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LONG-RANGE ESTIMATES OF THE FINANCIAL STATUS OF THE OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM, 1983

ACTUARIAL STUDY NO. 91

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Social Security Administration
Office of the Actuary

April 1984
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by Stephen C. Goss, A.S.A.

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FORWARD

This study briefly describes the long-range financial status of the OASDI program as presented in the 1983 Annual Report of the Board of Trustees. Many methodological improvements have been made since Actuarial Study Number 83 was published in September 1980. Among these are a totally new method for projecting the percentage of the population that is fully insured, improvements in the methods used for projecting the covered population and the size of the primary insurance amount awarded to new beneficiaries, and a new method for projecting the impact of changes in retirement age, like that enacted in the 1983 Social Security Amendments. It also describes, for the first time, the method used to estimate the effect on the income to the program of the provisions for taxation of benefits that were enacted in 1983.

We hope that the general descriptions presented here will enable a large proportion of interested persons to improve their understanding of the actuarial techniques that are used to evaluate the OASDI program. In order to keep the study to a reasonable size, the methodological descriptions are brief. The projections presented in the tables, however, are more detailed and extensive. Any reader who would like more information about particular portions of the methods that are being used is encouraged to write to us.

Francisco R. Bayo
Deputy Chief Actuary

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A. BACKGROUND

The financial status of the Old-Age, Survivors, and Disability Insurance (OASDI) program is customarily evaluated on the basis of estimates made over three time periods: short range (5-10 years), medium range (25 years), and long range (75 years). Short-range estimates provide an essential indicator of the program's ability to pay benefits over the next several years and show whether a need exists for legislative action to maintain this ability in the near future. Long-range (and to a lesser extent medium-range) estimates provide essential tools for evaluating the size of the financial obligation that the OASDI program will place on future generations after the provisions of the law become fully effective and the population matures, and for determining whether current provisions for financing will be adequate.

The long-range financial status is generally measured by the long-range actuarial balance, which is the difference, over the 75-year period, between the projected average income rate and the projected average cost rate, both expressed as percentages of effective taxable payroll. If the actuarial balance is positive, the program is said to have a long-range surplus, and if negative, to have a long-range deficit. Effective taxable payroll (often referred to simply as taxable payroll) is defined here as the amount which, when multiplied by the combined employer-employee tax rate, yields the total amount of taxes that would be paid by employers, employees, and the self-employed. The cost rate includes benefit payments, administrative expenses, net transfers under the financial interchange between the OASDI trust funds and the Railroad Retirement account, and payments for vocational rehabilitation services for disabled beneficiaries. The income rate includes FICA and SECA contributions, deposits by participating States for their employees, amounts transferred from the Treasury under the provision for taxation of some OASDI benefits, and various reimbursements from the general fund of the Treasury.

Over the long-range period, the program is said to be in "close actuarial balance" if the projected average income rate is between 95 percent and 105 percent of the projected average cost rate. For most of the period 1935 through 1973, the program was maintained in close actuarial balance. From 1974 through 1982, the program was out of balance with the projected average income rate being substantially less than 95 percent of the projected average cost rate. This imbalance was largely the result of the recognition of changing demographic trends, and the improperly indexed benefit formula introduced in the 1972 Social Security amendments, combined with the emergence of economic trends that were less favorable than those experienced through the mid-1960's. Close actuarial balance for the long-range period has once again been restored with enactment of the 1983 Social Security amendments. A detailed history of the long-range actuarial balance is shown in Table 22.

The medium-range actuarial status is sometimes measured by the medium-range actuarial balance, which is, generally, defined in the same way as the long-range actuarial balance, but using a 25-year projection period. For

the medium-range period, however, a closer match between income and cost (and even a further requirement that income at least equal cost) might be more appropriate because the shorter period implies both greater confidence in the assumptions and less time to act if a financial shortfall occurs.

An important measure of the short-range financial status of the OASDI program is the projected amount of assets in the trust funds at the beginning of each month because benefit payments can be made on the customary third day of each month only if sufficient assets are in the trust funds to cover these payments. This measure is also useful in the long-range period to illustrate when, and to what extent, the trust funds are projected to be built-up and drawn-down and as an indicator of the approximate date, if any, by which it is projected that legislative action will be necessary to ensure timely payment of benefits.

Projections of trust fund assets at the beginning of the year as a percentage of trust fund expenditures during the year (called trust fund ratios) are used to illustrate the expected progress of the trust funds. For this purpose, assets are defined to include all amounts that would actually be available for the payment of benefits. Thus any amounts borrowed from other trust funds are reflected, as are payroll taxes received on the first day of January (beginning 1984). The value of buildings and other property is excluded, since these "assets" could not easily be converted to cash for the payment of benefits. The trust fund assets are projected by adding estimated interest on trust fund investments to other estimated future income and subtracting estimated future expenditures. Trust fund assets not currently needed to meet expenditures are invested in U.S. Government issues or in issues backed by the U.S. Government. The U.S. Government bonds pay interest at the rate of the average market yield on all long-term bonds forming a part of the public debt.

In order to cover benefit payments, the trust fund ratio at the beginning of each month must be at least 8 to 9 percent. This minimum level amounted to about \$12.5 billion for the OASI fund and about \$1.5 billion for the DI fund in 1983. As a result of the 1983 Social Security amendments, contributions, which are received on a daily basis by the U.S. Treasury, are now estimated for each month and transferred to the OASI and DI trust funds in advance on the first day of the month. This provision is of considerable help in ensuring timely payment of benefits when trust fund balances are low because the advance tax transfer amounts to a temporary loan from the Treasury each month. The trust funds pay interest on these loans, and the differences between estimated and actual contributions are reconciled.

In recent years, the general philosophy of financing the OASDI program has been that the annual tax revenues should approximately equal the annual expenditures, and that the trust funds should be used only to absorb temporary imbalances between expenditures and income. Under this "current-cost" or "pay-as-you-go" method of financing, the trust funds should not grow too large (through continued annual surpluses) nor too small (through continued annual deficits).

Most analysts have, in the past, felt that the trust fund ratios should be maintained somewhere in the range of 50 to 100 percent in order to provide

time for executive and legislative action to prevent trust fund exhaustion in a period of continued deficits. Although no consensus has yet emerged, the generally desired target level may now be somewhat closer to the lower end of this range as a result of certain safeguards enacted in the 1983 amendments.

Three provisions of the 1983 Social Security amendments require that some action be taken if trust fund ratios become undesirably low. First, if the trust fund ratio is below 15.0 percent for any year through 1988 or below 20.0 percent for any year after 1988, the automatic benefit increase is to be based on the increase in the average wage, if lower than the increase in the Consumer Price Index, which is normally used. Second, repayments of amounts owed to the Hospital Insurance Trust Fund will be made from the OASI Trust Fund for any year through 1987 only to the extent that the OASDI combined trust fund ratio is not below 15 percent after any such repayment. Third, the Board of Trustees must submit to Congress a plan for legislative action if it is determined that the trust fund ratio may fall below 20 percent for any year. It should be noted that the definition of "trust fund ratio" is different for each of these three provisions and is, in each case, different from the definition described earlier which is normally used to evaluate the financial status of the trust funds.

The financial status of the OASDI program can also be measured on a present-value basis. In that case, income and expenditures during the projection period are evaluated as of the beginning of that period by applying discount factors which allow for the effects of compound interest over time. When the same assumptions are used, the financial status measured on a present-value basis is generally similar to the financial status measured on the more customary average-cost basis, through the actuarial balance.

The present-value analysis more closely resembles the methods generally used for valuing private pension plans than does the average-cost analysis. If the present-value analysis is done on a closed-group basis (that is, excluding the effect of new participants) actuarial concepts may be developed for OASDI analogous to the "normal cost" and "unfunded accrued liability" as used for private pension valuations. Although the assumption that the OASDI system would be closed to new entrants is contrary to the intent of Congress and is not customarily made, the resulting closed-group analysis gives useful insights into the financial commitment of the system.

B. ASSUMPTIONS

The future income and cost of the OASDI program will depend upon many economic, demographic, and programmatic factors. Among these are rates of average-wage growth, growth in GNP, productivity, labor force participation, inflation, unemployment, fertility, mortality, net immigration, marriage, divorce, prevalence of retirement, and disability incidence and termination. Income to the system will depend primarily upon how these factors affect the size and composition of the working population and the average level and distribution of earnings. Similarly, expenditures will depend upon how these factors affect the size and composition of the beneficiary population and the average level of benefits.

It is impossible to know what the future holds with respect to the various economic and demographic factors cited above. The best that can be done is to make assumptions about the future behavior of these factors in an objective manner according to current understanding. Cost projections based on such assumptions, although subject to appreciable variability, are a useful indicator of the trend and range of future income and expenditures. Even though such projections cannot be considered exact predictions of emerging experience, they provide insights which are useful for making informed policy decisions.

The sensitivity of the cost estimates to the various factors can be analyzed by varying one factor at a time and measuring the resulting change in actuarial balance (see section E). In addition, the entire set of assumptions may be varied at once, taking into account the complex interactions which exist among the assumptions (see section G).

Tables 1a, 1b, and 1c summarize the most important economic, demographic, and programmatic assumptions used in the projection of the long-range cost of the OASDI program on the basis of what we consider to be an intermediate, or most likely, scenario for the future. This set of assumptions is identified as the Alternative II-B assumptions in the 1983 Annual Report of the Board of Trustees.

1. ECONOMIC ASSUMPTIONS

Income to the OASDI program is directly dependent upon both the number of workers engaged in covered employment and the average level of their earnings. Covered employment is projected reflecting expected trends in labor force participation rates and unemployment rates for the U.S. economy as a whole. Increases in average earnings are projected reflecting expected increases in the CPI and in average real wages. Real-wage growth is projected reflecting long-range expectations about productivity and many other factors.

The cost of the system depends on both future earnings levels and the rate of inflation as measured by the CPI. Increases in the level of average earnings determine the level of benefits payable at the time of initial eligibility. The CPI determines (in general) the amounts by which benefits are increased after initial eligibility. In addition, the percentage of the

population that works in covered employment will determine the number of persons who become insured under the system and thus the eventual number who are eligible to receive benefits.

For further and more detailed information on economic assumptions made in order to project the financial status of the OASDI system see Actuarial Study No. 90: Economic Projections for OASDI Cost Estimates, 1983, by John C. Wilkin, Milton P. Glanz, Ronald V. Gresch, and Seung H. An.

Productivity

Labor productivity is defined as the ratio of real production in dollars to the number of hours for which employees are paid. From 1952 to 1982, productivity increased at an annual rate of 2.14 percent for the private non-farm sector, according to BLS data. For the first 20 years, increases were at an annual rate of about 2.7 percent, while since 1972 an increase of only about 0.9 percent per year has occurred on average.

Neither a continuation of the recent small gains in productivity nor the larger gains of the prior two decades is likely to be realized on average in the long-term future. For the intermediate assumptions, the rate of productivity gain is projected to rise gradually to an ultimate level of 2.1 percent per year around the year 2000.

Real-Wage Growth

Since 1952, average real wages have increased at an annual rate of 1.13 percent, one full percentage point less than the rate of increase in productivity for the same period. The difference can be explained by a 0.25-percent average annual increase in the employees' share of production, a 0.40-percent average annual decrease in the proportion of employee compensation paid in wages, a 0.45-percent average annual decrease in the average number of hours worked per week employed, and a 0.42-percent average annual decrease due to other factors such as changes in the average number of weeks employed per year and statistical discrepancy.

For the sake of simplicity, projected real-wage increases have customarily been presented in terms of the real-wage differential obtained by subtracting the percentage increase in the CPI from the percentage increase in nominal wages, rather than by dividing. The real-wage differential is projected to reach an ultimate level of 1.5 percent per year in 1993. The 0.6-percent average annual difference between productivity and real wages is expected to occur as a result of continued declines of about equal size in the proportion of employee compensation paid in wages and in the number of hours worked per week employed.

Consumer Price Index

The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is assumed to increase ultimately at an average annual rate of 4.0 percent, which is the same as the average over the last 50 years. The more recent high rates of increase in the CPI are not expected to continue over the long-range.

Average Annual Wages in Covered Employment

The sums of the real-wage differentials and the corresponding percentage increases in the average annual CPI yield the assumed increases in average annual wages in covered employment. The ultimate value of 5.5 percent is projected to be reached in 1993.

Gross National Product

The rate of real growth in the gross national product is projected as the product of changes in number of persons employed, the rate of productivity, and the average number of hours worked per week employed. Ultimately, productivity is projected to increase at an average annual rate of 2.1 percent, and average hours worked per week to decline at an average annual rate of 0.3 percent. The rate of increase in the number of persons employed is projected to slow to slightly less than 1.0 percent per year by the year 2000, and to less than 0.2 percent per year after the year 2015 largely because of the projected slowdown in general population growth. Therefore, the projected rate of real growth in GNP drops to 2.6 percent per year by the end of this century and to 1.9 percent per year by 2060.

Benefit Increases

The annual automatic adjustment to benefits for December of each year after 1983 is, in general, based on the increase in the CPI from the third quarter of the prior year to the third quarter of the current year. These adjustments are projected based on the assumed CPI increases discussed earlier and reach the same ultimate rate of 4.0 percent per year.

Labor Force Participation Rates

The total labor force participation rate for males has dropped from 87 percent in 1952 to 77 percent in 1982. While rates have dropped for all age groups, the largest declines have occurred at ages 50 and over. The total rate for females has risen from 35 percent to 53 percent over the same period. Rates have risen significantly for females at all ages under age 65. The combined rate for males and females has risen from 60 to 64 percent since 1952.

Future labor force participation rates for males are projected to increase slightly at ages under 35 and to continue declining slightly at ages 35 and over. Although the overall rate for males is projected to stay about constant on an age-sex adjusted basis, the projected redistribution of the population toward older age groups results in a drop in the total rate for males from 77 percent in 1982 to 69 percent for the year 2040 and later. For females, the rates are projected to increase for all age groups, resulting in an overall increase from 53 percent in 1982 to over 60 percent for the year 2000 and later, on an age-sex adjusted basis. However, due to population redistribution toward older ages, the total nonadjusted rate for females is projected to decline after the year 2000 from 59 percent to 52 percent for the year 2040 and later.

2. DEMOGRAPHIC ASSUMPTIONS

Projections of the size and distribution of the population residing in the area covered by Social Security must be at the foundation of any long-range analysis of the financial status of the program. Both the numbers of workers and beneficiaries and the relative size of one group to the other will be largely determined by the population itself.

The fertility and mortality rates combine to determine the overall size and age distribution of the population in future years, with the exception of the relatively small influence of migration. Marital-status trends have direct impact on the number of workers through labor force participation and on the number of beneficiaries through resulting changes in both insured rates and the number of auxiliary beneficiaries resulting from marriage. For a more detailed presentation of demographic assumptions, see Actuarial Study No. 88: Social Security Area Population Projections, 1983, by John C. Wilkin.

Fertility Rates

Historically, fertility rates in the United States have fluctuated considerably. The total fertility rate for a given year is defined as the average number of children who would be born to a woman in her lifetime if she were to experience the age-specific birth rates observed in, or assumed for, that year, and if she were to survive the entire child-bearing period. This rate decreased from 3.3 after World War I to 2.1 during the Great Depression, rose to about 3.7 in 1957, then fell to 1.7 in 1976, and has stayed at about 1.8 since 1976.

The historical variations in fertility rates are believed to be the result of changes in social attitudes, economic conditions, and the use of contraception and abortion. Based on the recent behavior and trends of these factors, an ultimate total fertility rate of 2.0 children per woman is assumed.

Mortality Rates

During this century, the rate of improvement in mortality has varied widely, with extended periods during which annual improvement was over 2 percent and other periods of less than 1-percent annual improvement. The average annual improvement in age-sex-specific mortality by cause of death was studied for the period 1968-1978, during which improvement averaged about 2 percent. These rates of improvement are assumed to continue in the near future and thereafter to decelerate. An average annual improvement of about 0.6 percent is projected for the period from 1979 through 2060.

Life Expectancy

Since 1940, the average life expectancy at birth has increased by about 16 percent for males and by about 20 percent for females. Average life expectancy for any year is defined as the average number of years of life remaining for persons if they were to experience the age-specific death rates observed in, or assumed for, that year. Based on the expected future

improvements in mortality rates discussed above, life expectancy at birth is projected to increase by about 8 percent between 1983 and 2060 for both males and females.

Net Immigration

Net immigration is assumed to be 400,000 persons per year, which has been the approximate level of immigration since the enactment of the Immigration Act of 1965. The assumed net immigration excludes aliens entering the United States illegally, largely because no reliable estimate of their number exists. However, to the extent that they are enumerated in the Census, illegal aliens are included in the starting population.

Marital Status

Although marriage rates have fallen significantly and divorce rates have increased significantly over the past twenty years, it is not clear whether these trends will continue, stabilize, or reverse in the future. For this reason, age-sex-specific marriage and divorce rates are projected to continue at levels similar to those experienced in the recent past. Marriage rates have also been observed to differ within a specific age-sex group depending on past marital status. Recent relative differences in marriage rates by past status are projected to continue.

3. PROGRAMMATIC ASSUMPTIONS

The future income to, and cost of, the Social Security program depend on the number of employed persons who are covered, the numbers of persons who become insured, and the percentage of insured persons who receive benefits.

Coverage Rates

Projections of the percentages of the population that work in covered employment at any time during the year, i.e., coverage rates, are made by age and sex based on the projections of unemployment rates and labor force participation rates. The ultimate age-adjusted coverage rates reflect an increase for men of 5 percent from the 1983 level, and a 23-percent increase for women. The ratio of the age-adjusted coverage rate for females to that for males is projected to increase from the current level of 72 percent to an ultimate level of 83 percent. The age-sex-specific coverage rates are discussed in more detail in the next section, under covered population.

Fully Insured Rates

Fully insured status is required of an aged worker for eligibility for a primary retirement benefit and for his or her family members' eligibility for auxiliary benefits. Fully insured status is also required of a deceased worker for his or her survivors' eligibility for benefits (with the exception of child survivors and parents of eligible child survivors, who may alternatively be eligible if the deceased worker had currently insured status).

Projections of the percentage of the population that is fully insured are made by age and sex based on recent experience and projected coverage rates. The ultimate age-adjusted levels are projected to be 94.9 percent for men aged 62 and over and 82.7 percent for women aged 62 and over. Currently insured status is disregarded in the cost projection because the number of cases in which eligibility for benefits is based solely on currently insured status is relatively small. The projection of fully insured rates is described in detail in the next section, under insured population.

Disability Insured Rates

Disability insured status, which is more restrictive than fully insured status, is required of a disabled worker for eligibility for a primary disability benefit and for his or her family members' eligibility for auxiliary benefits. Projections of the percentage of the population that is disability insured are developed from the percentages fully insured using projections of historical trends relating the two. The ultimate age-adjusted levels are projected to be 90.0 percent of the population for males aged 20-64 and 69.4 percent for females aged 20-64.

Retirement Prevalence Rates

Projections of the numbers of aged fully insured workers who are retired-worker beneficiaries are made by age and sex on the basis of past trends (after adjustments for changes in the earnings test, in the mandatory retirement age, and in the level of unemployment). The age-adjusted ratio of retired-worker beneficiaries to the aged fully insured population is projected to increase slightly through the end of this century, reflecting a minor continuation of the trend toward earlier retirement. After the year 2000, retirement prevalence rates are projected to decline slightly as a result of the retirement-age provision enacted in the 1983 amendments. Retirement prevalence rates are discussed in more detail in the following section under retired-worker beneficiaries.

Disability Incidence Rates

The incidence rates are projected by age, sex, and year of exposure to disability. Incidence rates are projected to increase gradually over a 20-year period until the ultimate rates are attained in the year 2002 for most age groups. For persons aged 60 and over, however, incidence rates continue to increase through the year 2022 due to changes in the 1983 amendments which lower early retirement benefit levels. Incidence rates for persons at ages 65 and 66 were developed for the year 2000 and later, reflecting the increase in the age at which disabled-worker beneficiaries are converted to retired-worker status--from age 65 currently to age 67 for the year 2027 and later.

The ultimate age-sex-adjusted incidence rate is projected to be 15 percent higher than the historically low average level experienced in the period 1980-82 but is significantly lower than the past levels experienced in the mid-1970's. The relative differences in incidence rates by age and sex are projected to be the same as experienced for 1981.

Disability Termination Rates

The termination rates are projected by age, sex, and duration of entitlement. The mortality rates used in the projection are those experienced by disabled-worker beneficiaries during 1977-80. The recovery rates are those of the same period, increased by 20 percent to reflect the effect of the Social Security Disability Amendments of 1980, which introduced periodic review of disabled workers receiving benefits. These termination rates are assumed to remain constant in the future and are extended to age 67 due to the increase in the age of disabled-worker conversion to retired-worker status specified in the 1983 amendments.

Changes in the Law

The cost estimates are based on the assumption that the present statutory provisions and regulations affecting the OASDI program, including the Social Security Amendments of 1983, will remain unchanged. However, when considering the long-range actuarial status of the program, it is important to recognize that the law is likely to change as society itself changes in response to future economic and demographic developments. The projections presented in this study should not be interpreted as a prediction of what will happen in the future, but rather as an indication of what could occur if no changes are made in the system and if the adopted assumptions were to be actually experienced.

C. METHODS

Population

Projections of the population in the Social Security coverage area are made for future years by age, sex, and marital status to the year 2080. The starting point is the population as of July 1, 1981, which totaled 238,588,000. Included in this estimated starting population are various groups of citizens living abroad, enumerated illegal aliens, and an adjustment for net census undercount.

The estimated population for years after 1981 is computed using projected fertility, mortality, marriage, divorce, and net migration rates. The total Social Security area population is projected to rise to over 334 million by the year 2060, an increase of about 37 percent from the current level. But while the increase in population for groups under age 20 and at ages 20-64 are projected to rise by 11 and 28 percent, respectively, by the year 2060, the projected rise for persons aged 65 and over is 155 percent. This age redistribution of the population is largely due to the assumed improvement in mortality rates.

Covered Population

Projections of the population in covered employment are made by multiplying the population by the coverage rates, by age and sex. Rates for each age-sex group are projected on the basis of the past relationships to labor force participation and unemployment rates. Regression equations were developed from data for years 1955 through 1978. Slight modifications in the regression equations were made in order to ensure that covered worker rates would remain below 100 percent if labor force participation rates were to approach 100 percent.

For the period 1984-1993, projections of the covered population prepared by the SSA Office of Research, Statistics, and International Policy are used. These projections are based on the economic assumptions presented in Table 1a. The transition from this short-range projection to the long-range projection made by the Office of the Actuary is done by linear interpolation over the 10-year period starting 1993.

Tables 3a and 3b summarize the projection of the covered population.

Effective Taxable Payroll

The effective taxable payroll is defined as the amount which, when multiplied by the combined employer-employee tax rate for any year, yields the total amount of taxes that would be paid by employers, employees, and the self-employed on the basis of earnings in that year. In practice, the effective taxable payroll is calculated as a weighted average of the taxable earnings of employers, employees, and the self-employed, where the weighting accounts for the lower tax rates on net earnings from self-employment (for 1983 and earlier), on tips, and on multiple-employer "excess wages," as compared to the combined employer-employee rate.

The effective taxable payroll provides a convenient basis for assessing the financial status of the OASDI program. Because the cost rate is expressed as a percentage of effective taxable payroll, it can be readily compared with the sum of the combined employer-employee tax rate and the income rate from taxation of benefits, which is also expressed as a percentage of effective taxable payroll.

For the period 1983-1992, the amounts of taxable earnings for employers, employees, and the self-employed are projected separately by the SSA Office of Research, Statistics, and International Policy. After 1992, the amounts of taxable earnings for employers, employees, and the self-employed are assumed to increase at the compound rate of the estimated increases in numbers of covered workers and in average wages in covered employment.

Table 4 summarizes the projection of the effective taxable payroll.

Insured Population

Fully insured rates by age and sex are projected based on changes in the pattern of lifetime work in covered employment and on changes in the fully insured requirements. Lifetime work in covered employment for each age group in each year is measured by summing the coverage rates for the cohort back through age 16. This sum is multiplied by a factor between 3 and 4, yielding an estimate of the average number of quarters of coverage earned to date by members of the cohort. The number of quarters of coverage required for fully insured status is specified by law and varies by age and year.

Second-degree polynomial equations were developed, relating fully insured rates to the ratio of average number of quarters of coverage earned to the number of quarters of coverage required for the year 1980. Four separate equations, reflecting variation by sex and whether age is over or under 35, were required to adequately fit the data. Equations for both sexes under age 35 provided excellent "predictions" of fully insured rates back through 1970 and, based on this stable relationship, were used to project fully insured rates through the year 2060. For ages 35 and over, however, the ratios of actual fully insured rates to those predicted by the equations increased over the period 1970 through 1980. This trend toward higher rates than were obtained from the equations was projected into future years by adjusting the equations for persons aged 35 and over. Ultimate equations were used for persons attaining age 35 after the year 1985.

After fully insured rates are projected by age and sex, they are further subdivided by marital-status group, based on recent data. For married males, the fully insured rate is projected to be slightly higher than average, the rate for widowers is projected to equal the average, and the rates for the single and divorced are projected to be slightly lower than average. The rates for the single and divorced females are set halfway between the average rates for males and females. The remaining number of fully insured females are distributed between the widowed and the married according to the projected relative rates at which these two groups are fully insured. Initially, the ratio of the fully insured rate for widows to the rate for married women is set equal to recent historical ratios that are as high as 1.3 for some age groups. The ratios are greatly reduced for future years in order to reflect the trend toward higher labor force participation by married women.

Projections of the disability insured population are calculated by applying the projected disability insured rates, expressed as a ratio to the fully insured rates, to the projected fully insured population.

The projections of the fully insured and disability insured populations are summarized in tables 5a, 5b, 6a, and 6b.

Retired-Worker Beneficiaries

The number of retired-worker beneficiaries is projected by age and sex as the product of retirement prevalence rates and the fully insured population. Modifications to projected retirement prevalence rates based solely on past trends were necessary this year to reflect the expected impact of significant changes in benefit level resulting from the Social Security Amendments of 1983.

Although the retirement-age provision of the 1983 amendments does not, in fact, change age 62 as the age at which retirement benefits are first available, it does, in combination with the change in delayed retirement credit, change the percentage of the primary insurance amount (PIA) available at any particular age at which benefits are first paid (retirement age).

