LONG-RANGE COST ESTIMATES FOR OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE SYSTEM, 1980

ACTUARIAL STUDY NO. 83

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TABLE OF CONTENTS

CONTENTS (Continued)

CONTENTS (Continued)

A. BASIC CONCEPTS

Estimates of the actuarial status of the Old-Age, Survivors, and Disability Insurance (OASDI) system are customarily made over three time periods: short-range (5 years), medium-range (25 years), and long-range (75 years). The long-range actuarial status is measured by the long-range actuarial balance, which is the difference, over the 75-year period, between the average of the combined employer-employee tax rates scheduled in the law and the projected average expenditures, expressed as a percentage of taxable payroll. If the actuarial balance is positive, the system is said to have an actuarial surplus, and if negative, to have an actuarial deficit. 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 expenditures include 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.

Over the long-range period, if the average of the scheduled tax rates is within 5 percent of the projected average expenditures, the system is said to be in close actuarial balance. Throughout most of its existence, the system has been maintained in close actuarial balance over the long-range period.

The medium-range actuarial status is sometimes measured by the medium-range actuarial balance, which is defined analogously to the long-range actuarial balance. The long-range definition of close actuarial balance is sometimes extended to the medium-range period, although a percentage somewhat lower than 5 percent might be more appropriate.

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 help analyze the progress of the trust funds. The trust funds are projected by adding estimated future income and subtracting estimated future expenditures. The OASI and DI trust funds receive the major part of their income from contributions made by employers, employees, and self-employed persons. Another source of income to the trust funds is interest received on investments held by the funds. That portion of the trust fund not currently needed to meet expenditures is 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 that is the average market yield on all long-term bonds forming a part of the public debt.

Income from contributions is generally credited to the trust funds uniformly throughout the year. However, benefit payments, which form the major part of trust fund expenditures, are usually paid on the third day of each month. Therefore, the assets in each trust fund at the beginning of each month must be sufficient to cover the benefits paid on the third of that month. For 1980, about $9 billion and $1.2 billion must be in the OASI and DI trust funds respectively, at the beginning of each month to ensure payment of benefits. In terms of the trust fund ratio, it is necessary to start the month with at least 8-9 percent to ensure payment of that month's benefits.

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 excesses of expenditures over income. Under this "current-cost" method of financing, the trust funds should not grow too large (through continued annual surpluses) nor too small (through continued annual deficits). Although there is no general agreement regarding the optimum trust fund size, it should be at least sufficient to allow time for executive and legislative action to prevent exhaustion of the trust fund during a period of continued annual deficits. The 1979 Advisory Council on Social Security considered that a trust fund ratio of 75 percent would be sufficient for such a contingency.

The actuarial status of the OASDI system can also be measured on a present-value basis, in addition to the average-cost basis. In a present-value analysis, income and expenditures during the projection period are evaluated at the beginning of the projection period by applying discount factors which allow for the effects of compound interest over time. When the same assumptions are used, the actuarial status measured on a present-value basis is generally close, but not identical, to the actuarial status measured on the more customary average-cost basis.

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 (closing the system to any new entrants) 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 all new entrants is contrary to the intent of Congress and is not customarily made, the resulting closed-group analysis gives useful insights into the funding of the system.

For additional detail regarding closed-group analysis and alternatives to current-cost financing, see Actuarial Note No. 97: Some Effects of Fully Funding OASDI by Joseph A. Applebaum.

B. ASSUMPTIONS

The future income and expenditures of the OASDI system will depend upon many economic, demographic, and programmatic factors, including fertility, mortality, net immigration, labor force participation, marriage, divorce, productivity, unemployment, inflation, prevalence of retirement, and prevalence of disability. The income of the system will depend upon how these factors affect the size and composition of the working population and the general level of earnings. Similarly, expenditures will depend upon how these factors affect the size and composition of the beneficiary population and the general level of benefits. Of course, the precise forecasting of the behavior of these various factors is impossible. Therefore, the effects of variations in assumptions must be considered.

The cost projections presented in this report make use of the latest available data on the economic and demographic factors which affect the OASDI system. These projections indicate the trend and range of future income and expenditures. Although, as with all projections, they cannot be considered exact predictions of emerging experience, they do provide insights which are essential 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. In addition, the entire set of assumptions may be varied at once, taking into account the complex interactions which exist among the assumptions.

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 system.

Real-Wage Differential

The real-wage differential is defined as the difference between the percentage increase in average annual wages in covered employment and the percentage increase in the average annual Consumer Price Index. Since 1951, the real-wage differential has averaged 1.5 percent, while average annual increases in productivity have averaged 2.3 percent. This difference of roughly 0.8 percent results from such factors as the average number of hours worked per year, the degree to which employees share in productivity gains, and the proportion of employee compensation received as wages. Until the middle and late 1970's, the real-wage differential averaged 2 percent or more. In the selection of long-range assumptions, the ultimate average annual increase in productivity is projected to be 2.4 percent, and the adjustment from the above mentioned factors is assumed to be 3/4 percent. This yields an ultimate average real-wage differential of 1 3/4 percent (to the nearest 1/4 percent), which is better than the experience of the recent past, but not as good as the experience of the previous decades. The ultimate real-wage differential is projected to be essentially attained by the year 1987.

Consumer Price Index

The Consumer Price Index (CPI) is assumed to increase ultimately at an annual rate of 4 percent, which is slightly higher than the 3.8 percent average over the last 30 years. This level was selected because of the tendency over the last 65 years for the rate of inflation as measured by a long-term average of the CPI to increase slowly with time. The current outlook does not support a cessation or reversal of this trend, although the 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 3/4 percent is reached in 2003.

Gross National Product

The compound effect of the assumed annual increases in productivity and the annual changes in the number of covered workers yield the assumed annual increases in real gross national product after 1990. For that period, the increases in real gross national product fluctuate between 2 and 3 percent annually.

In the period up to 1990, the gross national product and the taxable payroll are related by a set of linkages, including the effects of the ad hoc wage base increase in 1981, changes in the ratio of employee compensation to national income, and other factors. For more information concerning the GNP-taxable payroll linkages, see Actuarial Note No. 99: Projecting OASDI Long-Range Program Cost as a Percentage of Gross National Product by Harry J. Kingerski.

Benefit Increases

The annual automatic adjustment to benefits is based on the year-to-year change in the average first-quarter CPI. The automatic benefit increases used in the cost projections are calculated to be consistent with the assumed increases in the CPI. The ultimate annual value is 4 percent.

Interest Rates

Interest rates on new trust fund investments are assumed to decrease from a 1980 value of 10 1/2 percent to 6.08 percent in 2003, and to remain level thereafter. The ultimate rate of 6.08 percent was adopted to yield a real interest rate of 2 percent, based on the assumed ultimate 4 percent rate of increase in the CPI. In the past, real interest rates have been near 3 percent in some years, and negative in other years. An ultimate rate of 2 percent was chosen as a long-term average, after considering past rates and also the interest rates assumed in other applications. The assumed interest rates have no effect on the projected expenditures or on the actuarial balance. They do, however, affect projections of trust fund assets, and therefore also trust fund ratios.

Unemployment Rates

The annual total unemployment rate has averaged about 5.4 percent for the last 25 years and 6.2 percent for the last 10 years. The annual total unemployment rate after 1988 is assumed to be 5.0 percent, with varying rates in the earlier years. The ultimate rate of 5.0 percent allows for some improvement over the experience of the recent past, because the recession in the mid-1970's was unusually severe and because the proportion of the labor force in the age-sex groups with high unemployment is projected to decrease. Annual unemployment rates by age and sex are projected on the basis of their historical relationships with the annual total unemployment rate since 1966.

Labor Force Participation Rates

Labor force participation rates are projected on the basis of historical data since 1960. The ultimate age-adjusted rates reflect a slight decrease for men of 0.6 percentage points from the 1979 level of 78.4 percent, resulting primarily from a projected continuation of the trend toward less labor force participation at the ages 50-59. The rates for women reflect an 8.0 percentage point increase from the 1979 level of 51.0 percent, continuing the trend of higher female labor force participation at all ages. These assumptions result in ultimate labor force participation rates for women which average about 75 percent of those for men. The assumed ultimate rates are attained by 2020.

Fertility Rates

Historically, fertility rates in the United States have fluctuated considerably. The total fertility rate (which for a given year is the average number of children per woman that a group of women would have during their lifetimes if they were to experience the age-specific birth rates observed in that year) decreased from 3.3 after World War I to 2.1 during the Great Depression, rose to about 3.7 in 1957 and then fell to 1.7 in 1976. Preliminary data indicate a slight upturn to 1.8 since 1976.

The historical variations in fertility rates are believed to be the result of changes in social attitudes, economic conditions and knowledge about contraception. Based on the recent behavior and trends of these factors, an ultimate fertility rate is assumed for each age such that the ultimate total fertility rate is 2.1 children per woman. The ultimate fertility rate for each age up to 30 is assumed to be first experienced by the females born in 1975, while the ultimate rate for each age over 30 is first experienced in 2005.

Net Immigration

Net immigration is assumed to be 400,000 persons per year, which has been the approximate level of immigration since the Immigration Act of 1965 and other related changes. 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.

