments <sup>b/</sup>	Adminis- trative Expenses	Railroad Retirement Financial Interchange <sup>c/</sup>	Interest on Fund	Fund at End of Year
Actual Data						
1960	\$10,866	\$10,677	\$203	\$318	\$516	\$20,324
1961	11,285	11,862	239	332	548	19,725
1962	12,059	13,356	256	361	526	18,337
1963	14,541	14,217	281	423	521	18,480
1964	15,689	14,914	296	403	569	19,125
1965	16,017	16,737	328	436	593	18,235
1966	20,658	18,267	256	444	644	20,570
1967	23,216	19,468	406	508	818	24,222
1968	24,100	22,643	476	438	939	25,704
Low-Cost Assumptions						
1980	\$43,151	\$33,341	\$580	\$492	\$8,027	\$169,344
1985	45,900	38,166	625	454	12,642	260,580
1990	48,990	42,880	671	401	18,014	367,946
1995	53,055	46,515	712	325	24,779	504,156
2000	57,716	48,516	743	238	33,975	690,085
2025	79,381	78,659	1,113	-25	143,892	2,892,380
High-Cost Assumptions						
1980	\$42,427	\$34,100	\$649	\$535	\$5,849	\$150,520
1985	45,071	39,253	703	498	8,552	216,001
1990	47,773	44,357	756	426	11,308	282,933
1995	51,135	48,359	802	347	14,355	357,759
2000	54,840	51,039	839	261	18,160	451,899
2025	67,116	83,464	1,213	18	48,944	1,200,127
Intermediate-Cost Assumptions						
1980	\$42,789	\$33,721	\$614	\$514	\$6,894	\$159,789
1985	45,488	38,710	664	477	10,476	237,718
1990	48,381	43,619	714	414	14,407	323,888
1995	52,095	47,433	757	336	19,090	427,520
2000	56,278	49,779	791	250	25,233	564,168
2025	73,249	81,062	1,163	-3	88,345	1,951,865

<sup>a/</sup> Includes reimbursement for additional cost of noncontributory credits for military service and for social benefits to persons aged 72 and over.

<sup>b/</sup> Includes cost of vocational rehabilitation services to disabled beneficiaries.

<sup>c/</sup> A negative figure indicates payment to the Trust Fund from the Railroad Retirement Account, and a positive figure indicates the reverse.

Table 23

ESTIMATED PROGRESS OF DI TRUST FUND  
(in millions)

<u>Calendar Year</u>	<u>Contributions<sup>a/</sup></u>	<u>Benefit Payments<sup>b/</sup></u>	<u>Administrative Expenses</u>	<u>Railroad Retirement Financial Interchange<sup>c/</sup></u>	<u>Interest on Fund</u>	<u>Fund at End of Year</u>
Actual Data						
1960	\$1,010	\$568	\$36	-\$5	\$53	\$2,289
1961	1,038	887	64	5	66	2,437
1962	1,046	1,105	66	11	68	2,368
1963	1,099	1,210	68	20	66	2,235
1964	1,154	1,309	79	19	64	2,047
1965	1,188	1,573	90	24	59	1,606
1966	2,022	1,784	137	25	58	1,739
1967	2,302	1,950	109	31	78	2,029
1968	3,348	2,311	127	20	106	3,025
Low-Cost Assumptions						
1980	\$4,550	\$3,689	\$155	\$19	\$976	\$20,339
1985	4,848	4,164	155	17	1,437	29,490
1990	5,176	4,520	162	9	2,000	40,790
1995	5,607	4,987	175	5	2,715	55,157
2000	6,101	5,695	196	-2	3,599	72,836
2025	8,370	8,473	288	-7	11,936	239,949
High-Cost Assumptions						
1980	\$4,477	\$4,492	\$197	\$26	\$414	\$10,499
1985	4,763	5,129	212	23	412	10,315
1990	5,052	5,643	226	18	340	8,475
1995	5,409	6,294	246	12	187	4,656
2000	5,805	7,226	279	8	<u>d/</u>	<u>d/</u>
2025	7,086	10,303	397	-3	<u>d/</u>	<u>d/</u>
Intermediate-Cost Assumptions						
1980	\$4,513	\$4,090	\$176	\$22	\$669	\$15,317
1985	4,805	4,648	184	20	868	19,578
1990	5,114	5,081	194	14	1,064	23,880
1995	5,508	5,641	210	8	1,271	28,414
2000	5,953	6,460	238	3	1,457	32,399
2025	7,728	9,388	342	-5	919	20,202

a/ Includes reimbursement for additional cost of noncontributory credits for military service.

b/ Includes the cost of vocational rehabilitation services to disabled beneficiaries.

c/ A negative figure indicates payment to the Trust Fund from the Railroad Retirement Account, and a positive figure indicates the reverse.

d/ Fund exhausted in 1999.