<u>Retirement Age</u>	<u>Retired Worker Benefit as a Percentage of PIA For Persons Who Attain Age 62 in the Year--</u>	
	<u>1999 or earlier</u>	<u>2022 or later</u>
62	80	70
63	86 2/3	75
64	93 1/3	80
65	100	86 2/3
66	103	93 1/3
67	106	100
68	109	108
69	112	116
70	115	124

A model was developed to predict changes in retirement rates based on changes in the levels of benefits available at different ages. Retirement age is defined here as the age at which benefit entitlement begins, which may be earlier or later than the age at which work ceases. The model predicts an increase in retirement age of about 8 months on average for nondisabled fully insured persons who attain age 62 in the year 2022 or later. Smaller increases are predicted for persons who attain age 62 after 1986 and before 2022, during which period the phase-in occurs first for the delayed retirement credit provision and then (beginning in the year 2000) for the retirement-age provision.

Other provisions of the 1983 amendments, such as the earnings-test provision and the windfall-benefits provision, have much smaller impacts on the retirement rates.

The projection of the number of retired-worker beneficiaries is summarized in tables 7a and 7b.

Disabled-Worker Beneficiaries

The number of newly entitled disabled-worker beneficiaries is developed from the exposed population by applying disability incidence rates. To obtain the number of currently entitled beneficiaries, termination rates are applied to the population of beneficiaries who were currently entitled in the previous year and to those who become newly entitled during the year.

The projection of the number of disabled-worker beneficiaries is summarized in tables 8a and 8b.

Auxiliary Beneficiaries of Retired Workers

The number of wives aged 62 and over receiving benefits as auxiliaries of male retired-worker beneficiaries is estimated from the population projection by marital and insured status. All wives uninsured on their own account aged 62 and over (excluding those having husbands not receiving retired-worker benefits, those withheld because of the retirement earnings test, and those eligible for a government pension from earnings in noncovered employment) are assumed to claim benefits as soon as they become eligible. Experience indicates that, in the vast majority of cases, such immediate claiming of wife's benefits does occur. The number of aged husband beneficiaries is estimated in a similar manner.

The projected numbers of children receiving benefits as auxiliaries of retired-worker beneficiaries are based on projected ratios of the number of such child beneficiaries to the number of retired workers by sex of worker. The method of projecting these ratios takes into account the past and projected fertility rates.

The number of young wife beneficiaries is estimated by extrapolating the base year ratio of the number of such beneficiaries to the estimated number of child beneficiaries (excluding the non-disabled aged 16-18) of male retired-worker beneficiaries. The extrapolation reflects past and projected fertility and female labor force participation. Young husbands are disregarded because of the negligible cost involved.

Table 9a summarizes the projection of the numbers of auxiliary beneficiaries of retired workers.

Survivors of Deceased Workers

The number of widow beneficiaries aged 60 and over is estimated from the population by marital and insured status. All widows uninsured on their own account aged 60 and over (excluding those whose deceased husbands were not fully insured, those whose benefits are withheld because of the retirement earnings test, and those eligible for a government pension from earnings in noncovered employment) are assumed to receive benefits. In addition, some insured widows who have not applied for retired-worker benefits are assumed to receive widow benefits. The number of disabled-widow beneficiaries is estimated from the number of eligible widows by using assumed disability prevalence rates for widows. The numbers of widower and disabled-widower beneficiaries are estimated in an analogous manner.

The numbers of paternal, maternal, and full orphans under age 19 in the Social Security coverage area are estimated from the projected population by applying age-specific probabilities of being an orphan. These probabilities are derived by using distributions of age of parent at birth of child and death rates consistent with those used in the population projections. The number of child-survivor beneficiaries is estimated from the number of orphans by adjusting to include eligible disabled orphans aged 18 and over and to eliminate orphans of uninsured deceased parents. A further reduction is made to exclude nondisabled orphans at age 18 who are not attending secondary school full time.

The number of mother beneficiaries is estimated by a method similar to the one used to estimate the number of young wife beneficiaries, i.e., extrapolating the present ratio of such beneficiaries to child-survivor beneficiaries (excluding the nondisabled children aged 16-18). The number of father beneficiaries is estimated in an analogous manner.

The number of parent beneficiaries (parents of deceased workers) is projected on the basis of the past trend in the number of such beneficiaries. A decrease is assumed from 12 thousand at the beginning of 1983 to an ultimate 7 thousand in 1995.

Table 9b summarizes the projection of the numbers of beneficiaries who are survivors of deceased workers.

Auxiliary Beneficiaries of Disabled Workers

The number of child beneficiaries entitled under the DI program is projected as a proportion of the number of disabled-worker beneficiaries by sex, based on recent experience and allowing for projected changes in fertility.

The number of young wife beneficiaries is projected as a proportion of the number of child beneficiaries of male disabled-worker beneficiaries, based on recent experience and allowing for projected changes in fertility and female labor force participation. The number of young husband beneficiaries is projected analogously.

The number of aged wife beneficiaries is projected as a proportion of the number of male disabled-worker beneficiaries. The number of aged husband beneficiaries is projected in an analogous manner.

Table 9c summarizes the projection of the numbers of auxiliary beneficiaries of disabled workers.

Dual Eligibility

Many persons are eligible at the same time for both a primary benefit (as either a retired or disabled worker) and an auxiliary or survivor benefit. Such persons are referred to as dually eligible. In general, when a dually eligible person files for and qualifies to receive both the primary and auxiliary or survivor benefit, and the auxiliary or survivor benefit is larger than primary benefit, then he or she becomes dually entitled. In the case of dual entitlement the beneficiary is identified by the class of

primary benefit received. In addition to the primary benefit, a residual benefit is paid equal to the excess of the auxiliary or survivor benefit amount over the primary benefit amount.

Two types of dual eligibility occur in significant numbers of cases: 1) retired worker and aged spouse benefits, and 2) retired-worker and aged widow(er) benefits. The number of dually eligible aged spouses is estimated by distributing the number of insured married and divorced persons by age of spouse and applying the projected probability that a spouse at each such age would be insured and receiving a primary benefit. The number of dually eligible aged widow(er)s is projected in a similar manner. The numbers of dually entitled beneficiaries are estimated in each case by projecting the ratio of the number dually entitled to the number dually eligible, reflecting both past trends in the ratios and projected relative levels of primary insurance amount for males and females.

Table 11 summarizes the projection of the numbers of dually eligible persons in the two major groups and the percentages that are expected to be dually entitled.

Average Benefit Levels

Average benefit levels for monthly benefits in current-payment status are projected in two stages. First, the level of the average primary insurance amount (PIA) based on the earnings records of insured workers is projected. Second, the percentage of PIA payable is projected.

Average Primary Insurance Amount

The average level of PIA for beneficiaries is itself projected in two stages. First, average amounts for newly awarded beneficiaries are projected, and then average amounts for all beneficiaries in current-payment status are projected based on the award projections. Projections are made separately based on earnings of males and of females for each of four beneficiary groups, including retired-worker beneficiaries and their auxiliaries, young survivor beneficiaries, aged survivor beneficiaries, and disabled-worker beneficiaries and their auxiliaries.

The amount of the average PIA awarded for each group is projected by simulating the automatic PIA-formula-adjustment provisions and calculating future benefits for workers at various earnings levels.

The simulation is based on a sample of 1,350 families covering all of the eight beneficiary groups for which benefit levels are projected. The sample includes 1,141 families who applied for benefits and were found eligible during 1978, plus an additional 209 families who were not eligible for benefits due only to a lack of insured status. Projecting earnings histories through time results in an increase in the total number of families that is insured and thus eligible to 1,147 for 1983 and 1,217 for the year 2050. Each earnings history is projected to follow the path of average earnings in covered employment in the calendar years considered, with the following adjustments: (1) a salary scale is used so that earnings increase faster than average for younger workers and slower than average for older workers, (2) random fluctuations are introduced to the path of

smoothly increasing earnings, (3) years of zero earnings are inserted to account for periods of absence from the covered work force, and (4) earnings are limited to the contribution and benefit bases. For each year in the projection period, average awarded PIA's are computed from these generated earnings histories. The year-to-year increases in these PIA's are applied cumulatively to the actual PIA at the beginning of the projection period in order to estimate the future average PIA's for benefits awarded.

The amount of the average PIA for benefits in current-payment status for each group is projected on the basis of the projected distribution of beneficiaries by duration from year of award, their average awarded PIA, and the increases in their benefits since the year of award due to automatic benefit increases, recomputations, and other factors.

Average PIA levels for aged spouse and aged surviving spouse residual benefits are projected using the year-to-year increases applicable for auxiliary and survivor beneficiaries of the same type who do not receive a primary benefit.

Table 12 summarizes the projection of growth in the average PIA level for various types of beneficiaries.

Benefits as a Percentage of PIA

Benefit levels as a percentage of PIA are projected for those beneficiary groups directly affected by early retirement reduction and/or delayed retirement credit, including male and female retired worker beneficiaries, aged spouse beneficiaries, and aged surviving spouse beneficiaries. (Benefit levels as a percentage of PIA are projected to remain unchanged for all other groups of beneficiaries.) The projections reflect (1) the effects of the movement toward earlier retirement in the past and that projected for the future, (2) the changes in the percentage of PIA payable depending on age at initial entitlement (resulting primarily from the retirement-age and delayed-retirement-credit provisions of the 1983 amendments), and (3) the effects of the small increase in average retirement age starting around the year 2000 in reaction to lower benefit levels provided by the 1983 amendments.

The average benefit level as a percentage of PIA is expected to increase slightly in the future for certain auxiliary and survivor beneficiary groups due to interaction between the maximum family benefit and projected decreases in family size. This effect is small, however, in relation to those mentioned in the preceding paragraph and is not reflected in these estimates.

Table 13 summarizes the projection of benefit levels as a percentage of PIA for retired worker, aged spouse, and aged surviving spouse beneficiaries.

Benefit Payments

Monthly benefit payments are calculated as the product of the number of beneficiaries (including dually entitled beneficiaries with residual payments) and their corresponding average benefit amounts. These amounts

are then adjusted to include retroactive payments to newly awarded beneficiaries. Retroactive payments result from the processing time between the date of filing for benefits and the date of first payment, as well as from a provision in the law which allows a beneficiary to receive up to 6 months' benefits retroactively (up to 12 months for disabled-worker, DI auxiliary, and disabled-widow(er) beneficiaries) from the date of application for benefits, on the condition that benefits are not thereby permanently reduced for early retirement.

The number of lump-sum death payments is projected by applying the assumed mortality rates for the total population by age and sex to the projected fully insured, married population. This procedure does not reflect the fact that death rates for married individuals are generally lower than for the unmarried and thus tends to overstate the number of lump-sum payments. However, this overstatement tends to be offset because the procedure does not reflect cases where the deceased was unmarried but is survived by an eligible child beneficiary who may receive the lump-sum payment. The total amount of such payments is calculated as the product of the number of payments and the amount of the lump-sum death payment (\$255).

Tables 14a and 14b summarize the projection of OASDI benefit payments as a percentage of taxable payroll.

Income from Taxation of Benefits

As a result of the 1983 Social Security amendments, up to one-half of OASDI monthly benefits is subject to federal income taxation starting in 1984 for taxpayers who have adjusted gross income and/or tax-exempt interest income which, when added to half their benefits, exceeds \$25,000 for most persons filing a single return, \$32,000 in the case of a joint return, and zero for married persons who live together and file single returns. Transfers to the OASDI trust funds from the general fund of the Treasury are to be made (in advance) in amounts equal to the additional tax liability due to this provision.

The basis for projecting income from taxation of benefits is the tax model developed by the Office of Tax Analysis in the Department of Treasury. The model is used to estimate the average effective tax rate on benefits under various threshold amounts using a sample developed from income tax returns for 1981.

The threshold amounts (\$25,000 and \$32,000) are not indexed and will therefore be effectively declining after 1984 in relation to the rising average levels of income and benefits. As a result, the percentage of beneficiaries who pay some tax on benefits will be increasing after 1984. The average effective tax rate on aggregate OASDI monthly benefit payments is projected to rise gradually from 1.75 percent for 1984 to slightly over 5 percent by the year 2060.

Administrative Expenses

The projection of administrative expenses through 1992 is based on assumed increases in average wages and the levels of expenses and wages in prior years. For years after 1992, administrative expenses are assumed to

increase at approximately the combined rate of the increases estimated for the number of beneficiaries and for the level of average wages in covered employment.

Railroad Retirement Financial Interchange

The effect of the financial interchange with the Railroad Retirement program is evaluated on the basis of trends similar to those used in estimating the cost and income of the OASDI program. The resulting effect is a long-range loss to the OASDI program of 0.01 percent of taxable payroll.

Financing of Deemed Wage Credits

Prior to 1983, additional benefits and administrative expenses attributable to deemed military-service wage credits were periodically reimbursed from the general fund of the Treasury. The 1983 amendments modified this procedure so that, after 1983, annual transfers would be made equal to the amount derived by applying the combined employer-employee tax rate to the amount of these credits for the year. These transfers are represented in long-range cost estimates as an increase in effective taxable payroll for years after 1983.

In addition, the 1983 amendments required a transfer on May 20, 1983 to account for 1) the expected value of past and future benefit increments based on noncontributory credits for years prior to 1957, less all past reimbursements for such credits, and 2) the amount of taxes that would have been collected for deemed credits from 1957 through 1983 using combined employer-employee tax rates for each year, less all past reimbursement for such credits. The portion of this transfer attributed to credits from years prior to 1957 is reflected in the total income rate for the year 1983 and is shown in Table 15b under the column labeled "Taxation of Benefits". The portion of the transfer attributed to credits from years 1957 through 1983 is reflected in effective taxable payroll for the year 1983 and is shown in Table 4.

Actuarial Balance

The long-range actuarial balance is the difference between the projected average cost rate and the projected average income rate, over the 75-year period, expressed as a percentage of taxable payroll. The total cost rate includes benefit payments (including payments for vocational rehabilitation services for certain disabled beneficiaries), administrative expenses, and net transfers under the financial interchange between the OASDI trust funds and the Railroad Retirement account. The total income rate includes the combined employer-employee tax rate, transfers based on federal income taxes paid on benefits, and transfers for the financing of deemed military-service wage credits for years prior to 1984. The medium-range actuarial balance is the analogous difference over the 25-year period.

Table 15a, 15b, and 15c summarize the projected total cost rates, the projected total income rates, and the projected actuarial balances over the long-range and medium-range periods.

D. RESULTS

The cost of the OASI program, on the basis of the intermediate assumptions, is projected to decline from the level of about 10.3 percent of taxable payroll in 1983 to a low of about 8.7 percent in the year 2006. This decline reflects factors that tend to increase payroll, such as increased work rates by women and coverage of many government and all non-profit employees, as well as factors that tend to restrain total benefit payments, such as the changing distribution of beneficiaries toward older ages at which average benefit levels are lower and the gradual decline in the number of benefits based on the 1978 benefit tables. After 2006, however, the OASI projected total cost rate rises rapidly, reaching levels over 13 percent of taxable payroll by the year 2030, due largely to increasing life expectancy and movement of the "baby boom" generation from the work force to the beneficiary rolls.

The cost of the DI program, as a percentage of taxable payroll, is projected to follow a similar pattern, dropping from the current level of about 1.2 percent to 0.96 percent in 1996, thereafter rising to over 1.5 percent by the year 2016. All of the factors affecting the OASI program also affect the DI program, except that increasing life expectancy is of much less significance. In addition, disability incidence rates, which have recently been at historically low levels, are projected to rise, contributing substantially to the higher projected future cost rates for the DI program.

Table 10 provides a comparison of the projected numbers of OASDI beneficiaries and covered workers. The increase in the number of beneficiaries per 100 workers--from about 30 currently to about 50 by the year 2030--reflects largely demographic changes and explains most of the projected change in cost rates. Detailed breakdowns of the OASDI projected cost rates are shown in tables 14a, 14b, and 15a.

Income to the OASDI program comes primarily from payroll taxes, the rates for which are not scheduled to increase after 1990, when the combined employer-employee tax rate of 12.4 percent will be reached. A smaller income component results from taxation of benefits and yields amounts that increase steadily from a level of 0.17 percent of taxable payroll in 1984 to over 0.70 percent by the year 2035. Projected income rates for the OASDI program are shown in table 15b.

The annual actuarial balances for the OASDI program (table 15c) are projected to be positive (surpluses) starting in 1984, reaching a high of almost 2.9 percent of taxable payroll in 2004. However, deficits are projected to return in 2021 and continue indefinitely, reaching a level of 2.25 percent of taxable payroll in the year 2057. Projected surpluses over the first 38 years are sufficient to more than offset projected deficits during the remaining 37 years, leaving the system in long-range close actuarial balance for the first time since the valuation prepared in 1973 and in surplus for the first time since the 1972 valuation.

The surpluses projected for the OASDI program result in large trust fund accumulations (table 16), reaching as high as 548 percent of the annual

expenditure level in 2017. Thereafter, trust fund ratios decline steadily but remain positive, reaching 83 percent of the annual expenditure level at the end of the long-range period on the basis of the intermediate assumptions.

The projected cost of the OASDI program, as a percentage of gross national product (GNP), follows the same general pattern as does the cost as a percentage of taxable payroll, although the relative growth in cost is slightly less, as shown in table 17. The projected OASDI cost as a percentage of GNP ranges from about 4.2 percent around the turn of the century to slightly above 6 percent in 2035.

Trust fund assets as a percentage of GNP are also shown in table 17 and follow a pattern similar to the ratios of assets to annual expenditures.

Table 18 provides another indication of the increasing scope of the program as measured by the ratio of the number of beneficiaries to the population. The number of beneficiaries aged 65 and over as a percentage of the population aged 65 and over is projected to increase from 90 in 1982 to 94 around the year 2040, and to remain level thereafter. The number of beneficiaries aged 20-64 as a percentage of the population aged 20-64 is projected to decrease from 6 percent in 1982 to 5 percent through about 2005, thereafter returning to 6 percent. The number of beneficiaries aged 19 and under as a percentage of the population aged 19 and under is projected to remain approximately level at 5 percent throughout the 75-year period.

On a present value basis, the 75-year surplus for the OASDI program (table 20) totals \$161 billion, or an average of about \$2 billion per year. Table 20 also includes present values of income and outgo on a closed-group basis, where it is assumed that the OASDI program is closed off to all persons not yet age 18 by 1983. On this basis, a deficit of \$5,047 billion is projected for the OASDI program.

The closed-group results are further analyzed in table 19, where the outgo and payroll for the closed group aged 18 and over are apportioned into that due to those persons aged 18-22 and that due to those persons aged 23 and over. When the present value of outgo for those aged 18-22 in 1983 is compared to the present value of payroll for that same group, the result can be considered as being similar to a "normal cost" (as used in connection with private pension plans). The benefits for the group of persons aged 18-22 in 1983 are projected to be 12.86 percent of the taxable payroll for that group. When administrative expenses are included, the total cost becomes 13.03 percent of taxable payroll.

E. SENSITIVITY TO SELECTED ASSUMPTIONS

The estimates presented in this study are sensitive to changes in the various assumptions shown in tables 1a through 1c. In order to examine the degree of this sensitivity, several of these assumptions have been varied one at a time. The resulting estimates of total cost and income rates as well as actuarial balance are shown in tables 21a through 21f.

In each example where the cost of benefits as a percentage of taxable payroll is affected, the estimated income rate is also affected but to a much smaller extent. This effect on the income rate is in all cases the result of changes in income from taxation of benefits (as a percentage of taxable payroll), which parallel any changes in benefit cost as a percentage of taxable payroll.

Real-Wage Differential

Table 21a shows estimates under assumed ultimate real-wage differentials of 1.0 percent, 1.5 percent, 2.0 percent, and 2.5 percent. In each case, the ultimate rate of increase in the CPI is assumed to be 4.0 percent, yielding ultimate annual increases in average wages of 5.0 percent, 5.5 percent, 6.0 percent and 6.5 percent, respectively.

Over the range of examples considered here, the estimated long-range cost rate drops by about 1.48 percent of taxable payroll for each percentage point increase in real-wage differential, while the estimated long-range total income rate drops by about 0.07 percent of taxable payroll. The resulting sensitivity in the actuarial balance for the OASDI program is an increase of about 1.41 percent of taxable payroll for each percentage point increase in the real-wage differential. Sensitivity over the medium-range period is similar.

Reductions in the cost rate as the real-wage assumption is increased result from the fact that higher wage levels immediately yield proportionately higher taxable payroll, while the resulting increase in benefit levels is only for newly eligible persons and occurs with about a two-year lag. Benefit increases after a beneficiary becomes eligible are related almost exclusively to the CPI, which does not vary in these examples. (Examples where the ultimate nominal wage increase is held constant and the ultimate CPI assumption is varied would, of course, yield similar results).

Consumer Price Index

Table 21b shows estimates on the basis of assumed ultimate annual CPI increases of 2.0 percent, 3.0 percent, 4.0 percent, 5.0 percent, and 6.0 percent. In each case the ultimate real-wage differential is assumed to be 1.5 percent, yielding ultimate percentage increases in average annual wages of 3.5 percent, 4.5 percent, 5.5 percent, 6.5 percent, and 7.5 percent, respectively.

Over the long-range period, the average cost rate decreases by about 0.36 percent of taxable payroll for each percentage point increase in the annual rate of change assumed for the CPI, while the average income rate drops by

only about 0.01 percent of taxable payroll for each percentage point increase in the same assumption. Overall, the long-range actuarial balance increases by about 0.35 percent of taxable payroll for each percentage point increase in the assumed annual rate of change for the CPI over the range considered in these examples. Sensitivity over the medium-range period is similar.

The decreasing cost effect of higher CPI increase assumptions results from the time lag between the impact of higher inflation on payroll and the impact on benefit expenditures. When assuming a constant real-wage differential, the effect on payroll of a higher rate of increase in CPI is experienced immediately through higher wages, while the effect on benefits to currently eligible beneficiaries is experienced with slightly less than a one-year lag. In addition, the effect on benefits to newly eligible individuals is experienced with about a two-year lag, due to the indexing procedures.

Fertility

Table 21c shows estimates on the basis of various ultimate total fertility rates: 1.6, 2.0, and 2.3 children per woman per lifetime.

Over the long-range period, the average cost rate decreases by about 2.5 percent of taxable payroll and the average income rate decreases by about 0.1 percent of taxable payroll for each unit increase in the ultimate total fertility rate (e.g., for an increase from 1.5 to 2.5 children per woman). Overall the estimated OASDI long-range actuarial balance increases by about 2.3 percent of taxable payroll for each unit increase in the ultimate total fertility rate over the range considered in these examples.

Over the medium-range period, however, the average cost rate increases by about 0.07 percent of taxable payroll for each unit increase in the ultimate total fertility rate. The medium-range actuarial balance decreases by 0.07 percent of taxable payroll, and the income rate is not significantly altered for each unit increase in the ultimate total fertility rate.

The small increase in the cost as a percentage of taxable payroll over the first 25 years (the medium-range period) as the fertility rate is increased results from increased numbers of child beneficiaries (which increases cost) and assumed decreases in female labor force participation at the principal childbearing ages (which decreases taxable payroll). During the balance of the long-range period, however, these effects are overwhelmed by the increases in taxable payroll as the additional children grow old enough to enter the labor force and work. Although these additional workers also result in additional future benefit payments, the net effect over the long-range period is to increase the actuarial balance.

Mortality

Table 21d shows estimates on the basis of various assumptions as to future improvement in mortality by the year 2060. Those assumptions are improvement in the age-sex-adjusted mortality rate of approximately 23 percent, 39 percent, and 60 percent from the level experienced in 1979.

Over the long-range period, the average cost rate increases by about 0.47 percent of taxable payroll and the average income rate increases by about 0.02 percent of taxable payroll for each 10-percent improvement in the ultimate age-sex-adjusted mortality rate. Overall, the estimated long-range actuarial balance declines by about 0.44 percent of taxable payroll for each 10-percent improvement in this rate over the range considered in these examples. Sensitivity over the medium-range period is similar but of lower magnitude.

The effect of mortality improvement on the projected cost as a percentage of taxable payroll depends upon the distribution of the improvement by age. For the population aged 65 and over, where mortality rates are the highest, any mortality improvement results in a direct increase in the average number of years for which retirement benefits are paid. At ages 50 through 64, mortality improvement results in additional tax income, but this is more than offset by the increase in benefits payable as additional persons enter the group aged 65 and over. At the ages of 20 through 49, mortality rates are quite low, so that improvement of similar magnitude in the rates does not result in significant gains in the number of workers paying Social Security taxes. Mortality improvement of similar magnitude at ages below 20 has relatively little effect on cost or income. Consequently, for all ages combined, the net effect of uniform mortality improvement is to increase cost more than payroll, thereby resulting in higher cost as a percentage of taxable payroll.

Immigration

Table 21e shows estimates on the basis of assumed annual net immigration of 400,000, 800,000 and 1,200,000 persons. The two higher levels of net immigration are double and triple, respectively, the level assumed for the intermediate set of assumptions. Over the long-range period, the average cost rate decreases by about 0.13 percent of taxable payroll and the average income rate decreases by less than 0.01 percent of taxable payroll, resulting in an increase of about 0.13 percent of taxable payroll in the actuarial balance, for each 100,000 increase in annual net immigration. Sensitivity over the medium-range period is similar but of lower magnitude.

The decreasing cost effect of higher immigration assumptions results from the time lag between the effect of immigration changes on the worker population and on the beneficiary population.

Disability Incidence

Table 21f shows estimates on the basis of various disability incidence rates. Estimates are shown for assumed ultimate age-sex-specific incidence rates that are 0 percent, 15 percent, and 30 percent higher than the average levels experienced during the period 1980-82.

Over the long-range period, the average cost rate increases by about 0.10 percent of taxable payroll with the actuarial balance decreasing by about the same amount for each 10-percent increase in the ultimate disability incidence rates. Sensitivity over the medium-range period is similar but of lower magnitude.

The increasing cost effect of higher disability incidence rates results from higher numbers of DI beneficiaries. The associated effects on benefit payments to retirement beneficiaries under the OASI program are, on balance, insignificant over both the long-range and medium-range periods.

F. COMPARISON WITH PREVIOUS ESTIMATES

Prior to the publication of the 1965 Annual Report of the Board of Trustees of the OASI and DI Trust Funds, the financing of the system was evaluated on a present-value basis into perpetuity, with the assumption that future benefit and earnings levels would remain constant. The 1963-65 Advisory Council on Social Security recommended that the financing period be shortened to 75 years (roughly the maximum remaining lifespan of current participants). To compare the results of the two different methods, the program was valued in 1964 both into perpetuity and for 75 years. Since that time, the long-range cost estimates for the OASDI program have covered the 75-year period beginning with the calendar year of valuation.

In accordance with the recommendations of the 1971 Advisory Council on Social Security, the actuarial method was further modified to incorporate assumptions of increasing levels for earnings and benefits. This change was necessary because proposals made at that time involved automatic adjustments to benefits. To compare the results of the two different methods, the program after enactment of the 1971 amendments was valued on the basis of level as well as dynamic assumptions. Since that time, the long-range cost estimates have been prepared on the basis of dynamic assumptions only.