Mortality Rates

The average annual improvement in age-sex specific mortality by cause of death for the period 1969-77 is projected to continue until 1985. Lower average annual improvements are projected after 1985. For the period 1979-2050, the average annual improvement is projected to be about 44 percent of the average annual improvement observed during 1900-77. Projected age-adjusted mortality for 2055 is 31 percent and 38 percent for males and females, respectively, below that estimated for 1980. By age, the projected improvement in mortality by 2055 ranges from a low of about 26 percent for males under age 20 to a high of about 40 percent for males aged 20-64.

For additional detail regarding the fertility, mortality, and immigration assumptions, see Actuarial Study No. 82: United States Population Projections for OASDHI Cost Estimates, 1980 by Francisco R. Bayo and Joseph F. Faber.

Marital Status

Marriage and divorce rates are projected on an age-sex specific basis to continue at levels similar to those experienced in the recent past. The percentage of the population that is single, married, divorced, and widowed is derived by application of marriage, divorce, and mortality rates.

Additional detail regarding the marriage and divorce assumptions will be published in a forthcoming actuarial study on population projections by marital status.

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 on the basis of the projections of unemployment rates, labor force participation rates and the relationships existing between those rates from 1970 to 1976. The ultimate age-adjusted coverage rates reflect a slight increase for men of 1.8 percent from the 1980 level, and a 13.3 percent increase for women. The ultimate coverage rates for women average about 82 percent of those for men. 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 his eligibility for a primary retirement benefit and for his dependents' eligibility for secondary benefits. Fully-insured status is also required of a deceased worker for his 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 levels are projected to be 95 percent for aged men and 85 percent for aged women. 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.

Disability-Insured Rates

Disability-insured status, which is more restrictive than fully-insured status, is required of a disabled worker for his eligibility for a primary disability benefit and for his dependents' eligibility for secondary 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 84 percent of the population for males aged 20 to 64 and 65 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 proportions of retired-worker beneficiaries to aged fully insured population show gradual increases in the implicit retirement rates.

For more information regarding OASDI retirement experience, see Actuarial Note No. 91: Retirement Experience of Old-Age Insurance Beneficiaries, 1966-1976 by Harry J. Kingerski.

Disability Incidence Rates

The incidence rates are projected by age, sex, and year of exposure to disability. They are based on average annual rates for the period 1970-78, updated to reflect the aggregate disability benefit award experienced through calendar year 1979. The projected rates are adjusted to reflect changes expected to result from the enactment of the 1977 Amendments and by the Disability Amendments of 1980. Age-sex specific incidence rates are assumed to increase over the period 1980-1999 to a level about 16 percent higher than the average for 1978-1979 and to remain constant thereafter. This represents a gradual increase to a level about 3 percent below the average disability incidence rate experience during the 1970's.

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 1975-78. The recovery rates are those of the same period, increased by 20 percent to reflect the effect of the Disability Amendments of 1980, which introduce periodic review of disabled workers receiving benefits. The termination rates are assumed to remain constant in the future. For those disabled workers who attain age 65, disability benefits are assumed to be terminated at that age (when retired worker benefits become payable).

For additional detail regarding disability incidence and termination rates, see Actuarial Study No. 81: Experience of Disabled-Worker Benefits Under OASDI, 1974-78 by Bruce D. Schobel.

Changes in the Law

The cost estimates are based on the assumption that the present statutory provisions and regulations affecting the OASDI system, including the Disability Amendments of 1980, will remain unchanged. However, when considering the long-range actuarial status of the system, 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.

Consistent Assumptions

As much as possible, the known interrelationships among the various economic, demographic, and programmatic assumptions are taken into account. For instance, the increasing fully-insured rates for aged females reflect the coverage rates that have been increasing in the past and are projected to continue to increase into the future. At the same time, all of the possible interrelationships cannot be reflected in the assumptions, since many of them are too complex or depend on unpredictable human behavior. For instance, higher fertility rates intuitively would correlate with lower female coverage rates, but female coverage rates have, in fact, increased steadily for decades while fertility rates have moved upward and downward. In general, the relationships among the important parameters are not yet understood well enough to permit the behavior of one to be predicted solely from the behavior of another.

C. METHODS

Population

Projections of the United States population, including persons overseas covered by the OASDI system, are made for future years by age and sex to 2055. The starting point is the population on July 1, 1977, as estimated by the Bureau of the Census from the 1970 census and from births, deaths, and migration during the period 1970-77. Included in this estimate are any illegal aliens who responded to Census questionnaires or interviewers. This population estimate, which includes an adjustment for net census undercount, is increased by the estimated populations in the geographical areas covered by the OASDI system but not included in the estimate of the Bureau of the Census. The population in future years is then developed from projected deaths, births, and net immigration.

Tables 2a, 2b, and 2c summarize the population projection. For additional detail, see Actuarial Study No. 82: United States Population Projections for OASDHI Cost Estimates, 1980 by Francisco R. Bayo and Joseph F. Faber.

Because a specific marital status is required for many categories of OASDI benefits, the projected total population by age and sex is subdivided into those married, widowed, divorced, and never married for each year of the projection period. Additional detail on the population projection by marital status will be published in a forthcoming actuarial study.

Covered Population

Projections of the population in covered employment are made by multiplying the population by the coverage rates, by age and sex. Coverage rates for women are projected to increase substantially for all ages, thereby reflecting the projected increase in labor force participation of women. Coverage rates for men are projected to increase slightly for most age groups, except that small decreases are projected for ages 50-59 and for ages 70 and over.

For the group aged 60 and over, age-adjusted coverage rates have shown a decrease from 1970 to 1977 of 18.5 percentage points for men and 2.9 percentage points for women. A reversal is projected in the corresponding trend toward early retirement. Part of this reversal is assumed to result from Public Law 95-256, which generally prohibits mandatory retirement before age 70. Ultimate age-adjusted coverage rates for the group aged 60 and over are 11.3 percentage points higher for men and 3.1 percentage points higher for women than the corresponding rates in 1977.

For the period 1980-1990, projections of the covered population prepared by the SSA Office of Research and Statistics are used. These projections are based on the economic assumptions presented in Table 1a. The transition from this short-range projection to the Office of the Actuary long-range projection is done by linear interpolation over the period 1991-1999.

Tables 3a and 3b summarize the projection of the covered population, and include the adjustments made to account for the projection of the Office of Research and Statistics.

Taxable Payroll

The taxable payroll is defined here as the amount which, when multiplied by the combined employer-employee tax rates, yields the total amount of taxes that would be paid by employers, employees, and the self-employed. In this way expenditures, when expressed as percent of taxable payroll, can be compared directly to the combined employer-employee tax rate to determine whether the system is operating at a surplus or deficit. In practice, the taxable payroll is calculated as a weighted average of the earnings of employers, employees, and the self-employed, where the weighting is done to take into account the lower tax rates on self-employment income, on tips, and on multiple-employer "excess wages" as compared to the combined employer-employee rate.

For the period 1980-1990, the amounts of earnings taxable for employers, employees, and the self-employed are projected separately by the SSA Office of Research and Statistics. After 1990, the amounts of earnings taxable for employers, employees, and the self-employed are each assumed to increase at the compound rate of the estimated increases in covered workers and in average wages in covered employment.

Table 4 summarizes the projection of the taxable payroll.

Insured Population

Projections of the population who are fully-insured are calculated by age and sex, by applying the projected fully-insured rates to the projected population. The fully-insured population by age and sex is further split by marital status on the basis of judgment and limited historical data. For males, no variation in fully-insured rates is assumed by marital status. For females, widows are assumed to have lower fully-insured rates than single and divorces women. Married women are assumed to have the lowest fully-insured rates of all. The differentials in rate for the various marital status groups are projected to narrow considerably over time.

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.

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

Disabled-Worker Beneficiaries

The number of newly entitled beneficiareis 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.

Dependents of Retired Workers

The number of wives aged 62 and over receiving benefits as dependents 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 test, and those eligible for a government pension from earnings in non-covered employment) are assumed to claim benefits as soon as they become eligible, even if this occurs at ages 62-64, when they would have to take reduced benefits. Experience indicates that, in the vast majority of cases, such immediate claiming of wife benefits does occur. The number of aged husband beneficiaries is estimated in a similar manner.

The projected numbers of children receiving benefits as dependents 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 projected future fertility.

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 of male retired-worker beneficiaries. The extrapolation reflects 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 beneficiaries who are dependents 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 test, and those eligible for a government pension from earnings in non-covered 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 22 in the United States 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. For nondisabled children aged 18-21, a further reduction is made to exclude those not attending school.

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 those nondisabled children aged 18-21 who are attending school). 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 15,000 at the beginning of 1980 to an ultimate 7,000 in 1995.

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

Dependents 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 beneficiaries who are dependents of disabled workers.

Comparison of Beneficiaries and Covered Workers

Table 10 summarizes the past and projected total numbers of OASDI beneficiaries and compares them to the total numbers of covered workers. The number of covered workers per OASDI beneficiary is projected to decline from 3.3 in 1979 to 1.9 by 2030. After the passage of the post-World War II baby boom through the retirement ages, the ratio levels off at 2.0 covered workers per OASDI beneficiary in 2045 and later. Expressed inversely, the number of OASDI beneficiaries per hundred covered workers is projected to increase from 30 in 1979 to slightly over 50 in 2030 and later.