Table 24

ACTUARIAL BALANCE OF OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM  
 UNDER VARIOUS ACTS FOR VARIOUS ESTIMATES, INTERMEDIATE-COST BASIS

Legislation	Date of Estimate	Level-Equivalent <sup>a/</sup>		Actuarial Balance <sup>c/</sup>
		Benefit Costs <sup>b/</sup>	Contributions	
Old-Age, Survivors, and Disability Insurance <sup>d/</sup>				
1935 Act	1935	5.36%	5.36%	0.00%
1939 Act	1939	5.22	5.30	+0.08
1939 Act (as amended in the 1940's) <sup>e/</sup>	1950	4.45	3.98	-.47
1950 Act	1950	6.20	6.10	-.10
1950 Act	1952	5.49	5.90	+0.41
1952 Act	1952	6.00	5.90	-.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
1958 Act	1960	8.73	8.68	-.05
1960 Act	1960	8.98	8.68	-.30
1961 Act	1961	9.35	9.05	-.30
1961 Act	1963	9.33	9.02	-.31
1961 Act (perpetuity basis)	1964	9.36	9.12	-.24
1961 Act (75-year basis)	1964	9.09	9.10	+0.01
1965 Act	1965	9.49	9.42	-.07
1965 Act	1966	8.76	9.50	+0.74
1967 Act	1967	9.72	9.73	+0.01
1967 Act	1968	9.32	9.85	+0.53
1967 Act	1969	8.72	9.88	+1.16
Old-Age and Survivors Insurance <sup>d/</sup>				
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
1958 Act	1960	8.38	8.18	-.20
1960 Act	1960	8.42	8.18	-.24
1961 Act	1961	8.79	8.55	-.24
1961 Act	1963	8.69	8.52	-.17
1961 Act (perpetuity basis)	1964	8.72	8.62	-.10
1961 Act (75-year basis)	1964	8.46	8.60	+0.14
1965 Act	1965	8.82	8.72	-.10
1965 Act	1966	7.91	8.80	+0.89
1967 Act	1967	8.77	8.78	+0.01
1967 Act	1968	8.34	8.90	+0.56
1967 Act	1969	7.76	8.93	+1.17

(Continued on next page)

Table 24 (Continued)

ACTUARIAL BALANCE OF OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM  
UNDER VARIOUS ACTS FOR VARIOUS ESTIMATES, INTERMEDIATE-COST BASIS

Legislation	Date of Estimate	Level-Equivalent <sup>a/</sup>		Actuarial Balance <sup>c/</sup>
		Benefit Costs <sup>b/</sup>	Contributions	
		Disability Insurance <sup>d/</sup>		
1956 Act	1956	0.42%	0.49%	+0.07%
1956 Act	1958	.35	.50	+.15
1958 Act	1958	.49	.50	+.01
1958 Act	1960	.35	.50	+.15
1960 Act	1960	.56	.50	-.06
1961 Act	1961	.56	.50	-.06
1961 Act	1963	.64	.50	-.14
1961 Act (perpetuity basis)	1964	.64	.50	-.14
1961 Act (75-year basis)	1964	.63	.50	-.13
1965 Act	1965	.67	.70	+.03
1965 Act	1966	.85	.70	-.15
1967 Act	1967	.95	.95	.00
1967 Act	1968	.98	.95	-.03
1967 Act	1969	.96	.95	-.01

a/ Expressed as a percentage of effective taxable payroll, including adjustment to reflect the lower contribution rate on self-employment, on tips, and on multiple employer excess wages. Estimates prepared before 1964 are on a perpetuity basis, while those prepared after 1964 are on a 75-year basis. The estimates prepared in 1964 are on both bases.

b/ Including adjustments (a) for the interest earnings on the existing trust fund, (b) for administrative expense costs, and (c) for the net cost of the financial interchange with the railroad retirement system.

c/ A negative figure indicates the extent of lack of actuarial balance. A positive figure indicates more than sufficient financing, according to the particular estimate.

d/ The disability insurance program was inaugurated in the 1956 Act so that all figures for previous legislation are for the old-age and survivors insurance program only.

e/ The major changes being in the revision of the contribution schedule; as of the beginning of 1950, the ultimate combined employer-employee rate scheduled was only 4 percent.

Actuarial Studies Available from the Office of the Actuary\*

46. Illustrative United States Population Projections--May 1957.
48. Long-Range Cost Estimates for Old-Age, Survivors, and Disability Insurance under 1956 Amendments--August 1958.
49. Methodology Involved in Developing Long-Range Cost Estimates for the Old-Age, Survivors, and Disability Insurance System--May 1959.
50. Analysis of Benefits, OASDI Program, 1960 Amendments--December 1960.
51. Present Values of OASI Benefits in Current Payment Status, 1960--February 1961.
52. Actuarial Cost Estimates for Health Insurance Benefits Bill--July 1961.
53. Medium-Range Cost Estimates for Old-Age, Survivors, and Disability Insurance and Increasing-Earnings Assumption--August 1961.
54. Estimated Amount of Life Insurance in Force as Survivor Benefits under OASI, 1959-60--October 1961.
55. Remarriage Tables Based on Experience under OASDI and U. S. Employees' Compensation System--December 1962.
56. Analysis of Benefits under 26 Selected Private Pension Plans--January 1963.
57. Actuarial Cost Estimates for Hospital Insurance Bill--July 1963.
60. Mortality Experience of Workers Entitled to Old-Age Benefits under OASDI, 1941-1961--August 1965.
61. History of Cost Estimates for Hospital Insurance--December 1966.
62. United States Population Projections for OASDHI Cost Estimates--January 1967.
63. Long-Range Cost Estimates for Old-Age, Survivors, and Disability Insurance System, 1966--January 1967.

Actuarial Studies Available from the Office of the Actuary\* (Cont'd.)

64. Methods Used in Estimating Long-Range Costs for the Old-Age, Survivors, and Disability Insurance System. (In Preparation)
65. Termination Experience of Disabled-Worker Benefits under OASDI, 1957-63--March 1969.
66. Present Values of OASI Benefits in Current Payment Status, 1968--April 1969.
67. Present Value of DI Benefits in Current Payment Status, 1968--August 1969.
68. Analysis of Experience Under Hospital Insurance Program--September 1969.

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\*Numbers not listed are out of print.