With the enactment of the 1972 amendments, the method of valuation was changed from present value to average cost. This change was made because the nature of the automatic adjustments in the 1972 amendments made the simpler average-cost method a reasonable approximation to the present-value method. A primary consideration was that the average-cost method is more easily explained to laymen.

Until the valuation for the 1976 Annual Report of the OASDI Board of Trustees, the average cost included both the annual expenditures and the amounts needed to build the trust funds to about one year's expenditures. Since that time, only the annual expenditures have been included.

Prior to the 1983 Annual Report of the OASDI Board of Trustees, the average income rate reflected only scheduled taxes under FICA and SECA. As a result of the 1983 amendments, however, substantial transfers will be made from the general fund of the Treasury beginning in 1984 in amounts equal to the additional federal income tax liability accruing as a result of the partial taxation of OASDI benefits. This additional income is included in the total income rate starting with the 1983 valuation.

Table 22 presents a summary of the results of the long-range cost estimates that have been prepared in previous years. In comparing these cost estimates, the changes in valuation periods and methods, as well as the changes in the system itself, should be taken into consideration. For a historic summary of program changes, see SSA Publication No. 11-11515: History of the Provisions of Old-Age, Survivors, Disability, and Health Insurance, 1935-1983.

G. ESTIMATES UNDER ALTERNATIVE ASSUMPTIONS

Because of the uncertainties about future economic and demographic developments, cost projections based upon four alternative sets of assumptions were prepared for the 1983 Annual Report of the OASDI Board of Trustees. These alternative sets of assumptions were designed to illustrate variations in the projected financial status of the OASDI program that result from economic and demographic assumptions that differ substantially from what is considered to be most likely.

For the alternative set hereafter referred to as "optimistic," the various assumptions were changed (relative to the "intermediate" set described in Section B) to still plausible levels in the direction that would produce a more favorable financial projection for the OASDI program. For the set hereafter referred to as "intermediate but with greater economic growth," only economic assumptions were varied to be similar to the experience observed during recent periods of relatively robust economic expansion. For the set hereafter referred to as "pessimistic," the various assumptions were altered to still plausible levels that would produce a less favorable financial projection for the OASDI program.

Based on the optimistic set of assumptions, the level of economic activity is assumed to be higher than on the basis of the intermediate set. The assumed rate of unemployment in each year is lower, reaching an ultimate level of 4.0 percent in 1995. The assumed annual percentage increase in average wages in covered employment is generally lower, declining to an ultimate level of 4.5 percent by 1995. Although the assumed rate of increase in average wages is lower, the real-wage differential is higher (ultimately 2.5 percent) because of the lower assumed inflation rate, which is ultimately 2.0 percent. The ultimate real interest rate is assumed to be 3.0 percent. The ultimate total fertility rate of 2.3 children per woman is higher than the rate assumed for the intermediate set. The mortality rates improve at just over half the annual rate of improvement in the intermediate set. Coverage rates are higher than under the intermediate set of assumptions because of the lower unemployment rates. Female coverage rates are not increased as much as male rates because the female rates are partially offset due to the higher fertility rates assumed. Insured rates are higher than in the intermediate set due to the increased coverage rates. Disability incidence rates are lower. Tables 23a, 23b, 23c, and 23d summarize the major assumptions in the optimistic set.

Based on the alternative set referred to as intermediate but with greater economic growth, demographic assumptions are not changed from those in the intermediate set. Reflecting more robust economic growth, however, the unemployment rate is lower in all years, reaching an ultimate level of 5.0 percent in 1995. The ultimate real wage differential of 2.0 percent and the ultimate real interest rate of 2.5 percent are both higher. The ultimate rate of inflation is lower at 3.0 percent. Coverage rates are slightly higher due to lower unemployment rates. Insured rates are slightly higher, reflecting the higher coverage rates. Tables 24a, 24b, and 24c summarize the major assumptions in this set. No table for demographic assumptions is shown since no change is assumed from the assumptions for the "intermediate" set shown in table 1b.

Based on the pessimistic set of assumptions, the level of economic activity is assumed to be lower than on the basis of the intermediate set. As a result, the unemployment rate is assumed to remain above 8 percent through 1988, decreasing to an ultimate 6.5 percent by 1993. The ultimate real-wage differential of 1.0 percent and the ultimate real interest rate of 1.5 percent are lower. The ultimate inflation rate of 5.0 percent is higher. The ultimate total fertility rate of 1.6 children per woman is lower. The mortality rates are assumed to improve at an annual rate about one and one half times that assumed in the intermediate set of assumptions. Coverage rates are slightly lower. Insured rates are lower than in the intermediate set, reflecting the lower coverage rates. Disability incidence rates are higher. Tables 25a, 25b, 25c, and 25d summarize the major assumptions in the pessimistic set.

The projected cost rates for the four alternative sets of assumptions follow similar patterns. The average OASDI cost rates over the long-range (75-year) period range from a low of 9.81 percent of taxable payroll on the basis of the optimistic assumptions to 16.56 percent of taxable payroll on the basis of the pessimistic assumptions. The long-range average cost rate is 12.84 percent of taxable payroll on the basis of the intermediate assumptions and 11.99 percent of taxable payroll on the basis of the intermediate assumptions with greater economic growth. The long-range average OASDI income rates show relatively little variation ranging from 12.73 to 13.04 percent of taxable payroll on the basis of the optimistic and pessimistic assumptions, respectively. The relatively small variation in the income rate is due to the fact that the main component, the tax rates, are fixed by law, and only the income from taxation of some benefits varies when assumptions are changed.

The long-range OASDI actuarial balance varies from a surplus of 2.92 percent of taxable payroll on the basis of the optimistic assumptions to a deficit of 3.51 percent of taxable payroll on the basis of the pessimistic assumptions. The projected long-range balance on the basis of the intermediate assumptions is a surplus of 0.02 percent of taxable payroll, and on the basis of the intermediate assumptions with greater economic growth it is a surplus of 0.84 percent of taxable payroll. After a long period of annual surpluses, the OASDI program is projected to return to annual deficits starting in the year 2014 on the basis of the pessimistic assumptions, in 2021 on the basis of the intermediate assumptions, and in 2025 on the basis of the intermediate assumptions with greater economic growth. The system is projected to remain in surplus indefinitely on the basis of the optimistic assumptions. Tables 16a, 16b, 16c, and 16d present the projected cost rates, income rates and actuarial balances on the basis of the optimistic, intermediate but with greater economic growth, intermediate, and pessimistic assumptions, respectively.

Chart 1 compares the projected cost rates and income rates of the OASDI program for the period 1983-2060, on the basis of the optimistic, intermediate but with greater economic growth, intermediate, and pessimistic sets of assumptions.

The trust fund ratios (projected combined assets of the OASI and DI Trust Funds at the beginning of the year as a percentage of annual expenditures during the year) on the basis of the alternative sets of assumptions follow similar patterns. Based on the optimistic assumptions, the ratio rises steadily, exceeding 2,000 percent by the year 2060. Based on the alternative intermediate assumptions with greater economic growth, the rate increases gradually to a high of 767 percent for the year 2020 and thereafter declines, reaching 549 percent by the year 2060. Based on the intermediate assumptions, the ratio increases to a high of 548 percent for the year 2017 and thereafter declines, reaching 54 percent for the year 2060. Based on the pessimistic assumptions, the ratio increases to a high of 256 percent in the year 2012 and thereafter declines, resulting in trust fund exhaustion in the year 2027.

The fact that the trust funds are projected to remain solvent until at least the year 2027 for each of the four alternative sets of assumptions is the result of substantial trust fund accumulations beginning in 1988 which are initially attributable to the increases in tax rates scheduled for 1988 and 1990. For years 1984 through 1987, however, the combined OASDI trust fund ratio is projected to be no higher than 38 percent for the optimistic assumptions and no higher than 21 percent for the pessimistic assumptions. During this period, consequently, there is a possibility that the OASDI program could experience financial difficulties if economic conditions turn out to be more adverse than those assumed for the pessimistic projection. After 1987, however, the trust fund accumulations projected on the basis of each of the four alternative sets of assumptions would make the OASDI program relatively less vulnerable to the effects of temporary economic downturns well into the next century.

Tables 16, 27a, 27b, and 27c summarize the projected OASDI trust fund ratios on the basis of the four alternative sets of assumptions. Chart 2 illustrates the progress of the OASDI trust funds under these sets of assumptions.

Both the total cost and the trust fund assets as a percentage of GNP on the basis of the alternative sets of assumptions follow the same general patterns as projected for the total cost and assets as a percentage of taxable payroll. Tables 17, 28a, and 28b summarize these projections on the basis of the alternative sets of assumptions.

Based on all of the alternative sets of assumptions considered, except for the pessimistic set, the OASDI system is projected to be adequately financed over the long-range period. Based on both the optimistic assumptions and the alternative intermediate assumptions with greater economic growth, the long-range average income rate exceeds 105 percent of the long-range average cost rate, suggesting that the OASDI program would be out of close actuarial balance due to overfinancing on the basis of these assumptions. The long-range actuarial balance of 0.02 percent of taxable payroll on the basis of the intermediate assumptions indicates the system is in close, almost exact, actuarial balance on the basis of these assumptions.

It should be noted that although long-range average surpluses are projected on the basis of both the intermediate assumptions and the alternative

intermediate assumptions with greater economic growth, annual deficits are projected starting by the year 2025, reaching levels over 2 percent and 1 percent of taxable payroll, respectively, by the year 2050. Should actual experience follow a pattern similar to these assumptions, some additional financing may be necessary later during the next century.

Based on the pessimistic assumptions, the projected average long-range income rate falls short of 95 percent of the projected average cost rate, indicating that the OASDI program would be out of close actuarial balance due to insufficient financing should actual experience follow these assumptions. The need for additional financing should actual experience follow the pessimistic assumptions is further evidenced by the fact that the trust funds would be exhausted in the year 2027.

Table 29 summarizes the projected average cost rates and actuarial balances on the basis of the alternative sets of assumptions.

H. TABLES

Table 1a. Selected OASDI Long-Range Economic Assumptions

Calendar Year	Increase in...			Real Wage Differential	Interest Rate	Average Annual Unemployment Rate
	Real GNP	Average Annual... Wages in Covered Employment	Consumer Price Index			
1960-64	4.0%	3.4%	1.3%	2.1%	3.7%	5.7%
1965-69	4.4	5.4	3.4	2.0	5.2	3.8
1970	-.2	4.9	5.9	-1.0	7.3	4.9
1971	3.4	4.9	4.3	.6	6.0	5.9
1972	5.7	7.3	3.3	4.0	5.9	5.6
1973	5.8	6.9	6.2	.7	6.6	4.9
1974	-.6	7.4	11.0	-3.6	7.5	5.6
1975	-1.2	6.6	9.1	-2.5	7.4	8.5
1976	5.4	8.2	5.7	2.5	7.1	7.7
1977	5.5	8.0	6.5	1.5	7.1	7.1
1978	5.0	8.2	7.6	.6	8.2	6.1
1979	2.8	8.8	11.4	-2.6	9.1	5.8
1980	-.4	8.6	13.5	-4.9	11.0	7.1
1981	1.9	8.8	10.2	-1.4	13.3	7.6
1982	-1.7	5.6	6.0	-.4	12.8	9.7
1983	2.4	4.6	3.1	1.5	9.8	10.1
1984	4.1	4.6	4.4	.2	7.3	9.1
1985	3.7	5.5	5.3	.2	6.9	8.3
1986	3.1	5.6	4.8	.8	6.6	7.9
1987	3.0	5.7	4.4	1.3	6.4	7.6
1988	3.0	5.4	4.1	1.3	6.3	7.3
1989	3.0	5.4	4.0	1.4	6.3	6.9
1990	3.0	5.6	4.0	1.6	6.2	6.5
1991	3.0	5.7	4.0	1.7	6.1	6.2
1992	3.0	5.6	4.0	1.6	6.1	5.8
1993	2.5	5.5	4.0	1.5	6.1	5.7
1994	2.5	5.5	4.0	1.5	6.1	5.6
1995	2.6	5.5	4.0	1.5	6.1	5.5
2000 & later	2.6	5.5	4.0	1.5	6.1	5.5

- NOTES: 1. The real GNP (Gross National Product) is the total output of goods and services expressed in constant dollars. The annual percentage increase in real GNP is projected to continue changing after reaching the level of 2.6 percent for the year 2000. The value for the year 2060 is 1.9 percent.
2. The real wage differential is the difference between the percentage increase in average annual wages in covered employment and the percentage increase in the average annual CPI.
3. The interest rate is the average of the interest rates determined in each of the 12 months of the year for special public-debt obligations issuable to the trust funds.
4. The ultimate average annual unemployment rate includes military personnel and is age-sex adjusted based on the total labor force aged 16 and over as of July 1, 1981. Rates for earlier years are crude civilian unemployment rates.

Table 1b. Summary of Selected OASDI Long-Range Demographic Assumptions

Calendar Year	Total Fertility Rate	Median Life Expectancy at Birth	Male			Female			
			Average Life Expectancy			Average Life Expectancy			
			At Birth	At Age 20	At Age 65	at Birth	At Age 20	At Age 65	
1940	2.23	67.5	60.9	46.8	11.9	72.1	65.3	50.2	13.4
1945	2.42	68.5	62.5	47.3	12.6	74.1	68.2	52.1	14.4
1950	3.03	70.1	65.3	49.0	12.8	75.8	70.9	53.9	15.1
1955	3.50	70.9	66.6	49.8	13.1	77.3	72.7	55.2	15.6
1960	3.61	70.7	66.6	49.7	12.9	77.8	73.2	55.6	15.9
1965	2.88	70.7	66.8	49.6	12.9	78.4	73.8	56.1	16.3
1970	2.43	71.0	67.1	49.6	13.1	79.2	74.8	56.8	17.1
1975	1.77	72.4	68.8	50.8	13.7	80.6	76.6	58.2	18.0
1980	1.85	73.4	69.8	51.6	14.0	81.3	77.5	58.9	18.3
1983	1.86	74.2	70.8	52.4	14.4	82.0	78.3	59.6	18.9
1985	1.87	74.6	71.3	52.8	14.6	82.4	78.8	60.0	19.2
1990	1.90	75.5	72.3	53.7	15.1	83.5	79.8	60.9	19.9
1995	1.93	76.1	73.0	54.4	15.5	84.2	80.6	61.7	20.5
2000	1.96	76.5	73.4	54.8	15.7	84.7	81.0	62.1	20.8
2005	1.99	76.8	73.7	55.0	15.9	84.7	81.3	62.3	21.0
2010	2.00	77.0	73.9	55.2	16.1	85.0	81.6	62.6	21.3
2015	2.00	77.2	74.2	55.5	16.3	85.2	81.9	62.9	21.5
2020	2.00	77.5	74.4	55.7	16.4	85.8	82.2	63.1	21.7
2025	2.00	77.7	74.7	55.9	16.6	86.1	82.5	63.4	22.0
2030	2.00	77.9	74.9	56.1	16.8	86.4	82.7	63.7	22.2
2035	2.00	78.2	75.1	56.4	17.0	86.6	83.0	63.9	22.4
2040	2.00	78.4	75.4	56.6	17.2	86.9	83.3	64.2	22.6
2045	2.00	78.6	75.6	56.8	17.4	87.2	83.6	64.4	22.9
2050	2.00	78.9	75.8	57.0	17.5	87.4	83.8	64.7	23.1
2055	2.00	79.1	76.1	57.2	17.7	87.7	84.1	65.0	23.3
2060	2.00	79.3	76.3	57.5	17.9	88.0	84.4	65.2	23.6

- NOTES: 1. The total fertility rate for any year is the average number of children that would be born to women who survive the entire childbearing period if they were to experience the age-specific birth rates observed in or assumed for that year.
2. The median life expectancy at birth for any year is the age which would be reached by only half of all births in the year if they were to experience the age-specific death rates observed in or assumed for that year.
3. The average life expectancy for any year is the average number of years of life remaining for persons of the indicated age if they were to experience the age-specific death rates observed in or assumed for that year.

Table 1c. Summary of Selected OASDI Long-Range Programmatic Assumptions

Year	Age-Adjusted Rate				
	Coverage	Insured Status		Retirement Prevalence	Disability Incidence
		Fully	Disability		
males					
1983	73.2%	93.9%	88.5%	85.3%	4.21
1985	75.9	93.8	88.9	85.5	4.40
1990	77.6	93.4	89.0	86.4	4.64
1995	77.5	92.8	89.3	86.4	4.79
2000	77.1	92.3	89.5	86.3	4.92
2005	77.0	92.2	89.8	85.1	4.97
2010	77.0	92.5	89.8	83.7	4.97
2015	77.0	92.9	89.8	83.4	4.97
2020	77.1	93.3	89.8	82.8	4.97
2025	77.1	93.8	89.9	81.5	4.97
2030	77.2	94.2	90.0	80.7	4.97
2035	77.2	94.5	90.1	80.7	4.97
2040	77.1	94.7	90.1	80.7	4.97
2045	77.0	94.8	90.0	80.7	4.97
2050	77.0	94.8	90.0	80.7	4.97
2055	77.1	94.8	90.0	80.7	4.97
2060	77.1	94.9	90.0	80.7	4.97
females					
1983	52.4	59.0	56.4	83.4	2.92
1985	56.2	60.3	58.4	83.8	3.06
1990	60.5	63.0	61.1	84.6	3.22
1995	62.8	64.9	64.0	85.0	3.32
2000	64.2	66.8	66.6	85.2	3.42
2005	64.6	68.8	67.7	84.5	3.46
2010	64.4	71.1	68.3	83.7	3.46
2015	64.4	73.6	68.7	83.8	3.46
2020	64.4	75.8	68.9	83.5	3.46
2025	64.4	77.9	69.1	82.7	3.46
2030	64.4	79.5	69.3	82.1	3.46
2035	64.4	80.8	69.4	82.1	3.46
2040	64.3	81.6	69.4	82.0	3.46
2045	64.2	82.2	69.3	82.0	3.46
2050	64.2	82.5	69.3	82.1	3.46
2055	64.3	82.7	69.4	82.1	3.46
2060	64.3	82.7	69.4	82.2	3.46

- NOTES:
1. The coverage rates are the numbers of persons with any covered employment during the year as percentages of the total population aged 16 and over and are age-adjusted based on the population as of July 1, 1981.
 2. The fully insured rates are the numbers of fully insured persons as percentages of the total population aged 62 and over and are age-adjusted based on the population as of July 1, 1983.
 3. The disability insured rates are the numbers of disability insured persons as percentages of total population aged 20 to 64 and are age-adjusted based on the population as of July 1, 1983.
 4. The retirement prevalence rates are the numbers of retired worker beneficiaries in current-payment status as percentages of the fully insured population aged 20 and over and are age-adjusted based on the fully insured population as of July 1, 1983.
 5. The disability incidence rates are the numbers of newly entitled disabled worker beneficiaries per 100,000 exposed persons aged 20 to 64 and are age-adjusted based on the exposed population as of July 1, 1975. Exposed population is defined as the disability insured population less those receiving disabled worker primary benefits. These rates do not reflect assumed changes in incidence rates due to the retirement age provision in the 1983 Amendments.

Table 1d. Selected OASDI Programmatic Parameters Related to Economic Assumptions

Calendar Year	Average Wage	Contribution and Benefit Base	Benefit Increase	Earnings Test Annual Exempt Amounts		Quarter of Coverage Requirements	PIA Formula Bend Points Based on 1977 Act	
				Young	Aged		First	Second
1960	\$ 4,007	\$ 4,800	—	\$ 1,200	\$ 1,200	\$ 50	N/A	N/A
1965	4,659	4,800	7.0%	1,200	1,200	50	N/A	N/A
1970	6,186	7,800	15.0	1,680	1,680	50	N/A	N/A
1975	8,631	14,100	8.0	2,520	2,520	50	N/A	N/A
1980	12,513	25,900	14.3	3,720	5,000	290	\$ 194	\$ 1,171
1981	12,773	29,700	11.2	4,080	5,500	310	211	1,274
1982	14,498	32,400	7.4	4,440	6,000	340	230	1,388
1983	15,166	35,700	3.5	4,920	6,600	370	254	1,528
1985	16,596	39,300	5.3	5,400	7,320	410	279	1,683
1990	21,744	50,700	4.0	7,080	9,360	530	359	2,166
1995	28,500	66,600	4.0	9,240	12,240	690	471	2,841
2000	37,248	87,000	4.0	12,000	16,080	910	616	3,713
2005	48,682	114,000	4.0	15,720	21,000	1,190	805	4,853
2010	63,625	149,100	4.0	20,520	27,480	1,550	1,052	6,342
2015	83,155	194,700	4.0	26,760	36,000	2,020	1,375	8,289
2020	108,680	254,700	4.0	34,920	46,920	2,650	1,797	10,833
2025	142,041	333,000	4.0	45,720	61,446	3,460	2,349	14,159
2030	185,642	435,300	4.0	59,760	80,280	4,520	3,070	18,505
2035	242,626	569,100	4.0	78,000	105,000	5,910	4,012	24,185
2040	317,103	743,400	4.0	102,000	137,400	7,720	5,244	31,609
2045	414,441	971,700	4.0	133,320	179,520	10,090	6,854	41,312
2050	541,657	1,269,900	4.0	174,246	234,720	13,190	8,957	53,993
2055	707,924	1,659,600	4.0	227,760	306,840	17,230	11,707	70,556
2060	925,229	2,169,000	4.0	297,600	401,040	22,520	15,300	92,227

- NOTES: 1. Average wages are taken from the series used for indexing earnings for benefit computations and are rounded to the nearest dollar for this table.
2. For the purpose of earnings test annual exempt amounts, young refers to persons who are below normal retirement age (currently 65, ultimately 67) and aged refers to persons who are of normal retirement age or greater.

Table 2a. Projected Male Population, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
0-4	9,619	9,959	9,355	9,866	9,979	9,948	10,249	10,292	10,434
5-9	8,645	9,952	9,723	9,589	10,130	9,986	10,209	10,383	10,433
10-14	9,505	9,114	10,153	9,553	10,063	10,176	10,146	10,446	10,490
15-19	10,146	9,137	10,169	9,942	9,810	10,349	10,206	10,427	10,602
20-24	11,393	9,897	9,332	10,363	9,768	10,274	10,386	10,358	10,655
25-29	11,128	11,121	9,262	10,284	10,061	9,931	10,463	10,322	10,542
30-34	9,946	11,362	9,903	9,352	10,368	9,784	10,283	10,395	10,367
35-39	8,500	10,338	11,057	9,234	10,242	10,024	9,898	10,423	10,287
40-44	6,808	9,258	11,233	9,812	9,274	10,275	9,705	10,199	10,311
45-49	5,723	7,198	10,115	10,831	9,062	10,053	9,847	9,730	10,249
50-54	5,582	5,792	8,889	10,802	9,454	8,953	9,925	9,388	9,876
55-59	5,613	5,210	6,728	9,477	10,165	8,530	9,485	9,309	9,220
60-64	5,132	5,116	5,203	8,025	9,779	8,595	8,174	9,085	8,623
65-69	4,092	4,623	4,351	5,679	8,046	8,671	7,320	8,193	8,082
70-74	3,118	3,497	3,819	3,950	6,161	7,574	6,721	6,459	7,232
75-79	2,090	2,443	2,978	2,865	3,812	5,485	5,984	5,123	5,823
80-84	1,181	1,453	1,841	2,070	2,202	3,522	4,416	4,002	3,932
over 84	772	980	1,414	1,872	2,040	2,621	4,025	4,954	4,744
under 20	37,915	38,162	39,400	38,950	39,982	40,459	40,810	41,548	41,959
20-64	69,825	75,292	81,722	88,180	88,173	86,419	88,166	89,209	90,130
over 64	11,253	12,996	14,403	16,436	22,261	27,873	28,466	28,731	29,813
total	118,993	126,450	135,525	143,566	130,416	154,751	157,442	159,488	161,902
ratio to total male population (in percent)									
under 20	31.9	30.2	29.1	27.1	26.6	26.1	25.9	26.1	25.9
20-64	58.7	59.5	60.3	61.4	58.6	55.8	56.0	55.9	55.7
over 64	9.5	10.3	10.6	11.4	14.8	18.0	18.1	18.0	18.4

NOTE: The figures are as of July 1, are corrected for underenumeration, and include not only the population of the continental United States but also the populations of other geographical areas covered by the OASDI system. Age refers to "age last birthday".

Table 2b. Projected Female Population, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
0-4	9,172	9,506	8,928	9,416	9,522	9,493	9,779	9,820	9,954
5-9	8,251	9,506	9,289	9,161	9,677	9,539	9,750	9,916	9,963
10-14	9,105	8,745	9,744	9,170	9,657	9,764	9,735	10,020	10,062
15-19	9,758	8,827	9,830	9,614	9,487	10,002	9,864	10,075	10,241
20-24	11,017	9,589	9,073	10,069	9,497	9,982	10,089	10,061	10,345
25-29	10,936	10,798	9,050	10,049	9,835	9,708	10,221	10,085	10,295
30-34	9,891	11,204	9,710	9,199	10,908	9,621	10,105	10,212	10,184
35-39	8,488	10,317	10,857	9,123	10,117	9,905	9,781	10,292	10,157
40-44	6,856	9,331	11,206	9,730	9,225	10,210	9,648	10,130	10,238
45-49	5,871	7,310	10,248	10,790	9,083	10,069	9,864	9,745	10,253
50-54	5,889	6,026	9,174	11,019	9,585	9,098	10,069	9,525	10,004
55-59	6,176	5,606	7,085	9,930	10,463	8,828	9,795	9,607	9,503
60-64	5,939	5,792	5,697	8,680	10,437	9,104	8,665	9,601	9,102
65-69	5,049	5,668	5,091	6,460	9,078	9,593	8,126	8,048	8,901
70-74	4,293	4,753	4,997	4,952	7,586	9,166	8,040	7,696	8,563
75-79	3,356	3,837	4,577	4,159	5,332	7,554	8,041	6,865	7,706
80-84	2,293	2,775	3,439	3,686	3,717	5,778	7,062	6,275	6,085
over 84	1,935	2,628	3,831	4,994	5,248	6,252	9,279	11,305	10,845
under 20	36,286	36,584	37,791	37,361	38,343	38,798	39,128	39,831	40,220
20-64	71,063	75,973	82,100	88,589	88,432	86,495	88,237	89,258	90,081
over 64	16,926	19,218	21,935	24,251	30,961	38,343	40,548	41,189	42,100
total	124,275	132,218	141,826	150,201	157,736	163,666	167,913	170,278	172,401
ratio to total female population (in percent)									
under 20	29.2	27.7	26.6	24.9	24.3	23.7	23.2	23.4	23.3
20-64	57.2	57.5	57.9	59.0	56.1	52.8	52.5	53.2	52.3
over 64	13.6	14.9	15.5	16.1	19.6	23.4	24.1	24.5	24.4

NOTE: The figures are as of July 1, are corrected for underenumeration, and include not only the population of the continental United States but also the populations of other geographical areas covered by the OASDI system. Age refers to "age last birthday".