Average Benefits

The amount of the average male retired-worker benefit awarded is projected by simulating the automatic benefit adjustment provisions, and calculating future benefits for workers at various earnings levels. The average in each year is based on awards to two hundred theoretical cases, whose earnings histories are designed to be representative of the distribution of covered earnings under OASDI. Each theoretical earnings history follows 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. (4) Earnings are limited to the contribution and benefit bases. For each year in the projection period an average theoretical awarded PIA is computed from these generated earnings histories and the trend of these PIA's is combined with the known current awards to project the future benefit awards.

The amount of the average male retired-worker benefit in current-payment status is projected on the basis of the projected distribution of male retired-worker beneficiaries by duration from year of award, their average awarded benefits, and the increases in their benefits since the year of award due to automatic benefit increases, recomputations, and other factors. The average female retired-worker benefit in current-payment status is projected on the basis of the average male retired-worker benefit, adjusted to reflect the tendency for awards to female retired workers to increase faster than those for male retired workers. The average benefits for all other persons receiving monthly benefits from the OASI trust fund (except young survivor benefits and residual benefits paid to wives, widows, husbands, and widowers) are projected to increase at the same rate as the average male retired-worker benefit. The average benefits for young survivors are projected to increase at a slightly slower rate than the average retired-worker benefit, since the benefit reduction provisions in the 1977 Amendments are expected to have a stronger effect on young survivor benefits than on retired-worker benefits. The average residual benefits for females are projected to increase at a slightly slower rate, and those for males at a slightly faster rate, than the average retired-worker benefit, due to the changing relationship between the average benefit levels for male and female retired workers.

The amount of the average disabled-worker benefit awarded is projected in a manner similar to that for retired workers, except that the average computation period is modified to reflect its variation by age. The average male disabled-worker benefit in current-payment status is projected analogously to that for retired workers. The average benefits for all persons receiving monthly benefits from the DI trust fund are assumed to increase at the same rate as the average male disabled-worker benefit.

Table 11 summarizes the projection of the average benefits for retired workers and disabled workers.

Benefit Payments

Monthly benefit payments are calculated as the product of the number of beneficiaries and their corresponding average benefits. These amounts are then adjusted to include retroactive payments to newly entitled beneficiaries, and residual payments to dually entitled 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 12 months' benefits retroactively from the date of application for benefits, on the condition that benefits are not thereby permanently reduced for early retirement. Residual payments are those amounts paid in excess of the retired-worker benefit to those persons who are eligible to receive a secondary benefit in addition to their own retired-worker benefit. The law provides that in such cases, an individual may not receive more than the higher of the two benefits. Table 12 summarizes the projection of residual payments.

The number of lump-sum death payments is projected by applying the assumed mortality rates to the projected fully insured population. 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 13a, 13b, and 13c summarize the projection of OASDI benefit payments as percent of taxable payroll.

Administrative Expenses

The projection of administrative expenses through 1990 is based on assumed increases in average wages, increases in the CPI, and increases in the number of beneficiaries. For the years after 1990, administrative expenses are assumed to increase at the combined rate of the estimated increases in the number of beneficiaries and in 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 of the OASDI benefits. The resulting effect is a long-range loss to the OASDI system of .01 percent of taxable payroll.

Reimbursement for Noncontributory Credits

Although the effect of noncontributory credits for military service is implicit in the calculation of expenditures, the reimbursement from the general fund of the Treasury for such credits has not been reflected in the cost estimates. The reduction in cost resulting from such reimbursement is estimated to be about 0.05 percent of taxable payroll currently, and to decrease as a percentage of taxable payroll until about 2015, after which it is negligible.

Reimbursement from the general fund of the Treasury for special benefits to certain persons aged 72 and over has not been reflected in the cost estimates. The reduction in cost resulting from such reimbursement is estimated to be .01 percent of taxable payroll currently, and to decrease to a negligible amount after 1984.

Actuarial Balance

The long-range actuarial balance is the difference, over the 75-year period, between the average of the combined employer-employee tax rates scheduled in the law and the projected average expenditures as a percentage of taxable payroll. The expenditures consist of benefit payments, administrative expenses (including payments for vocational rehabilitation services for disability beneficiaries), and net transfers under the financial interchange between the OASDI trust funds and the railroad retirement account. The medium-range actuarial balance is the analogous difference over the 25-year period.

Table 14 summarizes the projection of the expenditures as a percentage of taxable payroll and gives the projected actuarial balances over the long-range and medium-range periods.

D. RESULTS

The cost of the OASI program is projected to be relatively constant at 9-10 percent of taxable payroll until just after the turn of the century, as shown in table 14. After the turn of the century, it is projected to increase rapidly and to peak at 15.59 percent of taxable payroll in the year 2035. The reason for the increase is that the number of beneficiaries will be increasing faster than the number of covered workers. The large number of persons born during the period from World War II through the 1960's will reach retirement age and begin to receive benefits while the relatively small number of persons born during the period of current and projected low fertility rates will comprise the labor force. During the last few years of the projection period, the OASI expenditures are projected to decrease slightly as a percentage of taxable payroll because of the effect of the low birth rates experienced during the 1970's and projected through the 1980's on the beneficiary population.

The cost of the DI program, as a percentage of taxable payroll, is projected to decline slightly after 1980 to 1.13 percent in 1990, and then to increase steadily to a peak in 2020 of 1.73 percent. The DI cost is relatively level for the remainder of the projection period, at about 1.60 percent of taxable payroll. The estimated DI expenditures are affected by the same demographic factors as the estimated OASI expenditures and, in addition, by the assumptions about future incidence of disability.

For the OASDI system, estimated annual surpluses begin in 1985 and continue until 2013, after which the system experiences annual deficits. After the medium-range period, these deficits grow rapidly before essentially stabilizing in the third 25-year period at about 4 1/2 percent of taxable payroll. These deficits in the third 25 years are large enough to cause a long-range actuarial deficit for the total 75-year period of 1.52 percent of taxable payroll, even though the surpluses of the medium-range period more than offset the deficits of the second 25 years. This long-range deficit is about 11 percent of the 75-year average of the expenditures which is estimated to be 13.74 percent of taxable payroll. Because the deficit exceeds 5 percent of the estimated average expenditures (that is, exceeds 0.69 percent of taxable payroll), the system is not regarded as being in close actuarial balance over the long-range period.

The projected cost of the OASDI system, 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 15. The projected OASDI cost as a percentage of GNP ranges from slightly below 4 1/2 percent around the turn of the century to slightly above 6 percent in 2030.

The effect on the OASDI trust funds of the deficits projected to occur in the early 1980's, the surpluses in the remainder of the medium-range period, and the deficits that occur thereafter is shown in table 16. The OASI trust fund is projected to decline, to become exhausted in 1981, and to remain negative through 1990. (Note that negative trust funds are theoretical because they are calculated on the assumption that the exhaustion of the OASI trust fund

in 1981 can be resolved by allowing the fund to borrow money.) After 1990, the trust fund ratio (that is, the ratio of the trust fund assets at the beginning of the year to the expenditures during the year) is projected to rise steadily to over 150 percent in the year 2010 before decreasing rapidly and again becoming exhausted in 2022. The DI trust fund ratio is projected to rise steadily throughout the projection period, reaching nearly 3,000 percent by 2055. The OASI and DI funds combined would become exhausted in 1983, due to the pattern of expenditures and income during the year. On a theoretical basis, the combined OASDI fund would return to solvency and the trust fund ratio would exceed 300 percent before the combined funds would again become exhausted in 2030.

Table 17 gives an indication of the increasing scope of the system 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 1979 to 95 in about 2030, and to remain level thereafter. The number of beneficiaries aged 20-64 as a percentage of the population aged 20-64 is projected to increase from 6 percent in 1979 to 8 percent in 2015 and thereafter. The number of beneficiaries aged 19 and under as a percentage of the population aged 19 and under is projected to remain level at 5 percent throughout the 75-year period.

The 75-year deficit on a present value basis for the OASDI system is 1.47 percent of taxable payroll, as shown in table 18, which is very close to the deficit of 1.52 percent of taxable payroll calculated on an average cost basis. The deficit totals $1,379.6 billion over the 75-year projection period, or an average of about $18 billion per year, on a present value basis. Table 18 also includes present values of income and outgo on a closed group basis, where it is assumed that the OASDI system is closed off to all persons not yet age 15 by 1980. The deficit on such a basis for the OASDI system is $5,279.5 billion.

The closed group results are further analyzed in table 19, where the outgo and payroll for the closed group aged 15 and over are apportioned into that due to those persons aged 15-19 and that due to those persons aged 20 and over. When the present value of outgo for those aged 15-19 in 1980 is compared to the present value of payroll for that same group, the result can be considered as being similar to a "normal cost". The benefits for the group of persons aged 15-19 in 1980 are projected to be 15.48 percent of the taxable payroll for that group. When administrative expense is included, the total cost becomes 15.64 percent of taxable payroll.

E. SENSITIVITY TO SELECTED ASSUMPTIONS

The estimates in this study are sensitive in varying degrees to changes in the assumptions. In tables 20a through 20f, the set of assumptions presented in tables 1a through 1c is varied one assumption at a time to examine the effect on the projected cost of the OASDI program.

Real-Wage Differential

Table 20a shows the average of the projected expenditures under assumed ultimate real-wage differentials of 1 1/4 percent, 1 3/4 percent, and 2 1/4 percent. In each case the ultimate rate of increase in the CPI is assumed to be 4 percent, yielding ultimate annual increases in average wages of 5 1/4 percent, 5 3/4 percent, and 6 1/4 percent, respectively.

Over the medium-range period, the average of the projected expenditures as a percentage of taxable payroll decreases from 10.99, assuming a 1 1/4 percent real-wage gain, to 10.35, assuming a 2 1/4 percent gain. Over the long-range period, the average decreases from 14.38 to 13.13 percent.

That the averages of the expenditures as percent of taxable payroll decrease with increasing real-wage differentials results from the continued faster increases in average taxable earnings after the worker retires, while the benefit increases, which are related to the CPI, do not vary.

Consumer Price Index

Table 20b shows the projected average expenditure as a percentage of taxable payroll under assumed ultimate annual CPI increases of 2 percent, 4 percent and 6 percent. In each case the ultimate real-wage differential is assumed to be 1 3/4 percent, yielding ultimate percentage increases in average annual wages of 3 3/4 percent, 5 3/4 percent, and 7 3/4 percent, respectively.

Over both the medium-range and the long-range periods, the average of the projected expenditures as a percentage of taxable payroll decreases with higher CPI assumptions. Over the medium-range period, the average varies from 10.82, assuming an ultimate rate of increase in the CPI of 2 percent, to 10.48, assuming 6 percent. Over the long-range period the average varies from 14.13 to 13.34 percent.

The decreasing cost effect of higher CPI assumptions results from the time lag between the impact 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 under a one-year lag. In addition, the effect on benefits to newly eligible individuals is experienced with about a two-year lag through the indexing procedures.

Fertility

Table 20c shows the projected average expenditures as a percentage of taxable payroll under various ultimate total fertility rate assumptions. Those assumptions are: 1.5, 2.1, and 2.5 children per woman.

Over the medium-range period, the average of the projected expenditures as a percentage of taxable payroll decreases with increasing fertility--although very minutely--from 10.67 assuming 1.7 children per woman, to 10.65 assuming 2.5 children per woman. Over the long-range period, the effect is more pronounced, with the average varying from 15.90 to 12.70 percent.

The small effect of the fertility assumptions in the medium-range period results from the time lag between the effect of fertility changes on either the worker population or the beneficiary population. Under high fertility for example, the larger number of benefits to children during the first 25-year period is offset by the larger amount of additional tax income in that period. Later in the 75-year period, higher fertility causes the labor force to increase in advance of the beneficiary population so that the average cost over the 75-year period decreases with increasing fertility.

Mortality

Table 20d shows the projected average expenditures as a percentage of taxable payroll under various assumptions as to future improvement in mortality by the year 2050. Those assumptions are improvement in mortality of approximately 19 percent, 34 percent, and 56 percent from the level experienced in 1977.

Over the medium-range period, the average of the projected expenditures as a percentage of taxable payroll increases with increasing mortality improvement, from 10.50 assuming 19 percent mortality improvement to 10.97 assuming 56 percent improvement. Over the long-range period, a similar but more pronounced effect would be experienced. The estimated long-range average varies from 13.05 percent of taxable payroll assuming 19 percent mortality improvement to 15.05 assuming 56 percent improvement.

The effect of mortality improvement on the projected expenditures as a percentage of taxable payroll depends upon the distribution of the improvement by age. For the population over age 65, where mortality rates are the highest, any mortality improvement means a relative lengthening to the period over which retirement benefits are paid. Between ages 50 and 65, mortality improvement would result in relatively more taxes. However, the additional taxes are more than offset by the additional benefits payable to the over-65 group. At the ages of 20 through 50, mortality rates are quite low, so that even substantial improvement in the rates would not result in significant gains in the number of workers paying social security taxes. Mortality improvement at ages under 20 has relatively little effect on expenditures or income. Consequently, for all ages combined, the net effect of mortality improvement is to increase expenditures more than payroll, thereby resulting in higher costs as a percentage of taxable payroll.

Immigration

Table 20e shows the projected average expenditures as a percentage of taxable payroll with assumed annual net immigration levels 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 in the basic set of assumptions. Over both the medium-range and the long-range periods, the average of the projected

expenditures as a percentage of taxable payroll decreases with higher immigration assumptions. Over the medium-range period, the average varies from 10.66 assuming 400,000 annual net immigration, to 10.27 assuming 1,200,000. Over the long-range period the average varies from 13.74 to 12.74 percent.

The decreasing cost effect of higher immigration assumptions results from the time lag between the effect of immigration changes on the beneficiary population and on the worker population. With higher immigration, there are a small number of additional beneficiaries during the first 25-year period, but a larger number of additional workers. Later in the 75-year period, continued higher immigration results in a higher number of additional beneficiaries, but there continues to be an even greater increase in the labor force.

Disability Incidence

Table 20f shows the projected average expenditure as a percentage of taxable payroll under various disability incidence rates. Those assumptions are a decrease in the ultimate incidence rates of 1 percent, an increase of 16 percent, and an increase of 34 percent from the average level during 1978-79.

Over both the medium-range and the long-range periods, the average of the projected expenditures as a percentage of taxable payroll increases with higher disability incidence assumptions. Over the medium-range period, the average OASDI cost varies from 10.56 assuming a 1 percent decrease in ultimate incidence rates from the 1978-79 level, to 10.76 assuming a 34 percent increase. Over the long-range period the average varies from 13.55 to 13.92 percent.

The increasing cost effect of higher disability incidence rates results from higher numbers of DI beneficiaries.

F. COMPARISON WITH PREVIOUS ESTIMATES

Prior to the cost estimates prepared for the 1965 Report of the Board of Trustees, the financing of the system was assumed to continue into perpetuity. The 1963-65 Advisory Council on Social Security recommended that the financing period be shortened to 75 years (roughly the life span of current new entrants). To compare the results of the two different methods, the 1961 Act was valued into perpetuity as well as for 75 years. Since that time, the long-range cost estimates for OASDI have covered the 75-year period beginning with the year of valuation.

In accordance with the recommendations of the 1971 Adivsory Council on Social Security, the actuarial method was further modified to incorporate assumptions of increasing earnings and benefits. This change was made because proposals made at that time involving automatic adjustment to benefits, could not properly be evaluated otherwise. To compare the results of the two different methods, the 1971 Act was valued on 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 further consideration was that the average-cost method is more easily understood by non-technicians.

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

Table 21 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, 1935-1979.

G. ESTIMATES UNDER ALTERNATE ASSUMPTIONS

Because of the uncertainties about future economic and demographic developments, cost projections based upon two alternate sets of assumptions are included. One of these alternate sets can be regarded as optimistic and the other as pessimistic, relative to the set of assumptions described in Section B (hereafter referred to as the intermediate set).

Under the optimistic set of assumptions, the level of economic activity is assumed to be higher than under the intermediate set. The assumed rate of unemployment in each year is lower, reaching an ultimate level of 4 percent in 1987. During the period 1980-82, the assumed annual percentage increase in average wages in covered employment is higher, declining to about 7 percent by 1986 and to an ultimate level of 5 1/4 percent by 1995. Although the assumed rate of increase in average wages is lower after 1982, the real-wage differential is higher because of the lower assumed inflation rate, which is ultimately 3 percent. The ultimate real interest rate is assumed to be 2 1/2 percent, slightly higher than under the intermediate set. The ultimate total fertility rate of 2.5 children per woman is higher. The mortality rates improve at half the annual rate of improvement in the intermediate set. Coverage rates are slightly higher than the intermediate set of assumptions because of the lower unemployment. 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 the same as in the intermediate set, but retirement prevalence rates and disability incidence rates are lower. Tables 22a, 22b, and 22c summarize the major assumptions in the optimistic set.

Under the pessimistic set of assumptions, the level of economic activity is assumed to be lower than under the intermediate set. As a result, the unemployment rate is assumed to remain above 7 percent through 1983, decreasing to an ultimate 6 percent by 1989. The ultimate real-wage differential of 1 1/4 and the ultimate real interest rate of 1 1/2 percent are lower. The ultimate total fertility rate of 1.5 children per woman is lower. The mortality rates are assumed to improve at twice the annual rate assumed in the intermediate set of assumptions. Coverage rates are slightly lower. Insured rates are the same as in the intermediate set, but retirement prevalence rates and disability incidence rates are higher. Tables 23a, 23b, and 23c summarize the major assumptions in the pessimistic set.

The expenditures under the optimistic set of assumptions follow a pattern similar to that followed by expenditures under the intermediate set, however the magnitudes are different. Under the optimistic set of assumptions, OASDI expenditures as a percentage of taxable payroll decrease until 2005, reach a peak of 13.56 percent in 2030, and drop thereafter to 11.97 percent by the end of the long-range projection period. Under the pessimistic set of assumptions, expenditures as a percentage of taxable payroll rise in the 1980's, remain level around the turn of the century, and then rise throughout the remainder of the long-range period to a value of 29.83 percent of taxable payroll by 2055. Tables 24a and 24b summarize the expenditures as a percentage of taxable payroll under the optimistic and pessimistic sets of assumptions.

Chart 1 compares the projected expenditures and scheduled tax rates of the OASDI system for the period 1980-2054, for the optimistic, intermediate, and pessimistic assumptions.