Table 2c. Projected Total Population, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
0-4	18,791	19,465	18,283	19,282	19,501	19,441	20,028	20,112	20,388
5-9	16,896	19,458	19,012	18,750	19,807	19,525	19,959	20,299	20,396
10-14	18,610	17,859	19,897	18,723	19,720	19,940	19,881	20,466	20,552
15-19	19,904	17,964	19,999	19,556	19,297	20,351	20,070	20,502	20,843
20-24	22,410	19,486	18,405	20,432	19,265	20,256	20,475	20,419	21,000
25-29	22,064	21,919	18,312	20,333	19,896	19,639	20,684	20,407	20,837
30-34	19,837	22,566	19,613	18,551	20,558	19,405	20,388	20,607	20,551
35-39	16,988	20,655	21,914	18,357	20,359	19,929	19,679	20,715	20,444
40-44	13,664	18,589	22,439	19,542	18,499	20,485	19,353	20,329	20,549
45-49	11,594	14,508	20,363	21,621	18,145	20,122	19,711	19,475	20,502
50-54	11,471	11,818	18,063	21,821	19,039	18,051	19,994	18,913	19,880
55-59	11,789	10,816	13,813	19,407	20,628	17,358	19,280	18,916	18,723
60-64	11,071	10,908	10,900	16,705	20,216	17,699	16,839	18,686	17,725
65-69	9,141	10,291	9,442	12,139	17,124	18,264	15,446	17,241	16,983
70-74	7,411	8,250	8,816	8,902	13,747	16,740	14,761	14,155	15,795
75-79	5,446	6,280	7,555	7,024	9,144	13,039	14,025	11,988	13,529
80-84	3,474	4,228	5,280	5,756	5,919	9,300	11,478	10,277	10,017
over 84	2,707	3,608	5,245	6,866	7,288	8,873	13,304	16,259	15,589
under 20	74,204	74,747	77,192	76,311	78,325	79,257	79,937	81,381	82,179
20-64	140,888	151,265	163,823	176,767	176,605	172,948	176,402	178,466	180,213
over 64	28,179	32,659	36,338	40,687	53,222	66,215	69,014	69,919	71,913
total	243,268	258,670	277,353	293,765	308,152	318,420	325,354	329,766	334,305
ratio to total population (in percent)									
under 20	30.5	28.9	27.8	26.0	25.4	24.9	24.6	24.7	24.6
20-64	57.9	58.5	59.1	60.2	57.3	54.3	54.2	54.1	53.9
over 64	11.6	12.6	13.1	13.9	17.3	20.8	21.2	21.2	21.5

NOTE: The figures are as of July 1, are corrected for underenumeration, and include not only the population of the continental United States but also the populations of other geographical areas covered by the OASDI system. Age refers to "age last birthday".

Table 3a. Projected Male Covered Population, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
16-19	6,132	5,879	6,530	6,440	6,351	6,701	6,609	6,752	6,866
20-24	9,850	9,297	8,768	9,779	9,215	9,688	9,802	9,770	10,053
25-29	9,762	10,441	8,697	9,646	9,451	9,324	9,826	9,696	9,900
30-34	8,656	10,368	8,979	8,479	9,399	8,876	9,327	9,428	9,404
35-39	7,331	9,210	9,769	8,194	9,081	8,889	8,783	9,243	9,125
40-44	5,588	7,982	9,632	8,490	8,039	8,885	8,405	8,828	8,923
45-49	4,151	5,854	8,450	9,117	7,720	8,539	8,370	8,282	8,710
50-54	4,063	4,593	7,064	8,518	7,564	7,194	7,928	7,533	7,909
55-59	3,964	3,865	4,932	6,738	7,176	6,160	6,789	6,681	6,639
60-64	3,243	3,217	3,232	4,889	5,705	5,153	4,934	5,403	5,184
65-69	1,423	1,596	1,374	1,780	2,493	2,670	2,261	2,522	2,481
over 69	1,064	1,206	1,147	1,121	1,635	2,124	2,051	1,877	2,106
total	65,227	73,508	78,574	83,191	83,829	84,203	85,085	86,015	87,300
ratio to male population by age group (in percent)									
16-19	75.6	80.4	80.3	81.0	80.9	80.9	81.0	80.9	81.0
20-24	86.5	93.9	94.0	94.4	94.3	94.3	94.4	94.3	94.3
25-29	87.7	93.9	93.9	93.8	93.9	93.9	93.9	93.9	93.9
30-34	87.0	91.3	90.7	90.7	90.7	90.7	90.7	90.7	90.7
35-39	86.2	89.1	88.4	88.7	88.7	88.7	88.7	88.7	88.7
40-44	82.1	86.2	85.8	86.5	86.7	86.5	86.6	86.6	86.5
45-49	72.5	81.3	83.5	84.2	85.2	84.9	85.0	85.1	85.0
50-54	72.8	79.3	79.5	78.9	80.0	80.3	79.9	80.2	80.1
55-59	70.6	74.2	73.3	71.1	70.6	72.2	71.6	71.8	72.0
60-64	63.2	62.9	62.1	60.9	58.3	60.0	60.4	59.5	60.1
65-69	34.8	34.5	31.6	31.3	31.0	30.8	30.9	30.8	30.7
over 69	14.9	14.4	11.4	10.4	11.5	11.1	9.7	9.1	9.7

NOTE: The figures include all persons aged 16 and over, on a calendar-age basis, who have had some taxable earnings during the year. Ratios are to the population as of July 1 on an "age last birthday" basis.

Table 3b. Projected Female Covered Population, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
	number (in thousands)								
16-19	4,705	5,956	5,089	5,877	5,803	6,116	6,031	6,161	6,262
20-24	8,130	8,234	8,206	9,093	8,581	9,031	9,111	9,095	9,348
25-29	7,687	7,705	8,629	8,625	8,414	8,317	8,754	8,631	8,816
30-34	6,582	7,882	8,552	7,511	8,355	7,864	8,278	8,358	8,332
35-39	5,422	8,501	7,621	7,188	7,999	7,812	7,718	8,124	8,011
40-44	4,389	8,797	6,832	7,698	7,307	8,091	7,637	8,027	8,107
45-49	3,383	7,832	5,092	8,285	6,978	7,760	7,584	7,498	7,888
50-54	3,133	6,402	3,798	7,768	6,751	6,424	7,100	6,718	7,057
55-59	2,929	3,831	2,887	5,336	5,543	4,718	5,230	5,120	5,071
60-64	2,158	2,298	2,261	3,487	4,007	3,518	3,371	3,692	3,517
65-69	902	1,020	1,148	1,315	1,863	1,955	1,641	1,830	1,785
over 69	571	884	863	827	1,179	1,532	1,465	1,318	1,467
total	49,991	69,342	60,978	73,010	72,780	73,138	73,920	74,572	75,661
	ratio to female population by age group (in percent)								
16-19	60.3	72.1	75.7	76.4	76.5	76.4	76.4	76.4	76.4
20-24	73.8	85.6	90.7	90.3	90.4	90.5	90.3	90.4	90.4
25-29	70.3	79.9	85.1	85.8	85.6	85.7	85.6	85.6	85.6
30-34	66.5	76.3	81.2	81.7	82.0	81.7	81.9	81.8	81.8
35-39	63.9	73.9	78.3	78.8	79.1	78.9	78.9	78.9	78.9
40-44	64.0	73.2	78.5	79.1	79.2	79.2	79.2	79.2	79.2
45-49	57.6	69.7	76.4	76.8	76.8	77.1	76.9	76.9	76.9
50-54	53.2	63.0	69.8	70.5	70.4	70.6	70.5	70.5	70.5
55-59	47.4	51.5	54.1	53.7	53.0	53.4	53.4	53.3	53.4
60-64	36.3	39.0	40.3	40.2	38.4	38.6	38.9	38.5	38.6
65-69	17.9	20.3	20.0	20.4	20.5	20.4	20.2	20.2	20.1
over 69	4.8	6.2	5.3	4.7	5.4	5.3	4.5	4.1	4.4

NOTE: The figures include all persons aged 16 and over, on a calendar-age basis, who have had some taxable earnings during the year. Ratios are to the population as of July 1 on an "age last birthday" basis.

Table 4. Past and Projected Total Taxable Earnings for Employees, Employers, and the Self-Employed, and Effective Taxable Payroll

(in billions)

Calendar Year	Total Earnings Taxable			Effective Taxable Payroll
	Employees	Employers	Self-Employed	
1960	\$ 184	\$ 188	\$ 18	\$ 198
1965	219	227	20	237
1970	388	396	27	414
1975	615	619	4	649
1980	1,088	1,094	71	1,140
1981	1,216	1,222	77	1,277
1982	1,279	1,285	79	1,341
1983	1,351	1,354	86	<u>1/</u> 1,475
1985	1,604	1,607	101	1,710
1990	3,287	2,292	127	2,420
1995	3,154	3,169	170	3,335
2000	4,315	4,335	233	4,562
2005	5,846	5,873	316	6,179
2010	7,783	7,819	420	8,225
2015	10,213	10,261	552	10,793
2020	13,330	13,392	720	14,085
2025	17,434	17,516	942	18,420
2030	22,875	22,982	1,236	24,188
2035	30,067	30,207	1,624	31,765
2040	39,488	39,672	2,133	41,717
2045	51,840	52,081	2,801	54,765
2050	68,122	68,439	3,680	71,964
2055	89,658	90,075	4,844	94,714
2060	118,081	118,630	6,379	124,739

1/ This value includes \$59 billion reflecting a transfer from the general fund of the Treasury relating to noncontributing military service wage credits. For details see C. Methods.

- NOTES:
1. Figures for the period 1980 and 1981 are based on preliminary data.
 2. The amount of earnings which is taxable for employees differs from that for employers because employees pay taxes on all tips while employers pay only on tips deemed to be wages, and because employees do not pay taxes on multi-employer excess wages while employers do.
 3. The effective taxable payroll is a theoretical figure defined to be that amount which when multiplied by the combined employer-employee tax rates, yields the total amount of taxes paid by employers, employees, and the self-employed.

Table 5a. Projected Male Fully Insured Population, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
20-24	10,459	9,204	8,697	9,679	9,123	9,596	9,701	9,674	9,952
25-29	10,905	10,865	9,040	10,037	9,820	9,693	10,212	10,074	10,289
30-34	9,677	11,055	9,695	9,156	10,150	9,579	10,067	10,177	10,149
35-39	8,143	9,935	10,692	8,929	9,904	9,693	9,571	10,079	9,948
40-44	6,434	8,804	10,739	9,439	8,931	9,895	9,346	9,822	9,929
45-49	5,311	6,752	9,579	10,365	8,681	9,631	9,433	9,321	9,819
50-54	5,113	5,363	8,338	10,208	9,010	8,532	9,459	8,947	9,412
55-59	5,158	4,736	6,223	8,870	9,636	8,095	9,001	8,834	8,750
60-64	4,742	4,666	4,771	7,455	9,163	8,131	7,733	8,594	8,157
65-69	3,879	4,299	3,977	5,270	7,539	8,220	6,954	7,775	7,678
70-74	2,905	3,290	3,510	3,646	5,754	7,127	6,378	6,136	6,863
75-79	1,931	2,310	2,770	2,619	3,538	5,139	5,673	4,867	5,526
80-84	1,075	1,380	1,742	1,902	2,032	3,290	4,155	3,798	3,735
over 84	678	899	1,339	1,758	1,873	2,422	3,763	4,677	4,502
total	76,410	83,558	91,112	99,333	105,154	105,043	111,446	112,775	114,709
ratio to male population by age group (in percent)									
20-24	91.8	93.0	93.2	93.4	93.4	93.4	93.4	93.4	93.4
25-29	98.0	97.7	97.6	97.6	97.6	97.6	97.6	97.6	97.6
30-34	97.3	97.3	97.9	97.9	97.9	97.9	97.9	97.9	97.9
35-39	95.8	96.1	96.7	96.7	96.7	96.7	96.7	96.7	96.7
40-44	94.5	95.1	95.6	96.2	96.3	96.3	96.3	96.3	96.3
45-49	92.8	93.8	94.7	95.7	95.8	95.8	95.8	95.8	95.8
50-54	91.6	92.6	93.8	94.5	95.3	95.3	95.3	95.3	95.3
55-59	91.9	90.9	92.5	93.6	94.8	94.9	94.9	94.9	94.9
60-64	92.4	91.2	91.7	92.9	93.7	94.6	94.6	94.6	94.6
65-69	94.8	93.0	91.4	92.8	93.7	94.8	95.0	94.9	95.0
70-74	93.2	94.1	91.9	92.3	93.4	94.1	94.9	95.0	94.9
75-79	92.4	94.6	93.0	91.4	92.8	93.7	94.8	95.0	94.9
80-84	91.0	95.0	94.6	91.9	92.3	93.4	94.1	94.9	95.0
over 84	87.8	91.7	94.7	93.9	91.8	92.4	93.5	94.4	94.9

NOTE: The figures are as of July 1, on an "age last birthday" basis.

Table 5b. Projected Female Fully Insured Population, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
20-24	8,714	7,786	7,567	8,428	7,949	8,355	8,444	8,421	8,659
25-29	9,700	9,859	8,344	9,285	9,088	8,970	9,444	9,319	9,513
30-40	8,368	9,725	8,700	8,325	9,232	8,717	9,155	9,252	9,227
35-39	6,629	8,604	9,543	8,156	9,095	8,905	8,793	9,253	9,131
40-44	5,025	7,362	9,391	8,426	8,081	8,944	8,452	8,874	8,968
45-49	4,092	5,431	8,291	9,128	7,784	8,669	8,483	8,390	8,828
50-54	3,952	4,266	7,128	9,014	8,061	7,715	8,539	8,077	8,483
55-59	4,064	3,784	5,200	7,855	8,611	7,345	8,179	8,022	7,935
60-64	3,807	3,817	3,994	6,614	8,339	7,456	7,149	7,921	7,509
65-69	3,226	3,758	3,482	4,767	7,163	7,847	6,712	7,501	7,370
70-74	2,623	3,099	3,338	3,516	5,834	7,360	6,617	6,372	7,099
75-79	1,913	2,375	3,035	2,845	3,935	5,960	6,578	5,670	6,388
80-84	1,176	1,659	2,242	2,462	2,639	4,443	5,671	5,164	5,038
over 84	865	1,311	2,279	3,251	3,542	4,495	7,173	9,134	8,936
total	64,154	72,836	82,534	92,072	99,353	105,181	109,389	111,370	113,084
ratio to female population by age group (in percent)									
20-24	79.1	81.2	83.4	83.7	83.7	83.7	83.7	83.7	83.7
25-29	88.7	91.3	92.2	92.4	92.4	92.4	92.4	92.4	92.4
30-34	84.6	86.8	89.6	90.5	90.6	90.6	90.6	90.6	90.6
35-39	78.1	83.4	87.9	89.4	89.9	89.9	89.9	89.9	89.9
40-44	73.3	78.9	83.8	86.6	87.6	87.6	87.6	87.6	87.6
45-49	69.7	74.3	80.9	84.6	85.7	86.1	86.0	86.1	86.1
50-54	67.1	70.8	77.7	81.8	84.1	84.8	84.8	84.8	84.8
55-59	65.8	67.5	73.4	79.1	82.3	83.2	83.5	83.5	83.5
60-64	64.1	65.9	70.1	76.2	79.9	81.9	82.5	82.5	82.5
65-69	63.9	66.3	68.4	73.8	78.9	81.8	82.6	82.9	82.8
70-74	61.1	65.2	66.8	71.0	76.9	80.3	82.3	82.8	82.9
75-79	57.0	61.9	66.3	68.4	73.8	78.9	81.8	82.6	82.9
80-84	51.3	59.8	65.2	66.8	71.0	76.9	80.3	82.3	82.8
over 84	44.7	49.9	59.5	65.1	67.5	71.9	77.3	80.8	82.4

NOTE: The figures are as of July 1, on an "age last birthday" basis.

Table 6a. Projected Male Disability Insured Population, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
under 25	11,391	9,945	9,420	10,484	9,866	10,406	10,501	10,477	10,781
25-29	9,804	9,622	7,997	8,951	8,690	8,623	9,086	8,939	9,143
30-34	8,494	9,778	8,550	8,194	9,025	8,520	8,983	9,052	9,043
35-39	7,426	9,011	9,556	8,014	8,959	8,700	8,637	9,077	8,953
40-44	5,892	8,099	9,815	8,517	8,176	9,000	8,504	8,965	9,034
45-49	4,821	6,267	8,874	9,449	7,940	8,874	8,626	8,569	9,008
50-54	4,531	4,918	7,743	9,360	8,158	7,836	8,630	8,166	8,616
55-59	4,641	4,316	5,825	8,197	8,762	7,385	8,269	8,055	8,020
60-64	4,782	4,748	4,842	7,527	9,194	8,137	7,798	8,614	8,192
65-66	1,519	1,673	1,504	2,063	2,983	3,047	2,525	2,961	2,857
total	63,302	68,376	74,135	80,756	81,751	80,529	81,541	82,874	83,647
ratio to male fully insured population by age group (in percent)									
under 25	88.5	88.3	88.0	88.0	88.0	88.0	88.0	88.0	88.0
25-29	89.5	89.3	89.0	89.0	89.0	89.0	89.0	89.0	89.0
30-34	86.5	88.1	89.0	89.0	89.0	89.0	89.0	89.0	89.0
35-39	89.6	89.8	90.0	90.0	90.0	90.0	90.0	90.0	90.0
40-44	89.6	90.4	91.0	91.0	91.0	91.0	91.0	91.0	91.0
45-49	89.6	90.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5
50-54	88.5	90.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
55-59	89.8	90.6	91.0	91.0	91.0	91.0	91.0	91.0	91.0
60-64	91.4	92.5	91.0	91.0	91.0	91.0	91.0	91.0	91.0
65-66	91.4	92.5	91.0	91.0	91.0	91.0	91.0	91.0	91.0

NOTE: The figures are as of July 1, on a calendar-age basis. The estimated figures for age 65 and 66 are hypothetical prior to the year 2030 since disabled worker benefits and disability insured status are not applicable up to age 67 until 2027.

Table 6b. Projected Female Disability Insured Population, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
under 25	8,766	7,799	7,629	8,498	8,001	8,433	8,508	8,489	8,732
25-29	7,077	7,490	6,681	7,482	7,273	7,213	7,581	7,477	7,642
30-34	5,003	6,327	6,095	5,918	6,512	6,153	6,483	6,530	6,524
35-39	3,878	5,478	6,546	5,611	6,304	6,123	6,079	6,384	6,296
40-44	3,306	5,149	6,861	6,076	5,909	6,498	6,142	6,470	6,517
45-49	2,910	4,129	6,528	7,071	6,048	6,784	6,588	6,549	6,878
50-54	3,001	3,364	5,752	7,171	6,336	6,146	6,758	6,395	6,738
55-59	3,046	3,130	4,192	6,242	6,731	5,762	6,456	6,287	6,250
60-64	3,098	1,124	3,264	5,376	6,728	6,001	5,799	6,384	6,065
65-66	988	1,124	987	1,407	2,137	2,201	1,841	2,161	2,075
total	41,073	46,901	54,535	60,852	61,979	61,316	62,235	63,127	63,712
ratio to female fully insured population by age group (in percent)									
under 25	81.5	81.8	82.0	82.0	82.0	82.0	82.0	82.0	82.0
25-29	71.8	75.9	80.0	80.0	80.0	80.0	80.0	80.0	80.0
30-34	57.9	64.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
35-39	57.3	63.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0
40-44	64.9	69.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0
45-49	70.8	74.4	78.0	78.0	78.0	78.0	78.0	78.0	78.0
50-54	76.1	77.5	79.0	79.0	79.0	79.0	79.0	79.0	79.0
55-59	74.7	76.3	78.0	78.0	78.0	78.0	78.0	78.0	78.0
60-64	73.7	74.5	73.0	73.0	73.0	73.0	73.0	73.0	73.0
65-66	73.0	73.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0

NOTE: The figures are as of July 1, on a calendar-age basis. The estimated figures for age 65 and 66 are hypothetical prior to the year 2030 since disabled worker benefits and disability insured status are not applicable up to age 67 until 2027.

Table 7a. Projected Numbers of Male Retired-Worker Beneficiaries in Current-Payment Status, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
62-64	1,090	1,157	1,144	1,544	1,826	1,541	1,436	1,653	1,566
65-69	3,473	4,036	3,738	4,696	6,604	6,699	5,668	6,337	6,258
70-74	2,905	3,290	3,510	3,646	5,754	7,127	6,378	6,136	6,863
75-79	1,931	2,310	2,770	2,619	3,538	5,139	5,673	4,867	5,526
80-84	1,075	1,380	1,742	1,902	2,032	3,290	4,155	3,798	3,735
over 84	678	899	1,339	1,758	1,873	2,422	3,763	4,677	4,502
total	11,153	13,073	14,243	16,165	21,627	26,218	27,073	27,468	28,450
ratio to male fully insured population by age group (in percent)									
62-64	39.6	41.8	41.8	36.1	34.1	32.4	32.4	32.4	32.4
65-69	89.5	93.9	94.0	89.1	87.6	81.5	81.5	81.5	81.5
70-74	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
75-79	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
80-84	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
over 84	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

NOTE: The numbers of beneficiaries are as of June 30, while the fully insured population is as of July 1. All figures are on an "age last birthday" basis.

Table 7b. Projected Numbers of Female Retired-Worker Beneficiaries in Current-Payment Status, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
number (in thousands)									
62-64	1,127	1,189	1,216	1,801	2,214	1,884	1,771	2,039	1,930
65-69	2,769	3,382	3,167	4,190	6,256	6,499	5,552	6,222	6,118
70-74	2,351	2,851	3,118	3,310	5,545	7,007	6,283	6,057	6,764
75-79	1,714	2,181	2,827	2,665	3,716	5,655	6,230	5,363	6,062
80-84	1,069	1,539	2,103	2,319	2,497	4,231	5,404	4,908	4,794
over 84	795	1,225	2,140	3,059	3,338	4,256	6,816	8,670	8,464
total	9,824	12,362	14,571	17,344	23,566	29,532	32,058	33,259	34,132
ratio to female fully insured population by age group (in percent)									
62-64	50.5	51.8	52.5	47.2	45.0	42.9	42.9	43.1	43.1
65-69	85.8	90.0	91.0	87.9	87.3	82.8	82.7	82.9	83.0
70-74	89.6	92.0	93.4	94.1	95.0	95.2	95.0	95.1	95.3
75-79	89.6	91.8	93.1	93.7	94.4	94.9	94.7	94.6	94.9
80-84	90.9	92.8	93.8	94.2	94.6	95.2	95.3	95.0	95.2
over 84	91.9	93.4	93.9	94.1	94.2	94.7	95.0	94.9	94.7

NOTE: The numbers of beneficiaries are as of June 30, while the fully insured population is as of July 1. All figures are on an "age last birthday" basis.

Table 8a. Projected Numbers of Male Disabled-Worker Beneficiaries Currently Entitled, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
	number (in thousands)								
0-24	24	23	23	26	24	25	26	26	26
25-29	60	52	47	52	52	51	54	53	54
30-34	87	82	75	72	80	76	79	81	80
35-39	97	118	119	105	115	114	112	118	117
40-44	116	150	182	167	159	175	166	173	176
45-49	164	180	263	283	242	264	263	259	272
50-54	269	244	374	467	424	400	440	418	437
55-59	442	390	502	733	789	672	732	728	719
60-64	617	606	625	993	1,231	1,124	1,068	1,166	1,117
65-66	0	0	0	171	261	547	455	533	514
total	1,875	1,844	2,209	3,069	3,378	3,448	3,396	3,555	3,512
	ratio to male disability insured population by age group (in percent)								
0-24	.2	.2	.2	.2	.2	.2	.2	.2	.2
25-29	.6	.5	.6	.6	.6	.6	.6	.6	.6
30-34	1.0	.8	.9	.9	.9	.9	.9	.9	.9
35-39	1.3	1.3	1.2	1.3	1.3	1.3	1.3	1.3	1.3
40-44	2.0	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9
45-49	3.4	2.9	3.0	3.0	3.1	3.0	3.0	3.0	3.0
50-54	5.9	5.0	4.8	5.0	5.2	5.1	5.1	5.1	5.1
55-59	9.5	9.0	8.6	8.9	9.0	9.1	8.9	9.0	9.0
60-64	12.9	12.8	12.9	13.2	13.4	13.8	13.7	13.5	13.6
65-66	0	0	0	8.3	8.7	18.0	18.0	18.0	18.0

NOTE: The numbers of beneficiaries are as of June 30, while the fully insured population is as of July 1. All figures are on a calendar-age basis.

Table 8b. Projected Numbers of Female Disabled-Worker Beneficiaries Currently Entitled, by Age Group

Age Group	1983	1990	2000	2010	2020	2030	2040	2050	2060
	number (in thousands)								
0-24	9	9	9	10	9	10	10	10	10
25-29	26	23	22	25	25	24	26	25	26
30-34	36	41	40	40	45	42	44	45	45
35-39	41	58	70	64	71	70	69	73	72
40-44	49	76	109	106	103	113	108	112	114
45-49	74	90	154	180	158	173	172	170	178
50-54	132	125	219	198	278	265	292	278	289
55-59	233	207	287	459	510	442	483	480	474
60-64	327	318	337	583	753	697	669	730	699
65-66	0	0	0	100	162	341	285	335	321
total	926	947	1,247	1,868	2,112	2,179	2,149	2,257	2,227
	ratio to female disability insured population by age group (in percent)								
0-24	.1	.1	.1	.1	.1	.1	.1	.1	.1
25-29	.4	.3	.3	.3	.3	.3	.3	.3	.3
30-34	.7	.6	.7	.7	.7	.7	.7	.7	.7
35-39	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
40-44	1.5	1.5	1.6	1.8	1.7	1.7	1.8	1.7	1.7
45-49	2.5	2.2	2.4	2.5	2.6	2.6	2.6	2.6	2.6
50-54	4.4	3.7	3.8	4.1	4.4	4.3	4.3	4.3	4.3
55-59	7.6	7.1	6.9	7.4	7.6	7.7	7.5	7.6	7.6
60-64	10.6	10.2	10.3	10.8	11.2	11.6	11.5	11.4	11.5
65-66	0	0	0	7.1	7.6	15.5	15.5	15.5	15.5

NOTE: The numbers of beneficiaries are as of June 30, while the fully insured population is as of July 1. All figures are on a calendar-age basis.

Table 9a. Past and Projected Numbers of OASI Beneficiaries in Current-Payment Status by Type of Benefit

(in thousands)

Calendar Year	Retired worker and auxiliaries			Survivors				Total
	Worker	Spouse	Child	Widow-widower	Mother-father	Child	Parent	
1960	7,813	2,224	260	1,471	388	1,549	35	13,740
1965	10,843	2,601	429	2,228	472	1,900	36	18,509
1970	13,066	2,651	535	3,151	514	2,673	29	22,618
1975	16,210	2,836	633	3,823	568	2,905	22	26,998
1976	16,789	2,867	638	3,939	576	2,911	21	27,740
1977	17,380	2,899	670	4,042	573	2,843	19	28,428
1978	17,924	2,942	662	4,147	569	2,800	18	29,062
1979	18,590	2,966	651	4,260	567	2,739	17	29,789
1980	19,167	2,987	633	4,354	560	2,668	15	30,385
1981	19,792	3,010	639	4,446	549	2,624	14	31,074
1982	20,392	3,019	522	4,540	520	2,201	13	31,207
1983	20,977	3,030	536	4,625	492	2,210	12	31,882
1985	22,401	3,113	506	4,772	460	1,960	10	33,222
1990	25,435	3,308	506	5,113	432	1,770	8	36,571
1995	27,504	3,462	528	5,218	421	1,787	7	38,927
2000	28,814	3,398	524	5,180	434	1,787	7	40,144
2005	30,422	3,312	550	5,109	438	1,782	7	41,620
2010	33,509	3,352	611	5,063	442	1,786	7	44,620
2015	38,929	3,543	719	5,050	446	1,789	7	50,483
2020	45,193	3,735	819	5,114	438	1,787	7	57,093
2025	51,214	3,852	885	5,230	426	1,781	7	63,395
2030	55,750	3,829	896	5,354	418	1,770	7	68,024
2035	58,462	3,694	882	5,447	419	1,760	7	70,671
2040	59,131	3,503	850	5,459	423	1,757	7	71,130
2045	59,686	3,382	855	5,420	422	1,753	7	71,527
2050	60,727	3,384	887	5,332	420	1,751	7	72,508
2055	61,807	3,431	909	5,239	418	1,749	7	73,560
2060	62,582	3,480	911	5,162	419	1,747	7	74,308

NOTE: The figures are as of June 30.

Table 9b. Projected Numbers of OASI Beneficiaries in Current-Payment Status by Sex of Worker on Who's Earnings Benefits are Based

(in thousands)

Calendar Year	Retired Workers and auxiliaries			Survivors				Total
	Worker	Spouse	Child	Widow- Widower	Mother- Father	Child	Parent	
benefits based on earnings of male worker								
1983	11,123	2,993	504	4,599	474	1,911	10	21,614
1985	11,784	3,077	474	4,741	440	1,693	8	22,217
1990	13,170	3,274	469	5,074	410	1,528	7	23,931
1995	13,850	3,405	489	5,158	398	1,539	6	24,845
2000	14,243	3,335	485	5,113	410	1,539	6	25,131
2005	14,817	3,245	508	5,037	414	1,533	6	25,560
2010	16,165	3,279	567	4,984	418	1,538	6	26,957
2015	18,714	3,465	670	4,967	422	1,544	6	29,788
2020	21,627	3,651	765	5,024	414	1,543	6	33,030
2025	24,329	3,762	826	5,135	403	1,537	6	35,998
2030	26,218	3,741	833	5,257	396	1,527	6	37,978
2035	27,140	3,609	815	5,349	397	1,519	6	38,835
2040	27,073	3,423	783	5,362	401	1,515	6	38,563
2045	27,059	3,308	786	5,324	400	1,514	6	38,397
2050	27,468	3,308	816	5,240	398	1,513	6	38,749
2055	27,028	3,355	836	5,150	396	1,511	6	39,282
benefits based on earnings of female worker								
1983	9,854	37	32	26	18	299	2	10,268
1985	10,616	36	32	31	19	267	2	11,003
1990	12,266	34	37	39	22	242	1	12,641
1995	13,654	57	39	60	23	248	1	14,082
2000	14,571	63	39	67	24	248	1	15,013
2005	15,605	67	42	72	24	249	1	16,060
2010	17,344	73	44	79	24	248	1	17,813
2015	20,215	78	49	83	24	245	1	20,685
2020	23,566	84	54	90	24	244	1	24,063
2025	26,885	90	59	95	23	244	1	27,397
2030	29,532	88	63	97	22	243	1	30,046
2035	31,322	85	67	98	22	241	1	31,836
2040	32,058	80	67	97	22	242	1	32,567
2045	32,627	76	69	96	22	239	1	33,130
2050	33,259	76	71	92	22	238	1	33,759
2055	33,779	76	73	89	22	238	1	34,278
2060	34,132	79	73	86	22	239	1	34,632

NOTE: The figures are as of June 30.

Table 9c. Past and Projected Numbers of DI Beneficiaries in Current-Payment Status by Type of Benefit

(in thousands)

Calendar Year	Worker	Spouse	Child	Total
1960	371	56	94	522
1965	944	187	518	1,648
1970	1,436	271	861	2,568
1975	2,363	429	1,333	4,125
1976	2,602	468	1,462	4,533
1977	2,755	482	1,496	4,733
1978	2,858	491	1,512	4,861
1979	2,877	483	1,466	4,826
1980	2,863	468	1,403	4,734
1981	2,835	450	1,350	4,836
1982	2,713	399	1,071	4,184
1983	2,571	362	996	3,929
1985	2,496	319	957	3,773
1990	2,588	323	970	3,881
1995	2,761	321	924	4,006
2000	3,178	355	1,022	4,555
2005	3,344	401	1,133	5,878
2010	4,614	444	1,239	6,297
2015	4,945	472	1,324	6,741
2020	5,080	489	1,378	6,947
2025	5,258	490	1,369	7,117
2030	5,206	476	1,321	7,003
2035	5,094	467	1,301	6,862
2040	5,179	475	1,326	6,980
2045	5,304	489	1,363	7,156
2050	5,290	491	1,373	7,153
2055	5,323	489	1,362	7,174
2060	5,309	487	1,359	7,155

NOTE: The Figures are as of June 30.

Table 9d. Projected Numbers of DI Beneficiaries in Current-Payment Status
by Sex of Worker on Who's Earnings Benefits are Based

(in thousands)

Calendar Year	Worker	Spouse	Child	Total
benefits based on earnings of male worker				
1983	1,781	357	848	2,986
1985	1,665	315	814	2,794
1990	1,710	318	820	2,848
1995	1,797	316	776	2,889
2000	2,032	349	850	3,231
2005	2,361	389	936	3,686
2010	2,653	427	1,081	4,097
2015	2,815	454	1,084	4,353
2020	2,858	468	1,125	4,452
2025	2,770	461	1,117	4,349
2030	2,649	444	1,077	4,169
2035	2,620	437	1,059	4,116
2040	2,686	446	1,079	4,212
2045	2,763	459	1,110	4,332
2050	2,764	461	1,117	4,342
2055	2,736	457	1,109	4,302
2060	1,704	456	1,106	4,300
benefits based on earnings of female worker				
1983	790	5	148	943
1985	831	4	143	999
1990	878	5	150	1,033
1995	964	5	148	1,117
2000	1,147	6	171	1,324
2005	1,394	7	197	1,598
2010	1,617	8	221	1,846
2015	1,747	8	240	1,996
2020	1,791	9	252	2,052
2025	1,746	9	252	2,007
2030	1,680	8	245	1,933
2035	1,669	8	242	1,919
2040	1,713	8	247	1,968
2045	1,761	9	253	2,023
2050	1,760	9	255	2,024
2055	1,742	9	253	2,004
2060	1,743	9	253	2,004

Note: The figures are as of June 30.

Table 10. Past and Projected Comparison Between Numbers of Beneficiaries and Covered Workers

Calendar year	Covered workers (thousands)	Beneficiaries (in thousands)			Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
		OASI	DI	Total		
1945	46,390	1,106	—	1,106	41.9	2
1950	48,280	2,930	—	2,930	16.5	6
1955	65,200	7,563	—	7,563	8.6	12
1960	75,530	13,740	522	14,262	5.1	20
1965	80,680	18,509	1,648	20,157	4.0	25
1970	93,090	22,618	2,568	25,186	3.7	27
1975	100,200	26,998	4,125	31,123	3.2	31
1980	114,300	30,385	4,734	35,119	3.3	31
1981	115,800	31,074	4,636	35,710	3.2	31
1982	115,000	31,207	4,184	35,391	3.2	31
1983	115,220	31,882	3,929	35,811	3.2	31
1985	123,865	33,222	3,773	36,995	3.3	30
1990	134,485	36,571	3,881	40,452	3.3	30
1995	141,308	38,927	4,006	42,933	3.3	30
2000	147,917	40,144	4,555	44,699	3.3	30
2005	153,326	41,620	5,878	47,498	3.2	31
2010	156,199	44,770	6,297	51,067	3.1	33
2015	156,831	50,483	6,741	57,224	2.7	36
2020	156,612	57,093	6,947	64,040	2.4	41
2025	156,727	63,395	7,117	70,512	2.2	45
2030	157,341	68,024	7,003	75,027	2.1	48
2035	158,234	70,671	6,862	77,533	2.0	49
2040	159,006	71,130	6,980	78,110	2.0	49
2045	159,717	71,527	7,156	78,683	2.0	49
2050	160,588	72,508	7,153	79,661	2.0	50
2055	161,715	73,560	7,174	80,734	2.0	50
2060	162,960	74,308	7,155	81,463	2.0	50

- NOTES: 1. Covered workers are workers who pay Social Security taxes at some time during the year.
2. Beneficiaries are persons with monthly benefits in current-payment status as of June 30.
3. Covered worker numbers for 1980, 1981, and 1982 are preliminary.

Table 11. Projected Number of Beneficiaries Who Are Dually Eligible For Retired-Worker and Spouse or Surviving Spouse Benefits, Percentage Who Are Dually Entitled, and Average Residual Benefit as Percent of Average Full Benefit, by Sex

Calendar Year	Dual Eligibility to Retired-Worker Benefit and to Spouse Benefit			Dual Eligibility to Retired-Worker Benefit and to Surviving Spouse Benefit		
	Number Dually Eligible (in thousands)	Percentage of Dually Eligible Who Are Dually Entitled	Average Residual Benefit as Percent of Average Full Benefit	Number Dually Eligible (in thousands)	Percentage of Dually Eligible Who Are Dually Entitled	Average Residual Benefit as Percent of Average Full Benefit
male						
1983	3,721	1	37	356	8	44
1990	4,763	1	36	690	8	45
2000	5,373	1	42	844	9	45
2010	6,237	1	46	928	10	45
2020	9,059	1	47	1,090	10	45
2030	11,600	1	47	1,352	10	45
2040	12,041	1	47	1,523	11	45
2050	12,280	1	47	1,557	11	45
2060	12,921	1	47	1,545	11	45
female						
1983	8,813	29	33	3,824	40	47
1990	4,867	35	33	4,834	41	47
2000	5,507	34	33	5,648	41	46
2010	6,469	33	33	6,220	40	46
2020	9,373	31	32	7,202	39	46
2030	11,964	31	32	9,049	39	46
2040	12,406	31	32	10,824	39	46
2050	12,667	31	32	11,639	39	46
2060	13,305	31	32	11,759	39	46

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- NOTES: 1. The number of cases of dual eligibility to retired-worker benefit and parent benefit is negligible.
2. Cases of potential dual eligibility, in which the surviving spouse has not actually applied for his or her retired-worker benefit, are not included in this tabulation.
3. The residual benefit is the amount paid in excess of the retired-worker benefit to those persons who are dually eligible.
4. All values are as of June 30.

Table 12. Comparison of Projected Growth in Average Primary Insurance Amount For Beneficiaries in Current Payment Status With Projected Growth in Average Wage Level For All Workers, Shown as Percentages of the Average Levels For 1983

Calendar Year	PIA Based on Male Worker Account				PIA Based on Female Worker Account				Average Wage Level All Workers
	Retired Workers and Dependents	Young Survivors	Aged Survivors	Disabled Workers and Dependents	Retired Workers and Dependents	Young Survivors	Aged Survivors	Disabled Workers and Dependents	
1983	100	100	100	100	100	100	100	100	100
1985	112	110	110	109	109	110	110	107	109
1990	145	142	142	139	136	142	142	131	143
1995	181	183	180	177	164	184	180	162	188
2000	227	241	229	232	201	242	230	207	246
2005	289	320	293	307	250	320	294	269	321
2010	374	424	376	407	316	422	378	350	420
2015	491	560	487	539	408	555	490	459	548
2020	648	736	636	712	533	727	631	602	717
2025	853	966	835	938	698	952	837	789	937
⁵¹ 2030	1,121	1,265	1,101	1,232	913	1,245	1,101	1,035	1,224
2035	1,468	1,656	1,452	1,614	1,192	1,627	1,446	1,355	1,600
2040	1,919	2,164	1,914	2,113	1,553	2,126	1,897	1,774	2,091
2045	2,513	2,829	2,518	2,764	2,027	2,779	2,485	2,319	2,733
2050	3,294	3,697	3,307	3,613	2,651	3,632	3,251	3,030	3,571
2055	4,318	4,833	4,337	4,721	3,475	4,748	4,251	3,962	4,668
2060	5,645	6,316	5,673	6,172	4,544	6,205	5,557	5,178	6,101

Table 13. Projected Average Percentage of PIA Payable for Benefits in Current Payment Status

<u>Calendar Year</u>	<u>Male Retired Workers</u>	<u>Female Retired Workers</u>	<u>Aged Spouses of Retired</u>	<u>Aged Surviving Spouses</u>
1983	93.6	92.4	42.5	88.6
1985	93.2	92.1	42.5	88.9
1990	92.4	91.7	42.3	88.9
1995	92.0	91.5	42.2	88.9
2000	91.8	91.4	42.2	88.9
2005	91.3	90.9	41.7	88.8
2010	90.2	89.8	41.0	88.6
2015	89.6	89.1	40.5	88.4
2020	89.0	88.4	39.9	88.0
2025	88.1	87.4	39.5	87.5
2030	87.4	86.7	39.0	87.0
2035	86.9	86.2	39.0	86.6
2040	86.6	85.8	39.0	86.2
2045	86.2	85.3	39.0	85.8
2050	85.9	84.9	39.0	85.5
2055	85.9	84.8	39.0	85.3
2060	86.0	84.9	39.0	85.2

NOTE: These percentages reflect reductions due to early retirement as well as increases due to the delayed retirement credit.

Table 14a. Past and Projected Old-Age and Survivors Insurance Benefit Payments, as a Percentage of Taxable Payroll

Calendar Year	Retired Worker and Auxiliary Benefits			Survivor Benefits					Lump-Sum Death Payments	Total
	Worker	Spouse	Child	Spouse			Child	Parent		
				With Child	Disabled	Aged				
1960	3.52	.52	.05	.14	---	.53	.47	.01	.08	5.33
1965	4.54	.57	.07	.16	---	.84	.63	.01	.09	6.93
1970	4.56	.50	.08	.14	.01	.99	.68	.01	.07	7.05
1975	5.88	.58	.10	.16	.03	1.45	.75	.01	.05	9.00
1980	6.18	.56	.10	.14	.03	1.52	.65	<u>1/</u>	.03	9.22
1981	6.56	.59	.10	.14	.03	1.60	.65	<u>1/</u>	.03	9.69
1982	7.10	.64	.09	.14	.03	1.73	.61	<u>1/</u>	.02	10.35
1983	7.01	.62	.08	.12	.02	1.63	.52	<u>1/</u>	.02	10.02
1985	7.03	.63	.08	.10	.03	1.64	.47	<u>1/</u>	.01	10.00
1990	7.21	.63	.07	.09	.03	1.63	.39	<u>1/</u>	.01	10.05
1995	6.85	.58	.07	.09	.02	1.53	.36	<u>1/</u>	.01	9.51
57 2000	6.46	.52	.06	.09	.02	1.42	.35	<u>1/</u>	.01	8.82
2005	6.29	.47	.06	.08	.02	1.33	.34	<u>1/</u>	<u>1/</u>	8.60
2010	6.59	.47	.06	.09	.02	1.27	.34	<u>1/</u>	<u>1/</u>	8.83
2015	7.55	.49	.07	.09	.02	1.26	.34	<u>1/</u>	<u>1/</u>	9.82
2020	8.74	.53	.08	.09	.02	1.28	.34	<u>1/</u>	<u>1/</u>	11.09
2025	9.83	.56	.09	.08	.02	1.34	.35	<u>1/</u>	<u>1/</u>	12.26
2030	10.52	.57	.09	.08	.02	1.40	.34	<u>1/</u>	<u>1/</u>	13.08
2035	10.94	.56	.09	.08	.02	1.46	.34	<u>1/</u>	<u>1/</u>	13.48
2040	10.91	.54	.09	.08	.02	1.49	.33	<u>1/</u>	<u>1/</u>	13.46
2045	10.88	.52	.09	.08	.02	1.50	.33	<u>1/</u>	<u>1/</u>	13.42
2050	10.99	.52	.09	.08	.02	1.49	.33	<u>1/</u>	<u>1/</u>	13.52
2055	10.14	.53	.09	.08	.02	1.46	.33	<u>1/</u>	<u>1/</u>	13.66
2060	11.20	.53	.09	.08	.02	1.46	.33	<u>1/</u>	<u>1/</u>	13.71
averages:										
1983-2007	6.78	.57	.07	.09	.02	1.51	.38	<u>1/</u>	.01	9.43
2008-2033	8.65	.52	.08	.08	.02	1.31	.34	<u>1/</u>	<u>1/</u>	11.02
2033-2057	10.97	.54	.09	.08	.02	1.48	.33	<u>1/</u>	<u>1/</u>	13.50
1983-2057	8.80	.54	.08	.08	.02	1.43	.35	<u>1/</u>	<u>1/</u>	11.32

1/ Negligible, i.e. less than 0.005 percent of taxable payroll.

Table 14b. Past and Projected Disability Insurance Benefit Payments, as a Percentage of Taxable Payroll

Calendar Year	Worker	Spouse	Child	Total
1960	.24	.01	.02	.28
1965	.52	.04	.02	.28
1970	.61	.04	.11	.76
1975	1.07	.06	.17	1.30
1980	1.12	.06	.17	1.35
1981	1.13	.05	.17	1.35
1982	1.10	.05	.14	1.29
1983	1.01	.04	.12	1.16
1985	.92	.03	.09	1.04
1990	.86	.03	.07	.96
1995	.85	.02	.06	.93
2000	.89	.02	.06	.98
2005	1.04	.02	.07	1.13
2010	1.21	.03	.08	1.31
2015	1.32	.03	.08	1.43
2020	1.36	.03	.09	1.49
2025	1.37	.03	.09	1.49
2030	1.33	.03	.09	1.45
2035	1.35	.03	.09	1.47
2040	1.38	.03	.09	1.51
2045	1.42	.03	.10	1.54
2050	1.42	.03	.10	1.54
2055	1.41	.03	.10	1.54
2060	1.40	.03	.10	1.53
averages:				
1983-2007	.92	.03	.09	1.01
2008-2033	1.32	.03	.09	1.43
2033-2057	1.39	.03	.09	1.52
1983-2057	1.21	.03	.09	1.32

Table 15a. Projected Cost Rate by Component as a Percentage of Taxable Payroll

Calendar Year	Benefit Payments			Administrative Expense			Railroad Interchange			Total Cost Rate		
	OASI	DI	OASDI	OASI	DI	OASDI	OASI	DI	OASDI	OASI	DI	OASDI
1983	10.02	1.16	11.18	.11	.05	.16	.15	<u>1/</u>	.16	10.28	1.21	11.49
1985	10.00	1.04	11.04	.11	.04	.15	.14	.01	.15	10.24	1.09	11.33
1990	10.05	.96	11.01	.10	.04	.14	.11	<u>1/</u>	.11	10.26	1.01	11.27
1995	9.51	.93	10.44	.10	.04	.14	.07	<u>1/</u>	.07	9.68	.97	10.65
2000	8.92	.98	9.90	.10	.04	.14	.04	<u>1/</u>	.04	9.06	1.02	10.08
2005	8.60	1.13	9.73	.10	.05	.15	.02	<u>1/</u>	.02	8.72	1.18	9.90
2010	8.83	1.31	10.15	.10	.06	.16	.01	<u>1/</u>	<u>1/</u>	8.95	1.37	10.31
2015	9.82	1.43	11.25	.12	.06	.18	<u>1/</u>	<u>1/</u>	-.01	9.93	1.50	11.43
2020	11.09	1.49	12.58	.13	.07	.20	-.01	<u>1/</u>	-.01	11.21	1.55	12.76
2025	12.26	1.49	13.76	.14	.07	.21	-.01	<u>1/</u>	-.02	12.40	1.56	13.96
2030	13.08	1.45	14.53	.15	.07	.22	-.02	<u>1/</u>	-.02	13.22	1.51	14.73
2035	13.48	1.47	14.95	.16	.07	.22	-.02	<u>1/</u>	-.02	13.62	1.53	15.16
2040	13.46	1.51	14.97	.16	.07	.23	-.02	<u>1/</u>	-.02	13.60	1.57	15.17
2045	13.42	1.54	14.97	.16	.07	.23	-.02	<u>1/</u>	-.02	13.56	1.61	15.17
2050	13.52	1.54	15.07	.16	.07	.23	-.02	<u>1/</u>	-.02	13.66	1.61	15.27
2055	13.66	1.54	15.19	.16	.07	.23	-.02	<u>1/</u>	-.02	13.79	1.60	15.40
2060	13.71	1.53	15.24	.16	.07	.23	-.02	<u>1/</u>	-.02	13.85	1.59	15.44
averages:												
1983-2007	9.43	1.01	10.44	.10	.05	.15	.08	<u>1/</u>	.08	9.61	1.06	10.66
2008-2032	11.02	1.43	12.45	.13	.06	.19	-.01	<u>1/</u>	-.01	11.14	1.49	12.64
2033-2057	13.40	1.52	15.02	.10	.07	.23	-.02	<u>1/</u>	-.02	13.65	1.58	15.23
1983-2057	11.32	1.32	12.64	.13	.06	.19	-.02	<u>1/</u>	-.02	11.46	1.38	12.84

1/ Less than 0.005 percent of taxable payroll.

Table 15b. Projected Total Income Rate by Component, as a Percentage of Taxable Payroll

Calendar Year	Payroll Tax			Taxation of Benefits			Total		
	OASI	DI	OASDI	OASI	DI	OASDI	OASI	DI	OASDI
1983	9.55	1.25	10.80	<u>1/</u> .37	<u>1/</u> .08	<u>1/</u> .44	9.92	1.33	11.24
1985	10.40	1.00	11.40	.17	.02	.18	10.57	1.02	11.58
1990	11.20	1.20	12.40	.28	.03	.31	11.48	1.23	12.71
1995	11.20	1.42	12.40	.36	.03	.39	11.56	1.23	12.79
2000	10.98	1.42	12.40	.35	.04	.38	11.33	1.46	12.78
2005	10.98	1.42	12.40	.35	.05	.39	11.33	1.47	12.79
2010	10.98	1.42	12.40	.37	.05	.42	11.35	1.47	12.82
2015	10.98	1.42	12.40	.42	.06	.48	11.40	1.48	12.88
2020	10.98	1.42	12.40	.49	.07	.55	11.47	1.49	12.95
2025	10.98	1.42	12.40	.56	.07	.63	11.54	1.49	13.03
2030	10.98	1.42	12.40	.61	.07	.68	11.59	1.49	13.08
2035	10.98	1.42	12.40	.65	.07	.72	11.63	1.49	13.12
2040	10.98	1.42	12.40	.68	.07	.74	11.65	1.49	13.14
2045	10.98	1.42	12.40	.68	.08	.76	11.66	1.50	13.16
2050	10.98	1.42	12.40	.69	.08	.76	11.67	1.50	13.16
2055	10.98	1.42	12.40	.69	.08	.77	11.67	1.50	13.17
2060	10.98	1.42	12.40	.70	.08	.77	11.68	1.50	13.17
averages:									
1983-2007	10.92	1.23	12.15	.31	.04	.34	11.23	1.26	12.50
2008-2032	10.98	1.42	12.40	.49	.06	.55	11.47	1.48	12.95
2033-2057	10.98	1.42	12.40	.67	.08	.75	11.65	1.50	13.15
1983-2057	10.96	1.36	12.32	.49	.06	.55	11.45	1.41	12.87

1/ For 1983 benefits were not subject to federal income tax. This value represents a transfer from the general fund of the Treasury relating to deemed military service wage credits. For details see C. Methods.

Table 15c. Past and Projected Total Cost Rate, Total Income Rate, and Actuarial Balance as a Percentage of Taxable Payroll.