The expenditures as a percentage of GNP under the two alternative sets of assumptions follow the same general patterns as do the expenditures as a percentage of taxable payroll. Under the optimistic set, expenditures average 4.63 percent of GNP over the 75-year period, reaching a peak of 5.36 percent of GNP in 2030. Under the pessimistic set, expenditures average 6.49 percent of GNP over the 75-year period, reaching 9.05 percent at the end of the period. Tables 25a and 25b summarize the expenditures as a percentage of GNP under the optimistic and pessimistic sets of assumptions.

The projected assets of the OASDI trust funds as a percentage of annual expenditures under the optimistic and pessimistic sets of assumptions show time trends similar to that shown by the assets under the intermediate set. Under the optimistic set, the assets of the combined OASI and DI trust funds reach a peak value of 626 percent of annual expenditures in 2015, and remain above 400 percent of annual expenditures throughout the remainder of the projection period. Under the pessimistic set, the combined funds become exhausted in 1982. On a theoretical basis, where the OASI trust fund is allowed to borrow money, the combined OASDI funds recover and reach a peak trust fund ratio of 38 percent in 2007, before becoming exhausted again in 2012. Tables 26a and 26b summarize the progress of the OASDI trust funds under the optimistic and pessimistic sets of assumptions.

Charts 2a, 2b, and 2c illustrate the progress of the OASI, DI, and OASDI trust funds, respectively, under the optimistic, intermediate, and pessimistic assumptions.

Under both the intermediate and pessimistic sets of assumptions, the system is inadequately financed over the long-range period. Under the optimistic set, there is an average long-range surplus of .89 percent of taxable payroll. Under the pessimistic set, the long-range deficit is 6.17 percent. The financing through the turn of the century is sufficient to provide an actuarial surplus over the medium-range period under all three sets of assumptions, although, due to the pattern of expenditures and tax rates, the OASI trust fund becomes exhausted in the early 1980's. The projected surplus over the medium-range varies from 1.94 percent of taxable payroll under the optimistic set of assumptions, to .22 percent under the pessimistic set. Table 27 summarizes the average expenditures and actuarial balances under the optimistic, intermediate, and pessimistic sets of assumptions.

H. TABLES

Table 1a. Selected OASDI Long-Range Economic Assumptions

Calendar Year	Increase in... Real GNP	Average Annual... Wages in Covered Employment	Consumer Price Index	Benefits Due to Automatic Adjustment	Real Wage Differential	Interest Rate	Total Unemployment Rate
1980	-0.42%	9.64%	14.19%	14.3%	-4.55%	10.500%	7.2%
1981	0.46	9.50	9.69	11.3	-0.19	9.875	7.9
1982	4.59	10.88	9.02	9.0	1.86	9.500	7.3
1983	4.62	9.91	8.61	8.8	1.30	9.250	6.6
1984	3.86	9.39	8.21	8.3	1.18	8.875	6.2
1985	3.59	9.06	7.80	7.9	1.26	8.500	5.9
1986	3.44	8.80	7.40	7.5	1.40	8.500	5.7
1987	3.34	8.83	7.08	7.2	1.75	8.500	5.5
1988	3.30	8.63	6.87	7.0	1.76	8.500	5.2
1989	3.04	8.45	6.68	6.7	1.77	8.500	5.0
1990	2.68	8.27	6.47	6.5	1.80	8.500	5.0
1991	2.33	8.09	6.30	6.3	1.79	8.400	5.0
1992	2.35	7.89	6.10	6.1	1.79	8.200	5.0
1993	2.34	7.68	5.90	5.9	1.78	8.000	5.0
1994	2.39	7.48	5.70	5.7	1.78	7.800	5.0
1995	2.45	7.28	5.50	5.5	1.78	7.600	5.0
1996	2.54	7.07	5.30	5.3	1.77	7.400	5.0
1997	2.50	6.87	5.10	5.1	1.77	7.200	5.0
1998	2.50	6.67	4.90	4.9	1.77	7.000	5.0
1999	2.49	6.46	4.70	4.7	1.76	6.800	5.0
2000	2.47	6.26	4.50	4.5	1.76	6.600	5.0
2001	2.83	6.06	4.30	4.3	1.76	6.400	5.0
2002	2.82	5.85	4.10	4.1	1.75	6.200	5.0
2003	2.82	5.75	4.00	4.0	1.75	6.080	5.0
2004	2.82	5.75	4.00	4.0	1.75	6.080	5.0
2005+	2.78	5.75	4.00	4.0	1.75	6.080	5.0

NOTES:

1. The real GNP (Gross National Product) is the total output of goods and services expressed in constant dollars.

2. The percentage increases in benefits due to automatic adjustment are calculated to be consistent with the assumed increases in the Consumer Price Index.

3. 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.

4. 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.

5. The annual percentage increase in real GNP is projected to change after the year 2005. The value for the year 2055 is 2.32 percent.

Table 1b. Selected OASDI Long-Range Demographic Assumptions

Calendar Year	Total Fertility Rate	Age-Adjusted Mortality Rate (per 100,000)			
		0-19	20-64	65+	Total
			males		
1980	n.a.	137	614	6,625	904
1985	n.a.	124	554	5,929	839
1990	n.a.	118	529	5,724	807
1995	n.a.	113	507	5,537	777
2000	n.a.	108	486	5,366	750
2005	n.a.	107	473	5,280	736
2010	n.a.	106	461	5,198	722
2015	n.a.	105	449	5,119	709
2020	n.a.	105	438	5,042	696
2025	n.a.	104	427	4,968	684
2030	n.a.	103	417	4,897	672
2035	n.a.	103	407	4,828	661
2040	n.a.	103	397	4,762	651
2045	n.a.	102	388	4,698	640
2050	n.a.	102	379	4,636	630
2055	n.a.	102	371	4,577	621
			females		
1980	1,803	90	318	3,960	642
1985	1,872	80	288	3,579	580
1990	1,942	75	276	3,384	550
1995	2,026	71	264	3,205	522
2000	2,086	67	253	3,040	497
2005	2,100	66	247	2,979	487
2010	2,100	65	242	2,919	477
2015	2,100	64	236	2,860	467
2020	2,100	64	231	2,804	458
2025	2,100	63	226	2,749	448
2030	2,100	63	221	2,697	440
2035	2,100	62	216	2,645	431
2040	2,100	62	211	2,596	423
2045	2,100	61	207	2,548	415
2050	2,100	61	203	2,501	408
2055	2,100	61	199	2,456	401

NOTES: 1. The total fertility rate is the number of children who would be born to 1,000 women in their lifetime if they were to experience the observed age-specific birth rates and were to survive the entire child-bearing period. It is not applicable ("n.a.") to males.

2. The age-adjusted mortality rate is the annual number of deaths per 100,000 persons that would occur in the enumerated male or female population, respectively, as of April 1, 1970, if the current age-specific death rates were to be experienced.

Table 1c. Selected OASDI Long-Range Programmatic Assumptions

Year	Age-Adjusted Rate				
		Insured Status		Retirement	Disability
	Coverage	Fully	Disability	Prevalence	Incidence
			males		
1980	78.1%	94.6%	83.7%	82.9%	4.97
1985	79.8	94.7	84.0	84.6	5.56
1990	81.1	94.9	84.1	85.4	5.98
1995	80.7	95.0	84.1	85.4	6.22
2000	79.9	95.0	84.1	85.4	6.28
2005	79.9	95.0	84.1	85.4	6.28
2010	79.9	95.0	84.1	85.4	6.28
2015	79.9	95.0	84.1	85.4	6.28
2020+	80.0	95.0	84.1	85.4	6.28
			females		
1980	57.0%	57.9%	51.3%	83.1%	3.79
1985	62.5	61.2	54.5	84.4	4.24
1990	66.1	64.2	57.5	85.4	4.55
1995	66.1	66.2	60.0	85.9	4.73
2000	65.3	68.1	62.1	86.1	4.78
2005	65.6	70.4	63.4	86.1	4.78
2010	65.7	73.1	64.1	86.3	4.78
2015	65.7	76.2	64.6	86.4	4.78
2020	65.7	79.3	64.8	86.5	4.78
2025	65.8	81.7	64.8	86.7	4.78
2030	65.8	83.2	64.8	86.9	4.78
2035	65.8	84.2	64.8	86.9	4.78
2040	65.8	84.6	64.8	87.0	4.78
2045	65.8	84.8	64.8	87.1	4.78
2050	65.8	84.9	64.8	87.1	4.78
2055	65.8	85.0	64.8	87.2	4.78

NOTES: 1. The coverage rates, insured status rates, and retirement prevalence are age-adjusted to the male or female population, respectively, as of April 1, 1970. The disability incidence rates are age-adjusted to the male or female population, respectively, as of July 1, 1977, per 1,000.

2. The coverage rates are adjusted to the population aged 15 to 74. The fully insured and retirement prevalence rates are adjusted to the population aged 62 and over. The disability insured and disability incidence rates are adjusted to the population aged 20-64.

3. The coverage rates and insured status rates are adjusted to the total population in each applicable age group. The retirement prevalence rates are adjusted to the fully insured population. The disability incidence rates are adjusted to the disability insured population less those receiving disability insurance benefits.

Table 2a. Projected Male Population, by Age Group

Age Group	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
0-4	8,685	9,888	9,527	10,060	10,388	10,456	10,940	11,106
5-9	8,704	9,644	9,783	9,731	10,427	10,423	10,779	11,124
10-14	9,397	8,831	10,033	9,675	10,208	10,536	10,604	11,087
15-19	10,826	8,837	9,777	9,916	9,864	10,557	10,552	10,906
20-24	11,051	9,473	8,920	10,110	9,755	10,281	10,603	10,669
25-29	10,208	10,876	8,931	9,860	9,995	9,943	10,622	10,616
30-34	9,155	11,128	9,588	9,050	10,221	9,871	10,387	10,704
35-39	7,408	10,231	10,905	8,995	9,912	10,047	9,998	10,668
40-44	6,086	9,072	11,024	9,526	9,004	10,160	9,822	10,335
45-49	5,744	7,240	10,005	10,678	8,836	9,744	9,887	9,851
50-54	5,882	5,822	8,704	10,601	9,192	8,715	9,848	9,542
55-59	5,667	5,314	6,750	9,365	10,032	8,341	9,234	9,401
60-64	4,783	5,163	5,180	7,802	9,556	8,341	7,961	9,038
65-69	3,908	4,603	4,399	5,661	7,926	8,558	7,178	8,021
70-74	2,913	3,483	3,854	3,936	6,009	7,442	6,570	6,348
75-79	1,784	2,383	2,907	2,839	3,723	5,290	5,776	4,907
80-84	1,030	1,376	1,728	1,959	2,041	3,174	3,981	3,564
over 84	762	937	1,344	1,747	1,867	2,285	3,333	3,944
under 20	37,613	37,200	39,120	39,382	40,888	41,971	42,875	44,225
20-64	65,983	74,318	80,006	85,987	86,503	85,443	88,362	90,823
over 64	10,397	12,782	14,231	16,142	21,566	26,749	26,839	26,783
total	113,993	124,300	133,356	141,511	148,956	154,162	158,077	161,831
				ratio to total male population (in percent)				
under 20	32.9	29.9	29.3	27.8	27.4	27.2	27.1	27.3
20-64	57.8	59.7	59.9	60.7	58.0	55.4	55.8	56.1
over 64	9.1	10.2	10.6	11.4	14.4	17.3	16.9	16.5

NOTE: The figures, which 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 the other geographical areas covered by the OASDI system. Age refers to "age last birthday".

Table 2b. Projected Female Population, by Age Group

Age Group	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
0-4	8,295	9,448	9,101	9,610	9,923	9,988	10,451	10,610
5-9	8,315	9,228	9,358	9,307	9,971	9,967	10,307	10,638
10-14	9,023	8,451	9,603	9,259	9,767	10,081	10,145	10,608
15-19	10,422	8,474	9,387	9,517	9,466	10,130	10,126	10,465
20-24	10,743	9,214	8,648	9,797	9,453	9,960	10,271	10,335
25-29	10,005	10,670	8,738	9,648	9,777	9,727	10,386	10,381
30-34	9,056	10,978	9,465	8,904	10,047	9,706	10,210	10,520
35-39	7,401	10,131	10,800	8,885	9,792	9,921	9,872	10,529
40-44	6,148	9,076	10,990	9,499	8,947	10,084	9,749	10,252
45-49	5,813	7,352	10,052	10,722	8,842	9,745	9,880	9,838
50-54	6,123	6,036	8,907	10,790	9,347	8,821	9,945	9,628
55-59	6,144	5,609	7,110	9,726	10,389	8,594	9,486	9,632
60-64	5,452	5,747	5,703	8,427	10,225	8,887	9,413	9,499
65-69	4,823	5,555	5,120	6,521	8,941	9,577	7,953	8,807
70-74	4,045	4,679	4,998	5,002	7,425	9,043	7,895	7,509
75-79	2,860	3,759	4,436	4,141	5,322	7,347	7,911	6,609
80-84	1,990	2,691	3,252	3,547	3,600	5,414	6,657	5,871
over 84	1,826	2,660	3,962	5,189	5,614	6,622	9,371	11,511
under 20	36,055	35,601	37,449	37,692	39,128	40,165	41,029	42,321
20-64	66,884	74,813	80,413	86,397	86,820	85,445	88,212	90,614
over 64	15,544	19,344	21,767	24,399	30,903	38,003	39,786	40,308
total	118,483	129,758	139,629	148,488	156,851	163,614	169,028	173,243
				ratio to total female population (in percent)				
under 20	30.4	27.4	26.8	25.3	24.9	24.5	24.2	24.4
20-64	56.4	57.6	57.5	58.1	55.3	52.2	52.1	52.3
over 64	13.1	14.9	15.5	16.4	19.7	23.2	23.5	23.2

NOTE: The figures, which 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 the other geographical areas covered by the OASDI system. Age refers to "age last birthday".

Table 2c. Projected Total Population, by Age Group

Age Group	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
0-4	16,980	19,336	18,627	19,670	20,312	20,444	21,391	21,716
5-9	17,020	18,873	19,141	19,038	20,398	20,390	21,086	21,763
10-14	18,421	17,282	19,636	18,934	19,975	20,616	20,749	21,695
15-19	21,247	17,311	19,164	19,433	19,331	20,686	20,678	21,371
20-24	21,794	18,687	17,568	19,907	19,208	20,240	20,875	21,004
25-29	20,213	21,547	17,669	19,508	19,772	19,670	21,008	20,997
30-34	18,211	22,106	19,053	17,953	20,268	19,576	20,579	21,223
35-39	14,809	20,362	21,703	17,880	19,704	19,968	19,870	21,197
40-44	12,234	18,148	22,014	19,025	17,952	20,244	19,571	20,587
45-49	11,558	14,592	20,057	21,400	17,678	19,489	19,767	19,689
50-54	12,005	11,858	17,611	21,391	18,540	17,537	19,793	19,170
55-59	11,810	10,922	13,860	19,091	20,421	16,935	18,720	19,032
60-64	10,234	10,910	10,884	16,229	19,780	17,228	16,374	18,537
65-69	8,731	10,158	9,519	12,182	16,867	18,136	15,131	16,827
70-74	6,959	8,162	8,851	8,938	13,435	16,484	14,465	13,857
75-79	4,643	6,142	7,342	6,979	9,045	12,637	13,687	11,516
80-84	3,020	4,068	4,980	5,506	5,641	8,587	10,638	9,435
over 84	2,588	3,597	5,305	6,937	7,481	8,907	12,703	15,455
under 20	73,668	72,801	76,568	77,074	80,016	82,136	83,904	86,546
20-64	132,867	149,131	160,419	172,384	173,323	170,888	176,575	181,438
over 64	25,941	32,126	35,998	40,541	52,469	64,752	66,625	67,091
total	232,476	254,059	272,985	290,000	305,807	317,776	327,104	335,074
				ratio to total population (in percent)				
under 20	31.6	28.6	28.0	26.5	26.1	25.8	25.6	25.8
20-64	57.1	58.6	58.7	59.4	56.6	53.7	53.9	54.1
over 64	11.1	12.6	13.1	13.9	17.1	20.3	20.3	20.0

NOTE: The figures, which 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 the 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	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
16-19	6,512	6,294	6,617	6,695	6,660	7,153	7,141	7,381
20-24	10,151	9,048	8,412	9,534	9,199	9,695	9,999	10,061
25-29	9,268	10,076	8,288	9,150	9,275	9,227	9,857	9,852
30-34	8,173	10,240	8,850	8,353	9,434	9,121	9,598	9,880
35-39	6,600	9,263	9,725	8,015	8,832	8,962	8,918	9,516
40-44	5,059	7,573	9,073	7,840	7,410	8,362	8,084	8,506
45-49	4,566	5,767	8,084	8,628	7,139	7,873	7,989	7,960
50-54	4,615	4,434	6,728	8,195	7,105	6,737	7,613	7,376
55-59	4,317	3,925	5,002	6,977	7,514	6,247	6,916	7,041
60-64	3,096	3,306	3,362	5,103	6,250	5,463	5,214	5,920
65-69	1,498	2,094	1,672	2,151	3,012	3,252	2,728	3,048
70+	1,036	1,456	1,416	1,509	1,964	2,620	2,831	2,702
total	64,891	73,476	77,229	82,150	83,794	84,712	86,888	89,243
				ratio to male population by age group (in percent)				
16-19	75	89	85	84	84	85	85	85
20-24	92	96	94	94	94	94	94	94
25-29	91	93	93	93	93	93	93	93
30-34	89	92	92	92	92	92	92	92
35-39	89	91	89	89	89	89	89	89
40-44	83	84	82	82	82	82	82	82
45-49	79	80	81	81	81	81	81	81
50-54	78	76	77	77	77	77	77	77
55-59	76	74	74	75	75	75	75	75
60-64	65	64	65	65	65	66	66	66
65-69	38	45	38	38	38	38	38	38
70+	16	18	14	14	14	14	14	14

NOTE: The figures include all persons aged 16 and over, on a calendar-age basis, who have had some taxable earnings during the year.