Calendar Year	Total Cost Rate			Total Income Rate			Actuarial Balance		
	OASI	DI	OASDI	OASI	DI	OASDI	OASI	DI	OASDI
1960	5.59	.30	5.89	5.50	.50	6.00	-.09	+.20	+.11
1965	7.23	.70	7.93	6.75	.50	7.25	-.48	-.20	-.68
1970	7.32	.81	8.12	7.30	1.10	8.40	-.02	+.29	+.28
1975	9.29	1.36	10.65	8.75	1.15	9.90	-.54	-.21	-.75
1980	9.36	1.38	10.75	9.04	1.12	10.16	-.32	-.26	-.59
1981	9.92	1.38	11.30	9.40	1.30	10.70	-.52	-.08	-.60
1982	10.59	1.34	11.94	9.15	1.65	10.80	-1.44	+.31	-1.14
1983	10.28	1.21	11.49	9.92	1.33	11.24	-.36	+.12	-.24
1985	10.24	1.09	11.33	10.57	1.02	11.58	+.32	-.07	+.25
1990	10.26	1.01	11.27	11.48	1.23	12.71	+1.22	+.22	+1.44
1995	9.68	.97	10.65	11.56	1.23	12.79	+1.88	+.26	+2.14
2000	9.06	1.02	10.08	11.33	1.46	12.78	+2.27	+.44	+2.71
2005	8.72	1.18	9.90	11.33	1.47	12.79	+2.61	+.28	+2.89
2010	8.95	1.37	10.31	11.35	1.47	12.82	+2.40	+.11	+2.51
2015	9.93	1.49	11.43	11.40	1.48	12.88	+1.47	-.01	+1.45
2020	11.21	1.55	12.76	11.47	1.49	12.95	+.26	-.06	+.19
2025	12.40	1.56	13.96	11.54	1.49	13.03	-.86	-.07	-.93
2030	13.22	1.51	14.73	11.59	1.49	13.08	-1.63	-.02	-1.65
2035	13.62	1.53	15.16	11.63	1.49	13.12	-2.00	-.04	-2.04
2040	13.60	1.57	15.17	11.65	1.49	13.14	-1.95	-.08	-2.03
2045	13.56	1.61	15.17	11.66	1.50	13.16	-1.90	-.11	-2.01
2050	13.66	1.61	15.27	11.67	1.50	13.16	-2.00	-.11	-2.11
2055	13.79	1.60	15.40	11.67	1.50	13.17	-2.12	-.11	-2.23
2060	13.85	1.59	15.44	11.68	1.50	13.17	-2.17	-.10	-2.27
averages:									
1983-2007	9.61	1.06	10.66	11.23	1.26	12.50	+1.63	+.20	+1.83
2008-2032	11.14	1.49	12.64	11.47	1.48	12.95	+.33	-.01	+.32
2033-2057	13.65	1.58	15.23	11.65	1.50	13.15	-1.99	-.09	-2.08
1983-2057	11.46	1.38	12.84	11.45	1.41	12.87	-.01	+.04	+.02

Table 16. Past and Projected Assets of the Trust Funds at the Beginning of the Year as a Percentage of Expenditures During the Year

Calendar Year	OASI	DI	OASDI
1960	180%	304%	186%
1965	109	121	110
1970	101	126	103
1975	63	92	66
1980	23	35	25
1981	18	21	18
1982	15	17	15
1983	15	15	15
1985	20	32	21
1990	35	69	38
1995	110	186	117
2000	227	297	234
2005	367	409	372
2010	501	431	491
2015	563	421	544
2020	556	405	538
2025	507	390	494
2030	442	393	437
2035	372	388	374
2040	308	369	314
2045	245	339	255
2050	178	311	192
2055	106	284	125
2060	31	260	54

- NOTES:**
1. For 1983-88, assets at beginning of year includes amounts borrowed from the (HI) Trust Fund. Under these assumptions, such amounts would be repaid by the end of 1988.
 2. Beginning with 1984, estimates reflect inclusion of advance tax transfers for the month of January in assets at the beginning of the year.

Table 17. Past and Projected OASDI Total Cost and Trust Fund Assets as a Percentage of Gross National Product

Calendar Year	Total Cost	Trust Fund Assets
1960	2.33	4.46
1965	2.78	2.87
1970	3.34	3.83
1975	4.47	2.85
1980	4.69	1.00
1981	4.91	.84
1982	5.23	.81
1983	5.20	.84
1985	5.00	.84
1990	4.92	2.23
1995	4.62	6.21
2000	4.33	11.50
2005	4.21	17.46
2010	4.34	23.26
2015	4.74	27.59
2020	5.22	29.45
2025	5.63	28.72
2030	5.86	26.06
2035	5.94	22.31
2040	5.87	18.33
2045	5.78	14.44
2050	5.74	10.48
2055	5.71	6.30
2060	5.64	2.01
averages:		
1983-2007	4.63	7.68
2008-2032	5.16	26.93
2033-2057	5.81	14.37
1983-2057	5.20	16.33

Table 18. Past and Projected Numbers of OASDI Beneficiaries and Ratio to Population, by Broad Age Group

Calendar Year	Number of Beneficiaries (in thousands)			Ratio of Number Beneficiaries to Population (in percent)		
	Under Age 20	Ages 20-64	Over Age 64	Under Age 20	Ages 20-64	Over Age 64
1960	1,840	1,808	10,614	2	2	62
1965	2,705	3,596	13,856	3	3	73
1970	3,605	4,882	16,699	4	4	81
1975	4,237	6,867	20,019	5	6	86
1980	3,841	7,784	23,491	5	6	89
1981	3,767	8,037	23,906	4	6	89
1982	3,217	7,682	24,492	4	6	89
1983	2,960	7,619	25,232	4	5	90
1985	2,919	7,603	26,473	4	5	90
1990	2,696	7,830	29,473	4	5	92
1995	2,683	7,459	32,791	4	5	93
2000	2,766	8,009	33,924	4	5	93
2005	2,872	9,381	35,245	4	5	94
2010	3,021	10,323	37,723	4	6	93
2015	3,200	11,132	42,892	4	6	92
2020	3,343	11,545	49,152	4	6	92
2025	3,384	11,204	55,924	4	6	92
2030	3,322	10,451	61,254	4	6	92
2035	3,265	10,277	63,991	4	6	93
2040	3,250	10,232	64,613	4	6	94
2045	3,284	10,843	64,556	4	6	94
2050	3,317	10,944	65,400	4	6	94
2055	3,320	10,806	66,608	4	6	94
2060	3,311	10,678	67,474	4	6	94

NOTE: The figures are as of June 30, and exclude certain beneficiaries aged 72 and over, whose entitlement to benefits is based on non-contributory credits. The effect of these beneficiaries on the long-range cost of the program is negligible. Age refers to "age last birthday".

Table 19. Projected Normal Cost as of January 1, 1983 for Persons Aged 18-22
 (as percentage of taxable payroll)

Type of Benefit	Normal Cost
Retired Worker	9.66
Dependent's of Retired Workers	0.48
Aged Wife	0.39
Young Wife	0.02
Child	0.07
Survivors	1.42
Aged Widows	1.08
Disabled Widows	0.01
Child	0.26
Mother	0.06
Parent	<u>1/</u>
Lump Sum Death Benefits	<u>1/</u>
Disabled Worker	1.21
Dependents of Disabled Worker	0.09
Wife	0.02
Child	0.07
Total Benefits	12.86
Administrative Expenses	0.20
Railroad Interchange	-0.03
TOTAL	13.03

1/ Less than 0.005 percent of taxable payroll.

Table 20. History of Projected Long-Range Assets and Liabilities for the OASDI Program on a Present-Value Basis

(in billions)

<u>OPEN GROUP</u>					
<u>Valuation Date</u>	<u>Valuation Interest Rate</u>	<u>Assets</u>	<u>Liabilities</u>	<u>Surplus (+) or Deficit (-)</u>	
1/1/1970	4.75%	\$ 1,143	\$ 1,146	\$- 3	
1/1/1971	1/	1,173	1,185	- 12	
7/1/1972	6.00	4,857	4,717	140	
7/1/1973	6.00	5,350	5,526	- 176	
7/1/1974	6.00	5,220	6,533	-1,312	
7/1/1975	7.38	4,797	6,824	-2,027	
10/1/1976	6.60	6,333	10,509	-4,176	
10/1/1977	6.60	6,850	11,637	-4,787	
10/1/1978	6.60	9,414	10,344	- 930	
10/1/1979	6.60	10,213	11,061	- 848	
10/1/1980	6.08	12,038	13,502	-1,464	
10/1/1981	6.08	12,230	13,785	-1,555	
10/1/1982	6.08	11,920	13,562	-1,641	
10/1/1983	6.08	13,810	13,662	148	
<u>CLOSED GROUP</u>					
<u>Valuation Date</u>	<u>Valuation Interest Rate</u>	<u>Assets</u>	<u>Liabilities</u>	<u>Surplus (+) or Deficit (-)</u>	<u>Lowest Age in Closed Group</u>
1/1/1970	4.75%	\$ 595	\$ 1,010	\$- 415	20
1/1/1971	1/	610	1,045	- 435	21
7/1/1972	6.00	1,007	2,872	-1,865	22
7/1/1973	6.00	1,113	3,231	-2,118	23
7/1/1974	6.00	1,565	4,025	-2,460	19
7/1/1975	7.38	1,572	4,282	-2,710	20
10/1/1976	6.60	1,727	5,875	-4,148	21
10/1/1977	6.60	2,201	7,563	-5,362	17
10/1/1978	6.60	3,095	7,066	-3,971	18
10/1/1979	6.60	3,265	7,490	-4,225	19
10/1/1980	6.08	4,441	10,042	-5,601	15
10/1/1981	6.08	4,486	10,345	-5,858	16
10/1/1982	6.08	4,229	10,037	-5,808	17
10/1/1983	6.08	4,968	10,027	-5,059	18

1/ An interest rate of 5.25% was used for the OASI program and an interest rate of 5.50% was used for the DI program.

Table 21a. Projected Average OASDI Cost Rate, Total Income Rate and Actuarial Balance Assuming Various Real-Wage Differentials

(as percentage of taxable payroll)

Calendar Years	Ultimate percentage increase in wages-CPI 1/			
	5-4	5.5-4	6-4	6.5-4
	average cost rate			
1983-2007	11.04	10.66	10.31	9.98
2008-2032	13.51	12.64	11.84	11.11
2033-2057	16.39	15.23	14.16	13.21
1983-2057	13.65	12.84	12.10	11.43
	average total income rate			
1983-2007	12.51	12.50	12.48	12.47
2008-2032	12.99	12.95	12.92	12.88
2033-2057	13.21	13.15	13.10	13.05
1983-2057	12.90	12.87	12.83	12.80
	actuarial balance			
1983-2007	+1.47	+1.83	+2.17	+2.50
2008-2032	- .52	+ .32	+1.08	+1.78
2033-2057	-3.18	-2.08	-1.07	- .16
1983-2057	- .74	+ .02	+ .73	+1.37

1/ The first value in each pair is the assumed annual percentage increase in average wages in 1993 and later years. The second value is the assumed annual percentage increase in CPI in 1989 and later years. The difference between the two values is the real-wage differential. The assumptions used in earlier years gradually merge into the ultimate values.

NOTE: An ultimate real-wage differential of 1.5 percent is assumed in the intermediate cost projections.

Table 21b. Projected Average OASDI Cost Rate, Total Income Rate and Actuarial Balance Assuming Various Rates of Increase in the Consumer Price Index

(as percentage of taxable payroll)

Calendar Years	Ultimate percentage increase in wages-CPI 1/				
	3.5-2	4.5-3	5.5-4	6.5-5	7.5-6
	average cost rate				
1983-2007	10.88	10.77	10.66	9.98 10.56	10.46
2008-2032	13.04	12.83	12.64	12.44	12.26
2033-2057	15.73	15.47	15.23	14.98	14.76
1983-2057	13.22	13.02	12.84	12.66	12.49
	average total income rate				
1983-2007	12.50	12.50	12.50	12.49	12.49
2008-2032	12.97	12.96	12.95	12.94	12.94
2033-2057	13.18	13.16	13.15	13.14	13.13
1983-2057	12.88	12.87	12.87	12.86	12.85
	actuarial balance				
1983-2007	+1.62	+1.73	+1.83	+1.93	+2.03
2008-2032	- .07	+ .13	+ .32	+ .50	+ 6.8 1.68
2033-2057	-2.56	-2.31	-2.08	-1.85	-1.64
1983-2057	- .33	- .15	+ .02	+ .20	+ .36

1/ The first value in each pair is the assumed annual percentage increase in average wages in 1993 and later years. The second value is the assumed annual percentage increase in CPI in 1989 and later years. The assumptions used in earlier years gradually merge into the ultimate values.

NOTE: An ultimate rate of increase in the Consumer Price Index of 4 percent is assumed in the intermediate cost projection.

Table 21c. Projected Average OASDI Cost Rate, Total Income Rate and Actuarial Balance Assuming Various Total Fertility Rates

(as percentage of taxable payroll)

Calendar Years	Ultimate total fertility rate		
	1.6	2.0	2.3
	average cost rate		
1983-2007	10.65	10.66	10.70
2008-2032	13.19	12.64	12.31
2033-2057	18.02	15.23	13.67
1983-2057	13.95	12.84	12.23
	average total income rate		
1983-2007	12.50	12.50	12.50
2008-2032	12.98	12.95	12.94
2033-2057	13.29	13.15	13.07
1983-2057	12.92	12.87	12.84
	actuarial balance		
1983-2007	+1.85	+1.83	+1.80
2008-2032	- .21	+ .32	+ .63
2033-2057	-4.73	-2.08	- .59
1983-2057	-1.03	+ .02	+ .61

NOTE: The total fertility rate is the average number of children that would be born to women who survive the entire childbearing period if they were to experience the age-specific birth rates that are assumed. The ultimate rate of 2.0 is assumed to be reached in the year 2007 in the intermediate cost projection.

Table 21d. Projected Average OASDI Cost Rate, Total Income Rate and Actuarial Balance Assuming Various Amounts of Mortality Improvement

(as percentage of taxable payroll)

Calendar Years	Ultimate Percentage Mortality Improvement		
	23	39	60
	average cost rate		
1983-2007	10.46	10.66	10.89
2008-2032	12.01	12.64	13.49
2033-2057	14.02	15.23	17.28
1983-2057	12.16	12.84	13.89
	average total income rate		
1983-2007	12.49	12.50	12.51
2008-2032	12.93	12.95	12.99
2033-2057	13.09	13.15	13.25
1983-2057	12.84	12.87	12.92
	actuarial balance		
1983-2007	+2.03	+1.83	+1.62
2008-2032	+ .91	+ .32	- .50
2033-2057	- .93	-2.08	-4.03
1983-2057	+ .67	+ .02	- .97

NOTE: The ultimate percentage mortality improvement is the assumed percentage change in the age-sex-adjusted mortality rate from 1979 to 2060. An improvement of 39 percent is assumed for the intermediate cost projection.

Table 21e. Projected Average OASDI Cost Rate, Total Income Rate and Actuarial Balance Assuming Various Levels of Net Immigration

(as percentage of taxable payroll)

Calendar Years	Annual Net Immigration		
	400,000	800,000	1,200,000
average cost rate			
1983-2007	10.66	10.49	10.33
2008-2032	12.64	12.00	11.45
2033-2057	15.23	14.29	13.56
1983-2057	12.84	12.26	11.78
average total income rate			
1983-2007	12.50	12.49	12.49
2008-2032	12.95	12.92	12.90
2033-2057	13.15	13.10	13.07
1983-2057	12.87	12.84	12.82
actuarial balance			
1983-2007	+1.83	+2.00	+2.16
2008-2032	+ .32	+ .92	+1.45
2033-2057	-2.08	-1.19	- .49
1983-2057	+ .02	+ .58	+1.04

NOTE: A level of 400,000 annual net immigration is assumed in the intermediate cost projection.

Table 21f. Projected Average OASDI Cost Rate, Total Income Rate and Actuarial Balance Assuming Various Disability Incidence Rates

(as percentage of taxable payroll)

Calendar Years	Ultimate Percentage Disability Incidence Increase		
	0	15	30
	average cost rate		
1983-2007	10.59	10.66	10.74
2008-2032	12.45	12.64	12.82
2033-2057	15.03	15.23	15.42
1983-2057	12.69	12.84	12.99
	average total income rate		
1983-2007	12.49	12.50	12.50
2008-2032	12.94	12.95	12.96
2033-2057	13.14	13.15	13.16
1983-2057	12.86	12.87	12.87
	actuarial balance		
1983-2007	+1.91	1.83	+1.76
2008-2032	+ .49	+ .32	+ .14
2033-2057	-1.89	-2.08	-2.26
1983-2057	+ .17	+ .02	- .12

NOTE: The disability incidence increase is based on the ratio of the age-sex adjusted incidence rate in 2002 and later to the average age-sex adjusted incidence rate during 1980-82. An increase of 15 percent is assumed in the intermediate cost projection.

Table 22. Estimated Long-Range Actuarial Balance by Date of Valuation

(as percentage of taxable payroll)

Date of Valuation	Act	OASI			DI			OASDI		
		Cost	Income	Balance	Cost	Income	Balance	Cost	Income	Balance
valuation to perpetuity under level assumptions (present value)										
1935	1935	5.36	5.36	.00	--	--	--	--	--	--
1939	1939	5.22	5.30	+ .08	--	--	--	--	--	--
1950	1/1939	4.45	3.98	- .47	--	--	--	--	--	--
1950	1950	6.20	6.10	- .10	--	--	--	--	--	--
1952	1950	5.49	5.90	+ .41	--	--	--	--	--	--
1952	1952	6.00	5.90	- .10	--	--	--	--	--	--
1954	1952	6.62	6.05	- .57	--	--	--	--	--	--
1954	1954	7.50	7.12	- .38	--	--	--	--	--	--
1956	1954	7.45	7.29	- .16	--	--	--	--	--	--
1956	1956	7.43	7.23	- .20	.42	.49	+ .07	7.85	7.72	- .13
1958	1956	7.90	7.33	- .57	.35	.50	+ .15	8.25	7.83	- .42
1958	1958	8.27	8.02	- .25	.49	.50	+ .01	8.76	8.52	- .24
1960	1958	8.38	8.18	- .20	.35	.50	+ .15	8.73	8.68	- .05
1960	1960	8.42	8.18	- .24	.56	.50	- .06	8.98	8.68	- .30
1961	1961	8.79	8.55	- .24	.56	.50	- .06	9.35	9.05	- .30
1962	1961	8.69	8.52	- .17	.64	.50	- .14	9.33	9.02	- .31
1963	1961	8.72	8.62	- .10	.64	.50	- .14	9.36	9.12	- .24
valuation for 75 years under level assumptions (present value)										
1964	1961	8.46	8.60	+ .14	.63	.50	- .13	9.09	9.10	+ .01
1965	1965	8.82	8.72	- .10	.67	.70	+ .03	9.49	9.42	- .07
1966	1965	7.91	8.80	+ .89	.85	.70	- .15	8.76	9.50	+ .74
1967	1967	8.77	8.78	+ .01	.95	.95	.00	9.72	9.73	+ .01
1968	1967	8.34	8.90	+ .56	.98	.95	- .03	9.32	9.85	+ .53
1969	1967	7.76	8.93	+1.17	.96	.95	- .01	8.72	9.88	+1.16
1969	1969	8.86	8.78	- .08	1.10	1.10	.00	9.96	9.88	- .08
1970	1969	8.55	8.84	+ .29	1.05	1.10	+ .05	9.60	9.94	+ .34
1971	1971	9.13	9.07	- .06	1.14	1.10	- .04	10.27	10.17	- .10
1972	1971	8.89	9.11	+ .13	1.18	1.10	- .08	10.16	10.21	+ .05

(continued next page)

Table 22. Long-Range Actuarial Balance by Date of Valuation (continued)
(percentage of taxable payroll)

Date of Valuation	Act	OASI			DI			OASDI		
		Cost	Income	Balance	Cost	Income	Balance	Cost	Income	Balance
valuation for 75 years under dynamic assumptions (average current cost) <u>2/</u>										
1972	1971	7.81	9.19	+1.38	1.15	1.10	- .05	8.96	10.29	+1.33
1972	<u>3/</u> 1971	8.51	8.60	+ .09	1.26	1.24	- .02	9.77	9.84	+ .07
1972	1972	9.32	9.31	- .01	1.31	1.32	+ .01	10.63	10.63	.00
1973	1972	9.41	9.32	- .09	1.54	1.31	- .23	10.95	10.63	- .32
1973	<u>4/</u> 1972	9.81	9.38	- .43	1.58	1.50	- .08	11.39	10.88	- .51
1974	1973	11.97	9.39	-2.58	1.92	1.52	- .40	13.89	10.91	-2.98
1975	1973	13.29	9.41	-3.88	2.97	1.53	-1.44	16.26	10.94	-5.32
valuation for 75 years under dynamic assumptions (average cost)										
1976	1973	15.42	9.43	-5.99	3.51	1.54	-1.97	18.93	10.97	-7.96
1977	1973	15.51	9.45	-6.06	3.68	1.54	-2.14	19.19	10.99	-8.20
1977	1977	11.09	10.01	-1.08	2.49	2.11	- .38	13.58	12.12	-1.46
1978	1977	11.29	10.03	-1.26	2.26	2.12	- .14	13.55	12.16	-1.40
1979	1977	11.47	10.05	-1.41	1.92	2.13	+ .21	13.38	12.19	-1.20
1980	1980	12.24	10.08	-2.16	1.50	2.14	+ .64	13.74	12.22	-1.52
1981	<u>5/</u> 1980	12.54	10.10	-2.44	1.52	2.15	+ .62	14.07	12.25	-1.82
1982	1981	12.59	10.11	-2.48	1.50	2.16	+ .66	14.09	12.27	-1.82
1983	<u>6/</u> 1981	13.04	10.13	-2.92	1.34	2.17	+ .83	14.38	12.29	-2.09
1983	1983	11.46	11.45	- .01	1.38	1.41	+ .04	12.84	12.87	+ .02

1/ As amended in the 1940's

2/ Average current cost includes annual expenditures and amounts necessary to build the trust funds to about one year's expenditures

3/ As amended through Public Law 92-336

4/ As amended through Public Law 93-66

5/ As amended through Public Law 96-499

6/ As amended through Public Law 97-248

Table 23a. Alternative Optimistic OASDI Long-Range Economic Assumptions

Calendar Year	Increase in...			Real Wage Differential	Interest Rate	Average Annual Unemployment Rate
	Real GNP	Wages in Covered Employment	Consumer Price Index			
1960-64	4.0%	3.4%	1.3%	2.1%	3.7%	5.7%
1965-69	4.4	5.4	3.4	2.0	5.2	3.8
1970	- .2	4.9	5.9	-1.0	7.3	4.9
1971	3.4	4.9	4.3	.6	6.0	5.9
1972	5.7	7.3	3.3	4.0	5.9	5.6
1973	5.8	6.9	6.2	.7	6.6	4.9
1974	- .6	7.4	11.0	-3.6	7.5	5.6
1975	- 1.2	6.6	9.1	-2.5	7.4	8.5
1976	5.4	8.2	5.7	-2.5	7.1	7.7
1977	5.5	8.8	6.5	1.5	7.1	7.1
1978	5.0	8.2	7.6	.6	8.2	6.1
1979	2.8	8.8	11.4	-2.6	9.1	5.8
1980	- .4	8.6	13.5	-4.9	11.0	7.1
1981	1.9	8.8	10.2	-1.4	13.3	7.6
1982	- 1.7	5.6	6.0	- .4	12.8	9.7
1983	3.4	4.3	2.5	1.8	9.6	10.0
1984	5.7	5.2	3.3	1.9	6.7	8.6
1985	5.1	5.3	3.7	1.6	5.8	7.5
1986	4.5	5.6	3.3	2.3	5.4	7.0
1987	4.5	5.7	3.0	2.7	5.3	6.6
1988	4.5	5.4	2.7	2.7	5.2	6.1
1989	4.5	5.2	2.3	2.9	5.1	5.6
1990	4.5	5.1	2.0	3.1	5.1	5.2
1991	4.5	5.3	2.0	3.3	5.1	4.8
1992	4.4	5.2	2.0	3.2	5.1	4.5
1993	3.9	4.9	2.0	2.9	5.1	4.3
1994	3.8	4.7	2.0	2.7	5.1	4.1
1995	3.8	4.5	2.0	2.5	5.1	4.0
2000 & later	3.6	4.5	2.0	2.5	5.1	4.0

- NOTES:
1. Real GNP (Gross National Product) is the total output of goods and services expressed in constant 1972 dollars. The annual percentage increase in real GNP is projected to continue changing after reaching the level of 3.6 percent for the year 2000. The value for the year 2060 is 3.2 percent.
 2. The real wage differential is the difference between the percentage increase in average annual wages in covered employment and the percentage increase in the average annual CPI.
 3. The interest rate is the average of the interest rates determined in each of the 12 months of the year for special public-debt obligations issuable to the trust funds.
 4. The ultimate average annual unemployment rate includes military personnel and is age-sex adjusted based on the total labor force aged 16 and over as of July 1, 1981. Rates for earlier years are crude civilian unemployment rates.
 5. The characterization "optimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1a., which are used in the intermediate projection.

Table 23b. Alternative Optimistic OASDI Long-Range Demographic Assumptions

Calendar Year	Total Fertility Rate	Median Life Expectancy at Birth	Male			Female			
			Average Life Expectancy			Average Life Expectancy			
			At Birth	At Age 20	At Age 65	at Birth	At Birth	At Age 20	At Age 65
1940	2.23	67.5	60.9	46.8	11.9	72.1	65.3	50.2	13.4
1945	2.42	68.5	62.5	47.3	12.6	74.1	68.2	52.1	14.4
1950	3.03	70.1	65.3	49.0	12.8	75.8	70.9	53.9	15.1
1955	3.50	70.9	66.6	49.8	13.1	77.3	72.7	55.2	15.6
1960	3.61	70.7	66.6	49.7	12.9	77.8	73.2	55.6	15.9
1965	2.88	70.7	66.8	49.6	12.9	78.4	73.8	56.1	16.3
1970	2.43	71.0	67.1	49.6	13.1	79.2	74.8	56.8	17.1
1975	1.77	72.4	68.8	50.8	13.7	80.6	76.6	58.2	18.0
1980	1.85	73.4	69.8	51.6	14.0	81.3	77.5	58.9	18.3
1983	1.87	73.9	70.5	52.2	14.3	81.7	78.0	59.3	18.7
1985	1.91	74.1	70.7	52.4	14.4	81.9	78.2	59.5	18.8
1990	2.01	74.5	71.1	52.8	14.5	82.4	78.7	59.9	19.2
1995	2.10	74.8	71.5	53.1	14.6	82.8	79.1	60.3	19.4
2000	2.18	75.0	71.7	53.3	14.8	83.0	79.3	60.6	19.6
2005	2.27	75.2	71.9	53.4	14.9	83.2	79.5	60.7	19.8
2010	2.30	75.3	72.0	53.6	15.0	83.4	79.7	60.9	19.9
2015	2.30	75.4	72.2	53.7	15.1	83.5	79.8	61.0	20.0
2020	2.30	75.6	72.3	53.8	15.2	83.7	80.0	61.1	20.2
2025	2.30	75.7	72.5	54.0	15.3	83.8	80.1	61.3	20.3
2030	2.30	75.8	72.6	54.1	15.4	84.0	80.3	61.4	20.4
2035	2.30	76.0	72.8	54.2	15.5	84.1	80.4	61.6	20.6
2040	2.30	76.1	72.9	54.4	15.6	84.3	80.6	61.7	20.7
2045	2.30	76.2	73.0	54.5	15.7	84.4	80.7	61.8	20.8
2050	2.30	76.4	73.2	54.6	15.8	84.6	80.9	62.0	21.0
2055	2.30	76.5	73.3	54.7	15.9	84.7	81.0	62.1	21.1
2060	2.30	76.6	73.4	54.8	16.0	84.8	81.2	62.2	21.2

- NOTES:
1. The total fertility rate for any year is the average number of children that would be born to women who survive the entire childbearing period if they were to experience the age-specific birth rates observed in or assumed for that year.
 2. The median life expectancy at birth for any year is the age which would be reached by only half of all births in the year if they were to experience the age-specific death rates observed in or assumed for that year.
 3. The average life expectancy for any year is the average number of years of life remaining for persons of the indicated age if they were to experience the age-specific death rates observed in or assumed for that year.
 4. The characterization "optimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1b., which are used in the intermediate projection.

Table 23c. Alternative Optimistic OASDI Long-Range Programmatic Assumptions

Year	Age-Adjusted Rate 1/				
	Coverage	Insured Status		Retirement Prevalence	Disability Incidence
		Fully	Disability		
males					
1983	73.2%	93.9%	88.5%	85.3%	3.97
1985	76.5	93.9	88.9	85.5	4.06
1990	78.5	93.5	89.0	86.4	4.16
1995	79.1	92.7	89.4	86.4	4.23
2000	79.4	92.4	89.6	86.3	4.30
2005	79.5	92.4	89.9	85.1	4.32
2010	79.7	92.7	90.0	83.7	4.32
2015	79.7	93.1	90.1	83.4	4.32
2020	79.8	93.6	90.1	82.8	4.32
2025	79.9	94.0	90.2	81.5	4.32
2030	80.0	94.5	90.3	80.7	4.32
2035	80.0	94.8	90.4	80.7	4.32
2040	80.0	95.0	90.4	80.7	4.32
2045	79.9	95.2	90.4	80.7	4.32
2050	79.9	95.2	90.4	80.7	4.32
2055	80.0	95.2	90.4	80.7	4.32
2060	80.0	95.2	90.4	80.7	4.32
females					
1983	52.6	59.0	56.5	83.3	2.75
1985	57.5	60.3	58.5	83.7	2.82
1990	62.8	63.0	61.4	84.5	2.89
1995	66.1	65.0	64.4	84.7	2.94
2000	68.0	67.0	67.2	84.9	2.99
2005	68.3	69.3	68.3	84.1	3.01
2010	68.0	71.6	69.0	83.3	3.01
2015	67.9	74.1	69.5	83.4	3.01
2020	68.0	76.5	69.7	83.1	3.01
2025	68.0	78.7	70.0	82.2	3.01
2030	68.0	80.9	70.2	81.7	3.01
2035	68.0	81.8	70.3	81.6	3.01
2040	68.0	82.8	70.3	81.5	3.01
2045	67.9	83.4	70.2	81.5	3.01
2050	67.9	83.7	70.2	81.6	3.01
2055	67.9	83.9	70.3	81.6	3.01
2060	68.0	84.0	70.3	81.7	3.01

- NOTES: 1. The coverage rates are the numbers of persons with any covered employment during the year as percentages of the total population aged 16 and over and are age-adjusted based on the population as of July 1, 1981.
2. The fully insured rates are the numbers of fully insured persons as percentages of the total population aged 62 and over and are age-adjusted based on the population as of July 1, 1983.
3. The disability insured rates are the numbers of disability insured persons as percentages of total population aged 20 to 64 and are age-adjusted based on the population as of July 1, 1983.
4. The retirement prevalence rates are the numbers of retired worker beneficiaries in current-payment status as percentages of the fully insured population aged 20 and over and are age-adjusted based on the fully insured population as of July 1, 1983.
5. The disability incidence rates are the numbers of newly entitled disabled worker beneficiaries per 100,000 exposed persons aged 20 to 64 and are age-adjusted based on the exposed population as of July 1, 1975. Exposed population is defined as the disability insured population less those receiving disabled worker primary benefits. These rates do not reflect assumed changes in incidence rates due to the retirement age provision in the 1983 Amendments.
6. The characterization "optimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1c., which are used in the intermediate projection.

Table 23d. Selected OASDI Programmatic Parameters Related to Economic Assumptions Based on Alternative Optimistic Assumptions

Calendar Year	Average Wage	Contribution and Benefit Base	Benefit Increase	Earnings Test Annual Exempt Amounts		Quarter of Coverage Requirements	PIA Formula Bend Points Based on 1977 Act	
				Young	Aged		First	Second
1960	\$ 4,007	\$ 4,800	—	\$ 1,200	\$ 1,200	\$ 50	N/A	N/A
1965	4,659	4,800	7.0%	1,200	1,200	50	N/A	N/A
1970	6,168	7,800	15.0	1,680	1,680	50	N/A	N/A
1975	8,631	14,100	8.0	2,520	2,520	50	N/A	N/A
1980	12,513	25,900	14.3	3,720	5,000	290	\$ 194	\$ 1,171
1981	12,773	29,700	11.2	4,080	5,500	310	211	1,274
1982	14,498	32,400	7.4	4,440	6,000	340	230	1,388
1983	15,137	35,700	3.5	4,920	6,600	370	254	1,528
1985	16,624	39,300	3.7	5,400	7,320	410	279	1,679
1990	21,607	50,700	1/	6,960	9,480	530	360	2,168
1995	27,454	65,100	2.0	8,760	12,240	650	462	2,784
2000	34,212	81,300	2.0	10,920	15,240	850	577	3,476
2005	42,635	101,400	2.0	13,560	19,080	1,060	719	4,342
2010	53,131	126,300	2.0	16,920	23,760	1,320	896	5,398
2015	66,211	157,800	2.0	21,120	29,640	1,640	1,116	6,727
2020	82,511	196,800	2.0	26,280	36,960	2,050	1,391	8,383
2025	102,823	245,400	2.0	32,760	46,080	2,550	1,733	10,447
2030	128,136	305,700	2.0	40,800	57,480	3,180	2,160	13,018
2035	159,681	381,000	2.0	50,760	71,880	3,960	2,691	16,223
2040	198,992	474,600	2.0	63,360	89,520	4,940	3,354	20,217
2045	247,980	591,300	2.0	78,960	111,600	6,150	4,180	25,194
2050	309,028	737,100	2.0	98,400	139,200	7,670	5,209	31,397
2055	305,105	918,900	2.0	122,640	173,520	9,560	6,491	39,126
2060	479,911	1,145,100	2.0	152,760	216,240	11,910	8,089	48,758

1/ No cost of living adjustment would be made for this year because the assumed change in CPI since the last adjustment is less than the required trigger level of 3 percent.

- NOTES:
1. Average wages are taken from the series used for indexing earnings for benefit computations and are rounded to the nearest dollar for this table.
 2. For the purpose of earnings test annual exempt amounts, young refers to persons who are below normal retirement age (currently 65, ultimately 67) and aged refers to persons who are of normal retirement age or greater.
 3. Starting in 1993 (after the end of the short-range period) benefit increases are assumed at an annual rate of 2 percent consistent with the CPI assumption. It should be noted that this pattern of COLA's could not actually occur since before a COLA is awarded current law requires accumulation of CPI changes until at least a 3 percent increase has occurred. In the long-range, however, the CPI assumption is intended to indicate an average increase of 2 percent per year and it would be misleading to actually predict specific years far in advance for which no COLA would be awarded on the basis of this kind of assumption.

Table 24a. Alternative Intermediate OASDI Long-Range Economic Assumptions
Reflecting Greater Economic Growth

Calendar Year	Increase in...			Real Wage Differential	Interest Rate	Average Annual Unemployment Rate
	Real GNP	Average Annual... Wages in Covered Employment	Consumer Price Index			
1960-64	4.0%	3.4%	1.3%	2.1%	3.7%	5.7%
1965-69	4.4	5.4	3.4	2.0	5.2	3.8
1970	- .2	4.9	5.9	-1.0	7.3	4.9
1971	3.4	4.9	4.3	.6	6.0	5.9
1972	5.7	7.3	3.3	4.0	5.9	5.6
1973	5.8	6.9	6.2	.7	6.6	4.9
1974	- .6	7.4	11.0	-3.6	7.5	5.6
1975	- 1.2	6.6	9.1	-2.5	7.4	8.5
1976	5.4	8.2	5.7	-2.5	7.1	7.7
1977	5.5	8.8	6.5	1.5	7.1	7.1
1978	5.0	8.2	7.6	.6	8.2	6.1
1979	2.8	8.8	11.4	-2.6	9.1	5.8
1980	- .4	8.6	13.5	-4.9	11.0	7.1
1981	1.9	8.8	10.2	-1.4	13.3	7.6
1982	- 1.7	5.6	6.0	- .4	12.8	9.7
1983	3.1	4.3	2.7	1.6	9.7	10.0
1984	4.8	5.0	3.6	1.4	6.8	8.8
1985	4.1	4.8	4.0	.8	6.0	7.9
1986	4.0	5.1	3.6	1.5	5.6	7.4
1987	4.0	5.2	3.2	2.0	5.6	6.9
1988	4.0	5.0	3.0	2.0	5.6	6.3
1989	4.0	5.3	3.0	2.3	5.6	5.8
1990	3.7	5.5	3.0	2.5	5.6	5.4
1991	3.2	5.4	3.0	2.4	5.6	5.3
1992	3.3	5.3	3.0	2.3	5.6	5.3
1993	3.3	5.2	3.0	2.2	5.6	5.2
1994	3.3	5.0	3.0	2.0	5.6	5.1
1995	3.3	5.0	3.0	2.0	5.6	5.0
2000 & later	3.1	5.0	3.0	2.0	5.6	5.0

- NOTES: 1. Real GNP (Gross National Product) is the total output of goods and services expressed in constant 1972 dollars. The annual percentage increase in real GNP is projected to continue changing after reaching the level of 3.1 percent for the year 2000. The value for the year 2060 is 3.2 percent.
2. The real wage differential is the difference between the percentage increase in average annual wages in covered employment and the percentage increase in the average annual CPI.
3. The interest rate is the average of the interest rates determined in each of the 12 months of the year for special public-debt obligations issuable to the trust funds.
4. The ultimate average annual unemployment rate includes military personnel and is age-sex adjusted based on the total labor force aged 16 and over as of July 1, 1981. Rates for earlier years are crude civilian unemployment rates.
5. The characterization "greater economic growth" is relative to the assumptions shown in Table 1a., which are used in the intermediate projection.

Table 24b. Alternative Intermediate OASDI Long-Range Programmatic Assumptions Reflecting Greater Economic Growth

Year	Age-Adjusted Rate 1/				
	Coverage	Insured Status		Retirement Prevalence	Disability Incidence
		Fully	Disability		
males					
1983	73.2%	93.9%	88.5%	85.3%	4.21
1985	76.1	93.8	88.9	85.5	4.40
1990	78.1	93.4	89.0	86.4	4.64
1995	78.9	92.7	89.3	86.4	4.79
2000	78.0	92.3	89.6	86.3	4.92
2005	78.0	92.3	89.8	85.1	4.97
2010	78.1	92.6	89.9	83.7	4.97
2015	78.1	93.0	89.9	83.4	4.97
2020	78.1	93.5	89.8	82.8	4.97
2025	78.2	93.9	89.9	81.5	4.97
2030	78.3	94.4	90.1	80.7	4.97
2035	78.2	94.7	90.1	80.7	4.97
2040	78.2	94.9	90.1	80.7	4.97
2045	78.1	94.9	90.0	80.7	4.97
2050	78.1	95.0	90.0	80.7	4.97
2055	78.2	95.0	90.1	80.7	4.97
2060	78.2	95.0	90.1	80.7	4.97
females					
1983	52.6	59.0	56.4	83.3	2.75
1985	57.5	60.3	58.5	83.7	2.82
1990	62.8	63.0	61.3	84.5	2.89
1995	66.1	65.0	64.2	84.7	2.94
2000	68.0	67.0	66.9	84.9	2.99
2005	68.3	69.3	68.0	84.1	3.01
2010	68.0	71.6	68.7	83.3	3.01
2015	67.9	74.1	69.1	83.4	3.01
2020	68.0	76.5	69.3	83.1	3.01
2025	68.0	78.7	69.5	82.2	3.01
2030	68.0	80.9	69.7	81.7	3.01
2035	68.0	81.8	69.8	81.6	3.01
2040	68.0	82.8	69.8	81.5	3.01
2045	67.9	83.4	69.7	81.5	3.01
2050	67.9	83.7	69.7	81.6	3.01
2055	67.9	83.9	69.8	81.6	3.01
2060	68.0	84.0	69.8	81.7	3.01

- NOTES: 1. The coverage rates are the number of persons with any covered employment during the year as percentages of the total population aged 16 and over and are age-adjusted based on the population as of July 1, 1981.
2. The fully insured rates are the numbers of fully insured persons as percentages of the total population aged 62 and over and are age-adjusted based on the population as of July 1, 1983.
3. The disability insured rates are the numbers of disability insured persons as percentages of total population aged 20 to 64 and are age-adjusted based on the population as of July 1, 1983.
4. The retirement prevalence rates are the numbers of retired worker beneficiaries in current-payment status as percentages of the fully insured population aged 20 and over and are age-adjusted based on the fully insured population as of July 1, 1983.
5. The disability incidence rates are the numbers of newly entitled disabled worker beneficiaries per 100,000 exposed persons aged 20 to 64 and are age-adjusted based on the exposed population as of July 1, 1975. Exposed population is defined as the disability insured population less those receiving disabled worker primary benefits. These rates do not reflect assumed changes in incidence rates due to the retirement age provision in the 1983 Amendments.
6. The characterization "greater economic growth" is relative to the assumptions shown in Table 1c., which are used in the intermediate projection.

Table 24c. Selected OASDI Programmatic Parameters Related to Economic Assumptions Based on Alternative Intermediate Assumptions Reflecting Greater Economic Growth

Calendar Year	Average Wage	Contribution and Benefit Base	Cost of Living Benefit Increase	Earnings Test Annual Exempt Amounts		Quarter of Coverage Requirements	PIA Formula Bend Points Based on 1977 Act	
				Young	Aged		First	Second
1960	\$ 4,007	\$ 4,800	—	\$ 1,200	\$ 1,200	\$ 50	N/A	N/A
1965	4,659	4,800	7.0%	1,200	1,200	50	N/A	N/A
1970	6,186	7,800	15.0	1,680	1,680	50	N/A	N/A
1975	8,631	14,100	8.0	2,520	2,520	50	N/A	N/A
1980	12,513	25,900	14.3	3,720	5,000	290	\$ 194	\$ 1,171
1981	12,773	29,700	11.2	4,080	5,500	310	211	1,274
1982	14,498	32,400	7.4	4,440	6,000	340	230	1,388
1983	15,134	35,700	3.5	4,920	6,600	370	254	1,528
1985	16,519	39,000	4.0	5,400	7,320	410	279	1,679
1990	21,328	49,200	3.0	6,840	9,360	520	353	2,128
1995	27,463	64,200	3.0	8,800	12,840	670	458	2,764
2000	35,051	81,900	3.0	11,400	16,440	860	585	3,527
2005	44,734	104,700	3.0	14,640	21,000	1,100	747	4,502
2010	57,094	133,200	3.0	18,600	26,880	1,400	953	5,745
2015	72,868	169,800	3.0	23,760	34,320	1,790	1,217	7,333
2020	92,999	216,600	3.0	30,240	43,800	2,290	1,553	9,359
2025	118,694	276,600	3.0	38,640	55,800	2,920	1,982	11,944
2030	151,486	352,800	3.0	49,440	71,160	3,720	2,529	15,244
2035	193,339	450,600	3.0	63,240	90,840	4,750	3,228	19,456
2040	246,755	575,100	3.0	80,760	116,040	6,060	4,120	24,832
2045	314,929	734,400	3.0	103,080	148,080	7,740	5,258	31,692
2050	401,938	937,500	3.0	131,520	189,000	9,880	6,710	40,448
2055	512,986	1,196,400	3.0	167,880	241,320	12,610	8,564	51,623
2060	654,715	1,526,700	3.0	214,200	308,040	16,090	10,930	65,885

- NOTES: 1. Average wages are taken from the series used for indexing earnings for benefit computations and are rounded to the nearest dollar for this table.
2. For the purpose of earnings test annual exempt amounts, young refers to persons who are below normal retirement age (currently 65, ultimately 67) and aged refers to persons who are of normal retirement age or greater.

Table 25a. Alternative Pessimistic OASDI Long-Range Economic Assumptions

Calendar Year	Increase in...			Real Wage Differential	Interest Rate	Average Annual Unemployment Rate
	Real GNP	Average Annual... Wages in Covered Employment	Consumer Price Index			
1960-64	4.0%	3.4%	1.3%	2.1%	3.7%	5.7%
1965-69	4.4	5.4	3.4	2.0	5.2	3.8
1970	-.2	4.9	5.9	-1.0	7.3	4.9
1971	3.4	4.9	4.3	.6	6.0	5.9
1972	5.7	7.3	3.3	4.0	5.9	5.6
1973	5.8	6.9	6.2	.7	6.6	4.9
1974	-.6	7.4	11.0	-3.6	7.5	5.6
1975	-1.2	6.6	9.1	-2.5	7.4	8.5
1976	5.4	8.2	5.7	-2.5	7.1	7.7
1977	5.5	8.8	6.5	1.5	7.1	7.1
1978	5.0	8.2	7.6	.6	8.2	6.1
1979	2.8	8.8	11.4	-2.6	9.1	5.8
1980	-.4	8.6	13.5	-4.9	11.0	7.1
1981	1.9	8.8	10.2	-1.4	13.3	7.6
1982	-1.7	5.6	6.0	-.4	12.8	9.7
1983	0.5	3.9	3.3	.6	9.9	10.5
1984	1.7	4.6	6.4	-1.8	8.0	10.5
1985	3.9	7.4	7.7	-.3	8.4	9.5
1986	3.1	7.5	7.3	.1	9.0	8.9
1987	2.7	6.7	6.0	.7	8.6	8.6
1988	2.7	6.4	5.5	.9	8.2	8.2
1989	2.7	6.2	5.1	1.1	7.7	7.8
1990	2.7	6.2	5.0	1.2	7.3	7.4
1991	2.6	6.3	5.0	1.3	6.6	7.0
1992	2.5	6.1	5.0	1.1	6.6	6.8
1993	2.3	6.1	5.0	1.1	6.6	6.5
1994	2.0	6.0	5.0	1.0	6.6	6.5
1995	2.1	6.0	5.0	1.0	6.6	6.5
2000 & later	2.1	6.0	5.0	1.0	6.6	6.5

- NOTES: 1. Real GNP (Gross National Product) is the total output of goods and services expressed in constant 1972 dollars. The annual percentage increase in real GNP is projected to continue changing after reaching the level of 2.1 percent for the year 2000. The value for the year 2060 is 1.9 percent.
2. The real wage differential is the difference between the percentage increase in average annual wages in covered employment and the percentage increase in the average annual CPI.
3. The interest rate is the average of the interest rates determined in each of the 12 months of the year for special public-debt obligations issuable to the trust funds.
4. The ultimate average annual unemployment rate includes military personnel and is age-sex adjusted based on the total labor force aged 16 and over as of July 1, 1981. Rates for earlier years are crude civilian unemployment rates.
5. The characterization "pessimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1a., which are used in the intermediate projection.

Table 25b. Alternative Pessimistic OASDI Long-Range Demographic Assumptions

Calendar Year	Total Fertility Rate	Median Life Expectancy at Birth	Male			Female			
			Average Life Expectancy			Average Life Expectancy			
			At Birth	At Age 20	At Age 65	Expectancy at Birth	At Birth	At Age 20	At Age 65
1940	2.23	67.5	60.9	46.8	11.9	72.1	65.3	50.2	13.4
1945	2.42	68.5	62.5	47.3	12.6	74.1	68.2	52.1	14.4
1950	3.03	70.1	65.3	49.0	12.8	75.8	70.9	53.9	15.1
1955	3.50	70.9	66.6	49.8	13.1	77.3	72.7	55.2	15.6
1960	3.61	70.7	66.6	49.7	12.9	77.8	73.2	55.6	15.9
1965	2.88	70.7	66.8	49.6	12.9	78.4	73.8	56.1	16.3
1970	2.43	71.0	67.1	49.6	13.1	79.2	74.8	56.8	17.1
1975	1.77	72.4	68.8	50.8	13.7	80.6	76.6	58.2	18.0
1980	1.85	73.4	69.8	51.6	14.0	81.3	77.5	58.9	18.3
1983	1.84	74.4	71.1	52.7	14.6	82.2	76.8	59.8	19.0
1985	1.81	75.1	71.8	53.3	14.9	82.9	79.3	60.4	19.5
1990	1.75	76.4	73.4	54.6	15.7	84.5	80.9	61.9	20.7
1995	1.70	77.4	74.5	55.6	16.3	85.7	82.1	63.0	21.5
2000	1.66	78.1	75.1	56.3	16.8	86.4	82.8	63.7	22.1
2005	1.62	78.6	75.7	56.8	17.2	87.0	83.4	64.3	22.6
2010	1.60	79.2	76.2	57.3	17.6	87.6	84.0	64.8	23.0
2015	1.60	79.7	76.7	57.8	18.0	88.2	84.6	65.4	23.5
2020	1.60	80.3	77.2	58.3	18.4	88.8	85.2	66.0	24.0
2025	1.60	80.8	77.7	58.8	18.8	89.3	85.8	66.6	24.4
2030	1.60	81.3	78.3	59.3	19.2	89.8	86.4	67.1	24.9
2035	1.60	81.9	78.8	59.8	19.6	90.4	86.9	67.7	25.4
2040	1.60	82.4	79.3	60.3	20.0	90.9	87.5	68.2	25.8
2045	1.60	82.9	79.8	60.8	20.4	91.4	88.1	68.8	26.3
2050	1.60	83.5	80.3	61.3	20.9	91.9	88.6	69.3	26.8
2055	1.60	84.0	80.7	61.8	21.3	92.4	89.2	69.9	27.2
2060	1.60	84.5	81.3	62.3	21.7	92.8	89.7	70.4	27.7

- NOTES: 1. The total fertility rate for any year is the average number of children that would be born to women who survive the entire childbearing period if they were to experience the age-specific birth rates observed in or assumed for that year.
2. The median life expectancy at birth for any year is the age which would be reached by only half of all births in the year if they were to experience the age-specific death rates observed in or assumed for that year.
3. The average life expectancy for any year is the average number of years of life remaining for persons of the indicated age if they were to experience the age-specific death rates observed in or assumed for that year.
4. The characterization "pessimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1b., which are used in the intermediate projection.

Table 25c. Alternative Pessimistic OASDI Long-Range Programmatic Assumptions

Year	Age-Adjusted Rate 1/				
	Coverage	Insured Status		Retirement Prevalence	Disability Incidence
		Fully	Disability		
males					
1983	78.2%	93.9%	88.5%	85.3%	4.45
1985	74.9	93.8	88.9	85.5	4.75
1990	76.6	93.4	88.9	86.4	5.12
1995	76.2	92.6	89.3	86.4	5.35
2000	75.7	92.1	89.4	86.3	5.55
2005	75.6	92.1	89.7	85.1	5.62
2010	75.5	92.4	89.6	83.7	5.62
2015	75.5	92.8	89.6	83.4	5.62
2020	75.5	93.2	89.5	82.8	5.62
2025	75.5	93.7	89.5	81.5	5.62
2030	75.6	94.1	89.6	80.7	5.62
2035	75.5	94.4	89.7	80.7	5.62
2040	75.4	95.6	89.6	80.7	5.62
2045	75.3	94.7	89.5	80.7	5.62
2050	75.3	94.7	89.5	80.7	5.62
2055	75.3	94.7	89.5	80.7	5.62
2060	75.3	94.7	89.6	80.7	5.62
females					
1983	51.8	59.0	56.4	83.4	3.09
1985	54.5	60.2	58.4	83.8	3.30
1990	59.0	62.9	60.9	84.7	3.55
1995	61.1	64.9	63.7	85.1	3.71
2000	62.5	66.7	66.3	85.4	3.86
2005	63.1	68.6	67.3	84.8	3.91
2010	63.2	70.8	67.9	84.0	3.91
2015	63.1	73.2	68.2	84.2	3.91
2020	63.1	75.4	68.4	84.0	3.91
2025	63.1	77.4	68.6	83.2	3.91
2030	63.1	79.0	68.8	82.7	3.91
2035	63.0	80.2	68.9	82.7	3.91
2040	62.9	81.0	68.9	82.7	3.91
2045	62.8	77.4	68.8	82.8	3.91
2050	62.8	81.9	68.8	82.9	3.91
2055	62.8	82.1	68.8	83.0	3.91
2060	62.8	82.2	68.8	83.1	3.91

- NOTES: 1. The coverage rates are the numbers of persons with any covered employment during the year as percentages of the total population aged 16 and over and are age-adjusted based on the population as of July 1, 1981.
2. The fully insured rates are the numbers of fully insured persons as percentages of the total population aged 62 and over and are age-adjusted based on the population as of July 1, 1983.
3. The disability insured rates are the numbers of disability insured persons as percentages of total population aged 20 to 64 and are age-adjusted based on the population as of July 1, 1983.
4. The retirement prevalence rates are the number of retired worker beneficiaries in current-payment status as percentages of the fully insured population aged 20 and over and are age-adjusted based on the fully insured population as of July 1, 1983.
5. The disability incidence rates are the numbers of newly entitled disabled worker beneficiaries per 100,000 exposed persons aged 20 to 64 and are age-adjusted based on the exposed population as of July 1, 1975. Exposed population is defined as the disability insured population less those receiving disabled worker primary benefits. These rates do not reflect assumed changes in incidence rates due to the retirement age provision in the 1983 Amendments.
6. The characterization pessimistic refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1c., which are used in the intermediate projections.

Table 25d. Selected OASDI Programmatic Parameters Related to Economic Assumptions Under Alternative Pessimistic Assumptions

Calendar Year	Average Wage	Contribution and Benefit Base	Benefit Increase	Earnings Test Annual Exempt Amounts		Quarter of Coverage Requirements	PIA Formula Bend Points Based on 1977 Act	
				Young	Aged		First	Second
1960	\$ 4,007	\$ 4,800	—	\$ 1,200	\$ 1,200	\$ 50	N/A	N/A
1965	4,659	4,800	7.0%	1,200	1,200	50	N/A	N/A
1970	6,186	7,800	15.0	1,680	1,680	50	N/A	N/A
1975	8,631	14,100	8.0	2,520	2,520	50	N/A	N/A
1980	12,513	25,900	14.3	3,720	5,000	290	\$ 194	\$ 1,171
1981	12,773	29,700	11.2	4,080	5,500	310	211	1,274
1982	14,498	32,400	7.4	4,440	6,000	340	230	1,388
1983	15,082	35,700	3.5	4,920	6,600	370	254	1,528
1985	16,789	39,000	^{1/} 3.9	5,400	7,200	410	278	1,673
1990	23,105	53,400	5.0	7,440	9,720	550	377	2,270
1995	31,093	72,300	5.0	10,080	13,080	750	509	3,070
2000	41,609	96,300	5.0	13,440	17,520	1 000	682	4,109
2005	55,683	128,700	5.0	18,120	23,400	1,340	912	5,498
2010	74,516	172,500	5.0	24,240	31,320	1,800	1,221	7,358
2015	99,719	231,300	5.0	32,400	42,120	2,400	1,634	9,847
2020	133,447	309,300	5.0	43,200	56,400	3,220	2,186	13,177
2025	178,582	414,300	5.0	57,840	75,600	4,310	2,925	17,634
2030	238,983	554,700	5.0	77,640	101,160	5,760	3,915	23,598
2035	319,813	742,500	5.0	103,920	135,480	7,710	5,239	31,579
2040	427,982	993,300	5.0	139,080	181,440	10,320	7,011	42,260
2045	572,737	1,329,600	5.0	186,240	242,880	13,810	9,382	56,553
2050	766,451	1,779,600	5.0	249,360	324,960	18,480	12,555	75,681
2055	1,025,684	2,380,400	5.0	333,720	434,880	24,730	16,802	101,279
2060	1,372,597	3,186,600	5.0	446,760	581,760	33,100	22,485	135,534

^{1/} The cost of living adjustment is computed under the benefit increase stabilizer provision of the 1983 amendments under these assumptions. In the absence of the stabilizer provision the calculated COLA would be 7.9 percent for 1985.