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

Age Group	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
16-19	5,468	5,896	5,895	5,969	5,929	6,377	6,367	6,571
20-24	8,609	7,921	7,697	8,719	8,413	8,864	9,141	9,198
25-29	6,864	8,299	6,824	7,535	7,636	7,597	8,111	8,108
30-34	5,865	8,374	7,392	6,945	7,837	7,580	7,974	8,216
35-39	4,733	7,559	7,798	6,459	7,109	7,213	7,177	7,655
40-44	3,806	6,683	7,781	6,725	6,334	7,139	6,902	7,258
45-49	3,364	5,277	6,564	7,001	5,774	6,373	6,452	6,424
50-54	3,230	3,898	5,371	6,722	5,823	5,495	6,196	5,998
55-59	2,907	2,872	3,932	5,641	6,078	5,027	5,549	5,635
60-64	1,990	2,107	2,161	3,261	3,957	3,439	3,256	3,676
65-69	900	601	1,085	1,415	1,940	2,078	1,726	1,911
70+	536	388	932	1,001	1,230	1,592	1,783	1,764
total	48,272	59,875	63,432	67,393	68,060	68,774	70,634	72,414
				ratio to female population by age group (in percent)				
16-19	66	87	79	78	78	79	79	79
20-24	80	86	89	89	89	89	89	89
25-29	69	78	78	78	78	78	78	78
30-34	65	76	78	78	78	78	78	78
35-39	64	75	72	73	73	73	73	73
40-44	62	74	71	71	71	71	71	71
45-49	58	72	65	65	65	65	65	65
50-54	53	65	60	62	62	62	62	62
55-59	47	51	55	58	59	59	59	59
60-64	37	37	38	39	39	39	39	39
65-69	19	11	21	22	22	22	22	22
70+	5	3	6	6	6	6	6	6

NOTE: The figures include all persons aged 16 and over, on a calendar-age basis, who have had some taxable earnings during the year.

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

(in billions)

Calendar Year	Total Earnings Taxable			Taxable Payroll
	Employees	Employers	Self-Employed	
1960	$ 184.4	$ 188.6	$ 18.4	$ 200.3
1965	223.2	230.8	19.9	241.8
1970	379.4	388.3	36.9	404.0
1975	614.2	620.4	43.5	648.1
1976	681.7	688.2	48.4	719.1
1977	753.2	760.5	52.4	793.9
1978	845.6	855.8	58.4	891.7
1979	986.1	994.2	71.4	1,039.7
1980	1,087.7	1,095.6	77.4	1,145.4
1985	1,934.1	1,947.5	132.3	2,040.0
1990	3,117.4	3,139.1	208.6	3,284.7
1995	4,614.2	4,646.3	308.8	4,861.9
2000	6,505.2	6,550.5	435.4	6,854.4
2005	8,955.9	9,018.2	599.4	9,436.6
2010	12,136.6	12,221.0	812.3	12,788.0
2015	16,244.1	16,357.1	1,087.2	17,116.0
2020	21,554.1	21,704.0	1,442.6	22,711.0
2025	28,618.4	28,817.5	1,915.4	30,154.5
2030	38,121.5	38,386.7	2,551.4	40,167.7
2035	51,007.7	51,362.5	3,413.9	53,745.5
2040	68,414.2	68,890.1	4,578.9	72,086.3
2045	91,685.5	92,323.2	6,136.4	96,606.7
2050	122,851.3	123,705.8	8,222.3	129,445.2
2055	164,482.7	165,626.7	11,008.7	173,311.2

NOTES: 1. Figures for the period 1975-79 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 employees do not pay taxes on multi-employer excess wages while employers do.

3. The taxable payroll is a theoretical figure defined to be that amount which when multiplied by the combined employer-employee tax rate, 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	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
20-24	9,946	8,620	8,117	9,200	8,877	9,356	9,649	9,709
25-29	10,004	10,658	8,752	9,663	9,795	9,744	10,410	10,404
30-34	8,789	10,683	9,204	8,688	9,812	9,476	9,972	10,276
35-39	7,038	9,719	10,358	8,545	9,416	9,545	9,489	10,135
40-44	5,721	8,528	10,363	8,954	8,464	9,550	9,233	9,715
45-49	5,227	6,588	9,105	9,717	8,041	8,867	8,997	8,964
50-54	5,411	5,356	8,008	9,753	8,457	8,018	9,060	8,779
55-59	5,270	4,942	6,278	8,709	9,330	7,757	8,588	8,743
60-64	4,544	4,905	4,921	7,412	9,078	7,924	7,563	8,586
65-69	3,713	4,373	4,179	5,378	7,530	8,130	6,819	7,620
70-74	2,767	3,309	3,661	3,739	5,709	7,070	6,242	6,031
75-79	1,695	2,264	2,762	2,696	3,537	5,026	5,487	4,662
80-84	979	1,307	1,642	1,861	1,939	3,015	3,782	3,386
over 84	655	862	1,277	1,660	1,774	2,171	3,166	3,747
total	71,759	82,114	88,627	95,975	101,759	105,649	108,466	110,757
				ratio to male population by age group (in percent)				
20-24	90	91	91	91	91	91	91	91
25-29	98	98	98	98	98	98	98	98
30-34	96	96	96	96	96	96	96	96
35-39	95	95	95	95	95	95	95	95
40-44	94	94	94	94	94	94	94	94
45-49	91	91	91	91	91	91	91	91
50-54	92	92	92	92	92	92	92	92
55-59	93	93	93	93	93	93	93	93
60-64	95	95	95	95	95	95	95	95
65-69	95	95	95	95	95	95	95	95
70-74	95	95	95	95	95	95	95	95
75-79	95	95	95	95	95	95	95	95
80-84	95	95	95	95	95	95	95	95
over 84	86	92	95	95	95	95	95	95

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	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
20-24	8,380	7,371	6,918	7,838	7,562	7,968	8,217	8,268
25-29	8,904	9,816	8,039	8,876	8,995	8,949	9,555	9,551
30-34	7,516	9,441	8,329	7,836	8,841	8,541	8,985	9,258
35-39	5,551	8,409	9,396	7,730	8,519	8,631	8,589	9,160
40-44	4,365	7,079	9,232	8,169	7,694	8,672	8,384	8,817
45-49	3,953	5,440	8,243	9,114	7,516	8,283	8,398	8,362
50-54	4,102	4,286	6,947	9,064	7,945	7,498	8,453	8,184
55-59	4,055	3,814	5,333	7,975	8,831	7,305	8,063	8,187
60-64	3,489	3,908	4,106	6,657	8,691	7,554	7,151	8,074
65-69	2,990	3,777	3,533	4,956	7,421	8,140	6,760	7,486
70-74	2,387	3,041	3,399	3,601	5,866	7,687	6,711	6,383
75-79	1,602	2,331	3,016	2,857	4,045	6,098	6,724	5,618
80-84	975	1,561	2,114	2,412	2,592	4,277	5,658	4,990
over 84	694	1,330	2,298	3,373	3,761	4,768	7,403	9,669
total	58,963	71,604	80,903	90,458	98,279	104,371	109,051	112,007
				ratio to female population by age group (in percent)				
20-24	78	80	80	80	80	80	80	80
25-29	89	92	92	92	92	92	92	92
30-34	83	86	88	88	88	88	88	88
35-39	75	83	87	87	87	87	87	87
40-44	71	78	84	86	86	86	86	86
45-49	68	74	82	85	85	85	85	85
50-54	67	71	78	84	85	85	85	85
55-59	66	68	75	82	85	85	85	85
60-64	64	68	72	79	85	85	85	85
65-69	62	68	69	76	83	85	85	85
70-74	59	65	68	72	79	85	85	85
75-79	56	62	68	69	76	83	85	85
80-84	49	58	65	68	72	79	85	85
over 84	38	50	58	65	67	72	79	84

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	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
under 25	10,646	9,127	8,652	9,818	9,452	9,988	10,285	10,352
25-29	8,855	9,294	7,657	8,529	8,582	8,571	9,150	9,134
30-34	7,897	9,442	8,019	7,689	8,643	8,340	8,807	9,046
35-39	6,435	8,785	9,202	7,627	8,476	8,528	8,524	9,084
40-44	5,261	7,854	9,419	8,036	7,713	8,661	8,367	8,833
45-49	4,875	6,207	8,502	8,917	7,415	8,243	8,301	8,307
50-54	4,875	4,954	7,425	8,922	7,640	7,353	8,267	8,004
55-59	4,838	4,538	5,891	8,078	8,505	7,105	7,927	8,009
60-64	4,511	4,917	5,029	7,533	9,153	7,973	7,670	8,655
total	58,114	65,128	69,796	75,148	75,580	74,762	77,298	79,425
				ratio to male fully-insured population by age group (in percent)				
under 25	87	87	87	87	87	87	87	87
25-29	89	89	89	89	89	89	89	89
30-34	88	88	88	88	88	88	88	88
35-39	90	90	90	90	90	90	90	90
40-44	91	91	91	91	91	91	91	91
45-49	91	92	92	92	92	92	92	92
50-54	90	91	91	91	91	91	91	91
55-59	91	91	92	92	92	92	92	92
60-64	89	91	91	91	91	91	91	91