- NOTES: 1. Average wages are taken from the series used for indexing earnings for benefit computations and are rounded to the nearest dollar for this table.
2. For the purpose of earnings test annual exempt amounts, young refers to persons who are below normal retirement age (currently 65, ultimately 67) and aged refers to persons who are of normal retirement age or greater.

Table 26a. Past and Projected Total Cost Rate, Total Income Rate, and Actuarial Balance as a Percentage of Taxable Payroll Based on Alternative Optimistic Assumptions

Calendar Year	Total Cost Rate			Total Income Rate			Actuarial Balance		
	OASI	DI	OASDI	OASI	DI	OASDI	OASI	DI	OASDI
1960	5.59	.30	5.89	5.50	.50	6.00	-.09	+.20	+.11
1965	7.23	.70	7.93	6.75	.50	7.25	-.48	-.20	-.68
1970	7.32	.81	8.12	7.30	1.10	8.40	-.02	+.29	+.28
1975	9.29	1.36	10.65	8.75	1.15	9.90	-.54	-.21	-.75
1980	9.36	1.38	10.75	9.04	1.12	10.16	-.32	-.26	-.59
1981	9.92	1.38	11.30	9.40	1.30	10.70	-.52	-.08	-.60
1982	10.59	1.34	11.94	9.15	1.65	10.80	-1.44	+.31	-1.14
1983	10.25	1.21	11.46	9.92	1.33	11.24	-.34	+.12	-.22
1985	9.95	1.05	11.01	10.56	1.02	11.58	+.61	-.04	+.57
1990	9.25	.90	10.15	11.45	1.22	12.68	+2.20	+.33	+2.53
1995	8.04	.80	8.84	11.50	1.23	12.72	+3.46	+.42	+3.88
2000	7.31	.82	8.14	11.26	1.45	12.71	+3.95	+.63	+4.57
2005	6.97	.94	7.91	11.26	1.46	12.71	+4.29	+.51	+4.80
2010	7.14	1.08	8.22	11.27	1.46	12.74	+4.13	+.38	+4.51
2015	7.90	1.17	9.07	11.31	1.47	12.78	+3.41	+.30	+3.71
2020	8.82	1.20	10.02	11.36	1.47	12.84	+2.55	+.27	+2.82
2025	9.53	1.19	10.73	11.41	1.47	12.88	+1.87	+.28	+2.15
2030	9.85	1.14	11.00	11.44	1.47	12.91	+1.58	+.33	+1.91
2035	9.80	1.14	10.94	11.45	1.47	12.92	+1.65	+.33	+1.98
2040	9.44	1.16	10.60	11.44	1.47	12.92	+2.00	+.31	+2.32
2045	9.12	1.18	10.30	11.44	1.48	12.92	+2.32	+.29	+2.61
2050	8.97	1.19	10.16	11.43	1.48	12.91	+2.46	+.29	+2.75
2055	8.92	1.19	10.10	11.43	1.48	12.91	+2.51	+.29	+2.80
2060	8.86	1.18	10.03	11.42	1.48	12.90	+2.57	+.30	+2.87
averages:									
1983-2007	8.31	.91	9.22	11.19	1.26	12.45	+2.88	+.35	+3.23
2008-2032	8.65	1.16	9.80	11.36	1.47	12.83	+2.71	+.31	+3.03
2033-2057	9.25	1.17	10.42	11.44	1.48	12.91	+2.19	+.30	+2.49
1983-2057	8.73	1.08	9.81	11.33	1.40	12.73	+2.59	+.32	+2.92

NOTE: The characterization "optimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1.

Table 26b. Past and Projected Total Cost Rate, Total Income Rate, and Actuarial Balance as a Percentage of Taxable Payroll Based on Alternative Intermediate Assumptions Reflecting Greater Economic Growth

Calendar Year	Total Cost Rate			Total Income Rate			Actuarial Balance		
	OASI	DI	OASDI	OASI	DI	OASDI	OASI	DI	OASDI
1960	5.59	.30	5.89	5.50	.50	6.00	-.09	+.20	+.11
1965	7.23	.70	7.93	6.75	.50	7.25	-.48	-.20	-.68
1970	7.32	.81	8.12	7.30	1.10	8.40	-.02	+.29	+.28
1975	9.29	1.36	10.65	8.75	1.15	9.90	-.54	-.21	-.75
1980	9.36	1.38	10.75	9.04	1.12	10.16	-.32	-.26	-.59
1981	9.92	1.38	11.30	9.40	1.30	10.70	-.52	-.08	-.60
1982	10.59	1.34	11.94	9.15	1.65	10.80	-1.44	+.31	-1.14
1983	10.28	1.21	11.49	9.92	1.33	11.24	-.36	+.12	-.24
1985	10.15	1.08	11.24	10.56	1.02	11.58	+.41	-.06	+.35
1990	9.74	.97	10.70	11.47	1.23	12.69	+1.73	+.26	+1.99
1995	9.03	.93	9.96	11.53	1.23	12.77	+2.51	+.30	+2.81
2000	8.35	.97	9.32	11.30	1.46	12.76	+2.95	+.48	+3.43
2005	8.02	1.13	9.15	11.30	1.46	12.76	+3.28	+.34	+3.61
2010	8.26	1.31	9.57	11.32	1.47	12.79	+3.05	+.17	+3.22
2015	9.22	1.43	10.64	11.37	1.48	12.85	+2.15	+.05	+2.21
2020	10.43	1.48	11.91	11.43	1.48	12.92	+1.01	+.00	+1.01
2025	11.53	1.49	13.02	11.50	1.48	12.98	-.03	-.00	-.03
2030	12.26	1.45	13.71	11.55	1.48	13.03	-.71	+.04	-.67
2035	12.60	1.46	14.07	11.58	1.49	13.07	-1.02	+.03	-1.00
2040	12.55	1.50	14.05	11.59	1.49	13.08	-.95	-.01	-.96
2045	12.50	1.54	14.03	11.61	1.49	13.10	-.89	-.04	-.93
2050	12.59	1.54	14.13	11.61	1.49	13.11	-.98	-.04	-1.02
2055	12.72	1.53	14.25	11.62	1.49	13.11	-1.10	-.04	-1.14
2060	12.78	1.52	14.30	11.62	1.49	13.12	-1.15	-.03	-1.18
averages:									
1983-2007	9.08	1.02	10.10	11.21	1.26	12.48	+2.14	+.24	+2.38
2008-2032	10.34	1.43	11.77	11.43	1.48	12.91	+1.10	+.05	+1.15
2033-2057	12.59	1.51	14.10	11.60	1.49	13.09	-.00	-.02	-1.01
1983-2057	10.67	1.32	11.99	11.42	1.41	12.83	+.75	+.09	+.84

Note: The characterization "greater economic growth" is relative to the assumptions shown in Table 1a.

Table 26c. Past and Projected Total Cost Rate, Total Income Rate, and Actuarial Balance as a Percentage of Taxable Payroll Based on Alternative Pessimistic Assumptions

Calendar Year	Total Cost Rate			Total Income Rate			Actuarial Balance		
	OASI	DI	OASDI	OASI	DI	OASDI	OASI	DI	OASDI
1960	5.59	.30	5.89	5.50	.50	6.00	-.09	+.20	+.11
1965	7.23	.70	7.93	6.75	.50	7.25	-.48	-.20	-.68
1970	7.32	.81	8.12	7.30	1.10	8.40	-.02	+.29	+.28
1975	9.29	1.36	10.65	8.75	1.15	9.90	-.54	-.21	-.75
1980	9.36	1.38	10.75	9.04	1.12	10.16	-.32	-.26	-.59
1981	9.92	1.38	11.30	9.40	1.30	10.70	-.52	-.08	-.60
1982	10.59	1.34	11.94	9.15	1.65	10.80	-1.44	+.31	-1.14
1983	10.39	1.22	11.62	9.92	1.33	11.25	-.47	+.10	-.37
1985	10.33	1.10	11.43	10.57	1.02	11.58	+.24	-.09	+.16
1990									
1995	10.58	1.09	11.65	11.59	1.24	12.83	+1.03	+.15	+1.18
2000	10.08	1.17	11.25	11.37	1.46	12.83	+1.28	+.29	+1.58
2005	9.88	1.37	11.25	11.37	1.47	12.84	+1.49	-.10	+1.59
2010	10.32	1.61	11.93	11.40	1.48	12.89	+1.08	-.12	+.96
2015	11.70	1.78	13.48	11.47	1.49	12.97	-.22	-.29	-.51
2020	13.56	1.87	15.43	11.57	1.50	13.07	-1.99	-.37	-2.36
2025	15.52	1.92	17.44	11.68	1.50	13.18	-3.85	-.41	-4.26
2030	17.28	1.90	19.17	11.78	1.51	13.28	-5.50	-.39	-5.89
2035	18.69	1.95	20.65	11.87	1.51	13.38	-6.82	-.44	-7.27
2040	19.67	2.04	21.71	11.94	1.52	13.46	-7.73	-.52	-8.25
2045	20.64	2.10	22.74	12.02	1.52	13.54	-8.62	-.58	-9.20
2050	21.72	2.10	23.82	12.07	1.52	13.59	-9.65	-.57	-10.23
2055	22.70	2.08	24.78	12.12	1.52	13.64	-10.58	-.56	-11.14
2060	23.41	2.06	25.46	12.16	1.52	13.68	-11.25	-.54	-11.79
averages:									
1983-2007	10.28	1.16	11.44	11.26	1.27	12.53	+.98	+.11	+1.08
2008-2032	13.68	1.81	15.50	11.58	1.50	13.08	-2.10	-.32	-2.42
2033-2057	20.68	2.05	22.73	12.00	1.52	13.52	-8.67	-.53	-9.21
1983-2057	14.88	1.68	16.56	11.61	1.43	13.04	-3.27	-.25	-3.51

NOTE: The characterization "pessimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1.

Table 27a. Past and Projected Assets of the Trust Funds at the Beginning of the Year as a Percentage of Expenditures During the Year Based on Alternative Optimistic Assumptions

Calendar Year	OASI	DI	OASDI
1960	180%	304%	186%
1965	109	121	110
1970	101	126	103
1975	63	92	66
1980	23	35	25
1981	18	21	18
1982	15	17	15
1983	15	15	15
1985	22	35	23
1990	73	113	77
1995	244	340	253
2000	506	574	513
2005	807	792	805
2010	1,079	897	1,005
2015	1,227	983	1,195
2020	1,286	1,088	1,262
2025	1,396	1,216	1,305
2030	1,363	1,400	1,366
2035	1,448	1,542	1,458
2040	1,594	1,652	1,601
2045	1,761	1,743	1,759
2050	1,913	1,853	1,906
2055	2,050	1,965	2,040
2060	2,193	2,086	2,180

- NOTES:
1. For 1983-88, assets at beginning of year includes the amounts borrowed from the (HI) Trust Funds. Under these assumptions, such amounts would be repaid by the end of 1988.
 2. Beginning with 1984, estimates reflect inclusion of advance tax transfers for the month of January in assets at the beginning of the year.
 3. The characterization "optimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1.

Table 27b. Past and Projected Assets of the Trust Funds at the Beginning of the Year as a Percentage of Expenditures During the Year Based on Alternative Intermediate Assumptions Reflecting Greater Economic Growth

Calendar Year	OASI	DI	OASDI
1960	180%	304%	186%
1965	109	121	110
1970	101	126	103
1975	63	92	66
1980	23	35	25
1981	18	21	18
1982	15	17	15
1983	15	15	15
1985	21	33	22
1990	51	84	54
1995	161	226	168
2000	329	360	332
2005	525	491	521
2010	704	526	680
2015	792	532	757
2020	800	535	767
2025	766	544	741
2030	723	577	708
2035	684	595	675
2040	662	596	658
2045	642	587	636
2050	615	585	611
2055	580	585	580
2060	544	590	549

- NOTE: 1. For 1983-88, assets at beginning of year includes amounts borrowed from the (HI) Trust Fund. Under these assumptions, such amounts would be repaid by the end of 1988.
2. Beginning with 1984, estimates reflect inclusion of advance tax transfers for the month of January in assets at the beginning of the year.
3. The characterization "greater economic growth" is relative to the assumptions shown in Table 1a.

Table 27c. Past and Projected Assets of the Trust Funds at the Beginning of the Year as a Percentage of Expenditures During the Year Based on Alternative Pessimistic Assumptions

Calendar Year	OASI	DI	OASDI
1960	180%	304%	186%
1965	109	121	110
1970	101	126	103
1975	63	92	66
1980	23	35	25
1981	18	21	18
1982	15	17	15
1983	15	15	15
1985	17	29	18
1990	34	56	36
1995	73	124	78
2000	132	169	136
2005	201	220	203
2010	260	193	251
2015	265	127	245
2020	204	38	184
2025	99	1/	81
2030	1/	1/	1/
2035	1/	1/	1/
2040	1/	1/	1/
2045	1/	1/	1/
2050	1/	1/	1/
2055	1/	1/	1/
2060	1/	1/	1/

1/ The fund is projected to be exhausted and not to recover before the end of the projection period.

- NOTES:
1. For 1983-88, assets at beginning of year includes amounts borrowed from the (HI) Trust Fund. Under these assumptions, such amounts would be repaid by the end of 1988.
 2. Beginning with 1984, estimates reflect inclusion of advance tax transfers for the month of January in assets at the beginning of the year.
 3. The characterization "pessimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1.

Table 28a. Past and Projected OASDI Total Cost and Trust Fund Assets as Percentages of Gross National Product Based on Alternative Optimistic Assumptions

Calendar Year	Total Cost	Trust Fund Assets
1960	2.338	4.468
1965	2.78	2.87
1970	3.34	3.83
1975	4.47	2.85
1980	4.69	1.00
1981	4.91	.84
1982	5.23	.81
1983	5.18	.85
1985	4.86	1.01
1990	4.47	4.35
1995	3.90	11.66
2000	3.60	20.99
2005	3.49	31.28
2010	3.62	41.73
2015	3.98	51.24
2020	4.38	58.86
2025	4.66	64.43
2030	4.76	68.71
2035	4.71	72.61
2040	4.54	76.97
2045	4.40	81.93
2050	4.31	87.12
2055	4.27	91.28
2060	4.22	97.46
averages:		
1983-2007	4.07	13.92
2008-2032	4.28	56.93
2033-2057	4.45	81.19
1983-2057	4.27	51.01

NOTE: The characterization "optimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1.

Table 28b. Past and Projected OASDI Total Cost and Trust Fund Assets as Percentages of Gross National Product Based on Alternative Intermediate Assumptions Reflecting Greater Economic Growth

Calendar Year	Total Cost	Trust Fund Assets
1960	2.33%	4.46%
1965	2.78	2.87
1970	3.34	3.83
1975	4.47	2.85
1980	4.69	1.00
1981	4.91	.84
1982	5.23	.81
1983	5.19	.85
1985	4.95	.92
1990	4.68	3.16
1995	4.34	8.48
2000	4.05	15.28
2005	3.95	22.89
2010	4.11	30.45
2015	4.53	36.70
2020	5.02	40.63
2025	5.43	42.06
2030	5.67	41.64
2035	5.76	40.21
2040	5.70	38.60
2045	5.64	37.09
2050	5.63	35.48
2055	5.62	33.58
2060	5.59	31.51
averages:		
1983-2007	4.41	10.18
2008-2032	4.95	38.22
2033-2057	5.67	36.98
1983-2057	5.01	28.46

Note: The characterization "greater economic growth" is relative to the assumptions shown in Table 1a.

Table 28c. Past and Projected OASDI Total Cost and Trust Fund Assets as Percentages of Gross National Product Based on Alternative Pessimistic Assumptions

Calendar Year	Total Cost	Trust Fund Assets
1960	2.33%	4.46%
1965	2.78	2.87
1970	3.34	3.83
1975	4.47	2.85
1980	4.69	1.00
1981	4.91	.84
1982	5.23	.81
1983	5.28	.82
1985	5.00	.63
1990	4.92	2.06
1995	4.99	4.19
2000	4.75	7.12
2005	4.68	10.39
2010	4.89	13.05
2015	5.42	13.53
2020	6.09	10.55
2025	6.75	3.69
2030	7.29	<u>1/</u>
2035	7.70	<u>1/</u>
2040	7.94	<u>1/</u>
2045	8.17	<u>1/</u>
2050	8.39	<u>1/</u>
2055	8.57	<u>1/</u>
2060	8.64	<u>1/</u>
averages:		
1983-2007	4.90	4.88
2008-2032	6.09	<u>2/</u>
2033-2057	8.15	<u>2/</u>
1983-2057	6.38	<u>2/</u>

1/ The fund is projected to be exhausted and not to recover before the end of the projection period.

2/ The trust fund assets are projected to be exhausted for some or all of this period.

NOTE: The characterization "pessimistic" refers to the effect of the assumptions on the financial status of the OASDI program and is relative to the assumptions shown in Table 1.

Table 29. Projected Average OASDI Cost Rates, Income Rates and Actuarial Balances Based on Alternative Assumptions

(as percentage of taxable payroll)

Calendar Year	Assumptions that are relatively--			
	Optimistic	Intermediate (but with greater economic growth)	Intermediate	Pessimistic
average cost rate				
1983-2007	11.19	10.10	10.66	11.44
2008-2032	11.36	11.77	12.64	15.50
2033-2057	11.44	14.10	15.23	22.73
1983-2057	11.33	11.99	12.84	16.56
average income rate				
1983-2007	12.45	12.48	12.50	12.53
2008-2032	12.83	12.91	12.95	13.08
2033-2057	12.91	13.09	13.15	13.52
1983-2057	12.73	12.83	12.87	13.04
actuarial balance				
1983-2007	+3.23	+2.38	+1.83	+1.02
2008-2032	+3.03	+1.15	+ .32	-2.42
2033-2057	+2.49	-1.01	-2.08	-9.21
1983-2057	+2.92	+ .84	+ .02	-3.51

NOTE: The characterizations "optimistic", "greater economic growth", and "pessimistic" refers to the effect of the assumptions on the financial status of the OASDI program and are relative to the "intermediate" assumptions presented in Table 1.

Chart 1. Comparison of the Projected Cost Rates and Income Rates of the OASDI Program Based on Optimistic, Intermediate, Intermediate but with Greater Economic Growth, and Pessimistic Assumptions

(as percentage of taxable payroll)

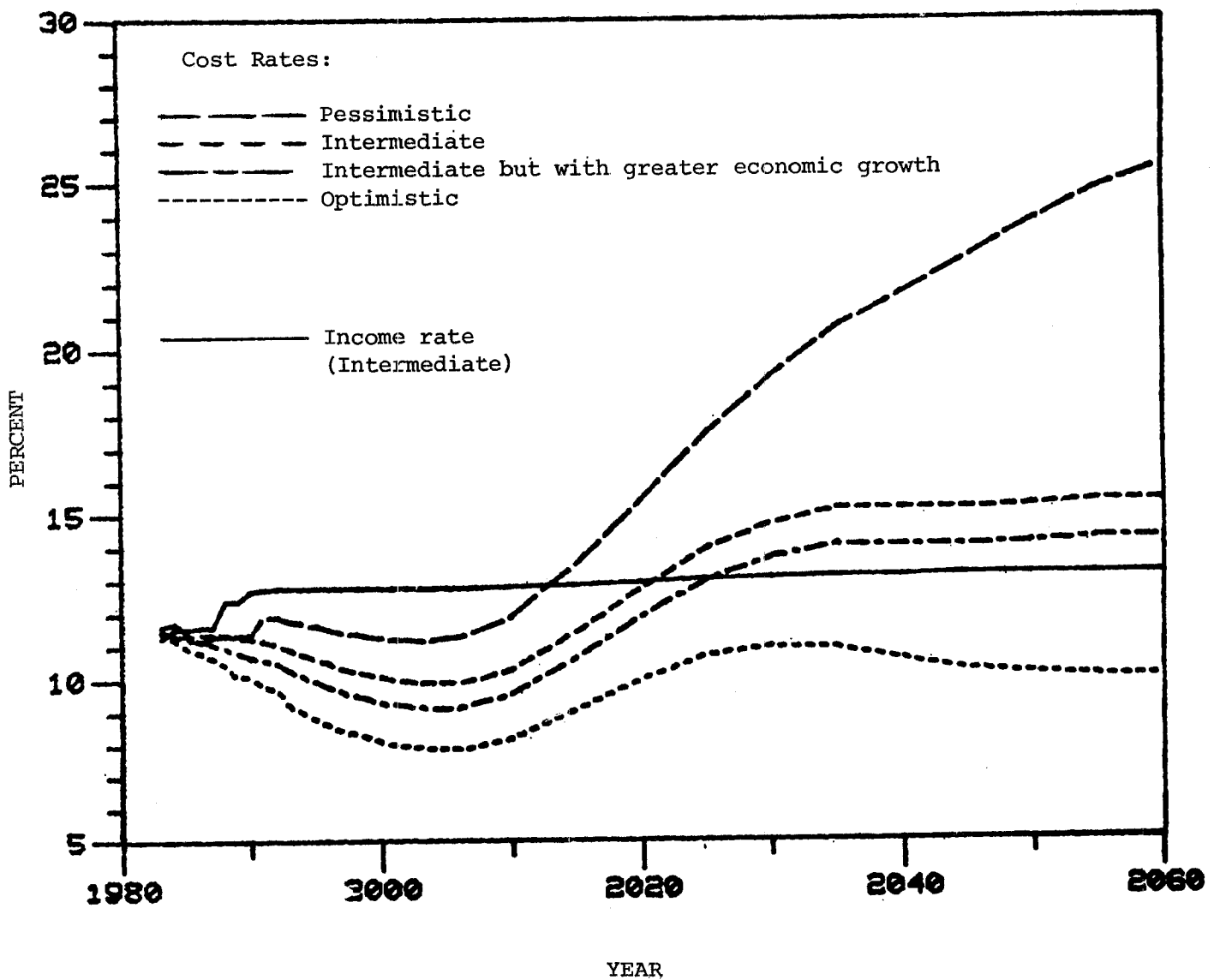
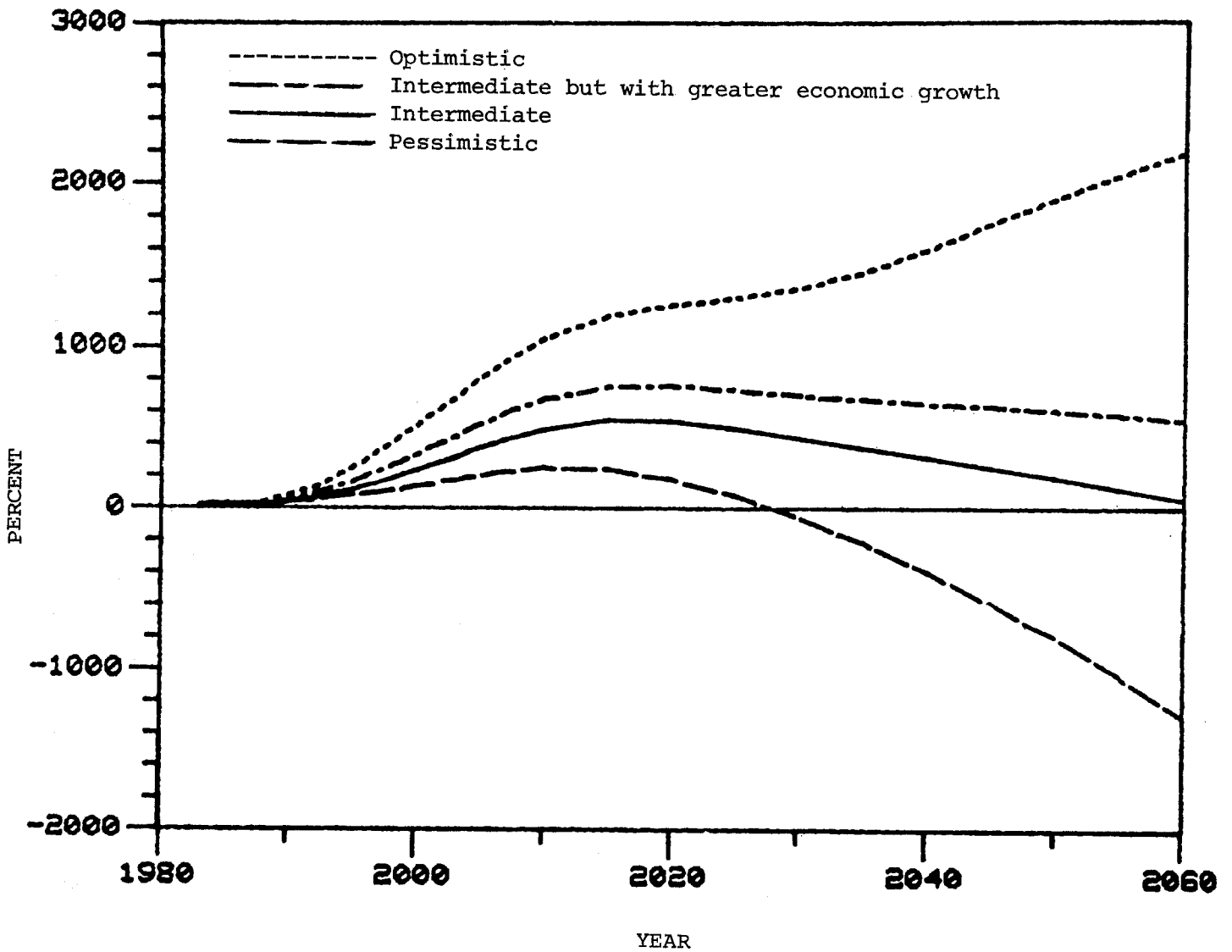


Chart 2. Projected OASDI Trust Fund Assets at the Beginning of the Year as a Percentage of Expenditures During the Year Based on Optimistic, Intermediate but with Greater Economic Growth, Intermediate, and Pessimistic Assumptions



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