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

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

Age Group	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
under 25	8,349	7,302	6,895	7,822	7,529	7,954	8,190	8,243
25-29	6,456	7,515	6,393	7,112	7,161	7,151	7,628	7,618
30-34	4,476	6,287	5,785	5,572	6,251	6,037	6,373	6,544
35-39	3,305	5,520	6,435	5,361	5,960	5,993	5,990	6,380
40-44	2,811	4,933	6,557	5,715	5,470	6,136	5,927	6,255
45-49	2,780	4,208	6,447	6,997	5,791	6,435	6,477	6,477
50-54	2,939	3,305	5,500	7,064	6,102	5,848	6,560	6,348
55-59	3,013	2,914	4,257	6,338	6,885	5,722	6,363	6,417
60-64	2,751	3,070	3,292	5,308	6,858	5,946	5,679	6,372
total	36,878	45,065	51,563	57,289	58,007	57,222	59,188	60,653
				ratio to female fully-insured population by age group (in percent)				
under 25	81	81	82	82	82	82	82	82
25-29	72	77	80	80	80	80	80	80
30-34	57	66	70	70	70	70	70	70
35-39	58	65	69	70	70	70	70	70
40-44	64	69	71	71	71	71	71	71
45-49	71	76	78	78	78	78	78	78
50-54	72	76	78	78	78	78	78	78
55-59	74	76	77	78	78	78	78	78
60-64	71	71	71	71	71	71	71	71

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

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

Age Group	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
62-64	974	1,266	1,251	1,887	2,348	2,059	1,925	2,235
65-69	3,342	4,067	3,886	5,002	7,003	7,561	6,342	7,087
70-74	2,739	3,309	3,661	3,739	5,709	7,070	6,242	6,031
75-79	1,695	2,264	2,762	2,696	3,537	5,026	5,487	4,662
80-84	979	1,307	1,642	1,861	1,939	3,015	3,782	3,386
over 84	655	862	1,277	1,660	1,774	2,171	3,166	3,747
total	10,384	13,075	14,479	16,845	22,310	26,902	26,944	27,148
				ratio to male fully-insured population by age group (in percent)				
62-64	38	44	44	44	44	44	44	44
65-69	90	93	93	93	93	93	93	93
70-74	99	100	100	100	100	100	100	100
75-79	100	100	100	100	100	100	100	100
80-84	100	100	100	100	100	100	100	100
over 84	100	100	100	100	100	100	100	100

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	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
62-64	998	1,248	1,296	2,102	2,788	2,438	2,261	2,612
65-69	2,631	3,449	3,252	4,582	6,861	7,524	6,257	6,937
70-74	2,248	2,888	3,251	3,468	5,649	7,394	6,462	6,156
75-79	1,510	2,211	2,879	2,743	3,895	5,863	6,458	5,406
80-84	919	1,477	2,010	2,305	2,491	4,104	5,417	4,783
over 84	653	1,251	2,166	3,190	3,572	4,548	7,048	9,176
total	8,959	12,524	14,854	18,390	25,256	31,871	33,903	35,070
				ratio to female fully-insured population by age group (in percent)				
62-64	50	54	54	54	54	54	54	54
65-69	88	91	92	93	93	92	93	93
70-74	94	95	96	96	96	96	96	96
75-79	94	95	96	96	96	96	96	96
80-84	94	95	95	96	96	96	96	96
over 84	94	94	94	95	95	95	95	95

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 in Current-Payment Status, by Age Group

Age Group	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
0-24	25	23	22	26	25	26	27	27
25-29	64	58	50	55	57	57	61	61
30-34	88	92	86	82	92	89	93	97
35-39	97	137	143	122	134	137	136	144
40-44	120	185	221	201	190	213	206	216
45-49	175	244	319	341	287	313	320	319
50-54	279	298	455	557	496	468	523	509
55-59	452	469	611	860	914	769	837	860
60-64	636	715	765	1,138	1,390	1,241	1,176	1,313
total	1,936	2,201	2,672	3,382	3,585	3,313	3,379	3,546
				ratio to male disability-insured population by age group (in percent)				
0-24	.2	.3	.2	.3	.3	.3	.3	.3
25-29	.7	.6	.6	.6	.7	.7	.7	.7
30-34	1.1	1.0	1.1	1.1	1.1	1.1	1.1	1.1
35-39	1.5	1.6	1.5	1.6	1.6	1.6	1.6	1.6
40-44	2.3	2.4	2.3	2.6	2.5	2.5	2.5	2.5
45-49	3.6	3.6	3.7	3.8	3.9	3.8	3.9	3.8
50-54	5.7	6.0	6.1	6.2	6.5	6.5	6.3	6.4
55-59	9.3	10.3	10.3	10.7	10.7	10.8	10.6	10.7
60-64	14.1	14.5	15.2	15.1	15.2	15.6	15.3	15.2

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

Table 8b. Projected Numbers of Female Disabled-Worker Beneficiaries in Current-Payment Status, by Age Group

Age Group	1980	1990	2000	2010	2020	2030	2040	2050
				number (in thousands)				
0-24	9	9	8	10	9	10	10	10
25-29	25	28	25	28	28	28	29	29
30-34	36	48	48	46	52	50	52	54
35-39	39	69	84	74	81	83	82	87
40-44	50	93	132	126	120	134	130	135
45-49	78	114	190	221	187	204	209	208
50-54	135	153	268	364	332	312	349	339
55-59	235	239	353	553	617	519	563	578
60-64	324	358	410	679	890	803	757	842
total	931	1,111	1,518	2,101	2,316	2,143	2,181	2,282
	ratio to female disability-insured population by age group (in percent)							
0-24	.1	.1	.1	.1	.1	.1	.1	.1
25-29	.4	.4	.4	.4	.4	.4	.4	.4
30-34	.8	.8	.8	.8	.8	.8	.8	.8
35-39	1.2	1.3	1.3	1.4	1.3	1.4	1.4	1.4
40-44	1.8	1.9	2.0	2.2	2.2	2.2	2.2	2.2
45-49	2.8	2.7	2.9	3.1	3.2	3.2	3.2	3.2
50-54	4.6	4.6	4.9	5.1	5.4	5.3	5.3	5.3
55-59	7.8	8.2	8.3	8.7	9.0	9.1	8.8	9.0
60-64	11.8	11.7	12.4	12.8	13.0	13.5	13.3	13.2

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

Table 9a. Past and Projected Numbers of Beneficiaries in Current-Payment Status Who Are Retired Workers or Dependents of Retired Workers

(in thousands)

Calendar Year	Retired Worker	Dependents of Retired Worker			
		Spouse			
		With Child	Aged	Child	Total
1960	7,813	110	2,114	260	10,297
1965	10,843	170	2,431	429	13,873
1970	13,066	166	2,484	535	16,251
1975	16,210	193	2,642	633	19,678
1976	16,789	200	2,667	638	20,294
1977	17,380	204	2,695	670	20,949
1978	17,924	202	2,740	662	21,528
1979	18,590	191	2,775	651	22,207
1980	19,291	194	2,799	646	22,930
1985	22,491	189	2,915	625	26,220
1990	25,701	188	2,988	618	29,495
1995	27,777	232	3,038	602	31,649
2000	29,333	261	2,958	615	33,167
2005	31,472	284	2,912	662	35,330
2010	35,235	321	2,960	771	39,287
2015	40,814	370	3,052	909	45,145
2020	47,566	414	3,114	1,043	52,137
2025	54,263	441	3,154	1,137	58,995
2030	58,773	441	3,105	1,148	63,467
2035	60,735	429	2,982	1,115	65,261
2040	60,847	417	2,805	1,073	65,142
2045	61,100	420	2,727	1,087	65,334
2050	62,218	438	2,734	1,137	66,527
2055	63,550	450	2,804	1,171	67,975

NOTE: The figures are as of June 30.

Table 9b. Past and Projected Numbers of Beneficiaries in Current-Payment Status Who Are Survivors of Deceased Workers

(in thousands)

Calendar Year	Spouse			Child	Parent	Total
	With Child	Disabled	Aged			
1960	388	--	1,471	1,549	35	3,443
1965	472	--	2,228	1,900	36	4,636
1970	514	45	3,105	2,673	29	6,366
1975	568	101	3,722	2,905	22	7,318
1976	576	115	3,823	2,911	21	7,446
1977	573	122	3,920	2,843	19	7,477
1978	569	128	4,046	2,800	18	7,561
1979	567	129	4,131	2,739	17	7,583
1980	566	129	4,226	2,645	15	7,581
1985	529	132	4,589	2,333	10	7,593
1990	494	127	4,807	2,113	8	7,549
1995	548	118	4,705	2,139	7	7,517
2000	567	118	4,643	2,173	7	7,508
2005	556	130	4,541	2,157	7	7,391
2010	541	142	4,507	2,112	7	7,309
2015	535	145	4,505	2,085	7	7,277
2020	527	145	4,542	2,098	7	7,319
2025	516	135	4,578	2,121	7	7,357
2030	510	121	4,605	2,131	7	7,374
2035	509	115	4,631	2,129	7	7,391
2040	514	117	4,567	2,124	7	7,329
2045	518	122	4,523	2,139	7	7,309
2050	519	122	4,425	2,157	7	7,230
2055	517	119	4,359	2,169	7	7,171

NOTE: The figures are as of June 30.

Table 9c. Past and Projected Numbers of Beneficiaries in Current-Payment Status Who Are Disabled Workers or Dependents of Disabled Workers

(in thousands)

Calendar Year	Disabled Worker	Dependents of Disabled Worker			
		Spouse			
		With Child	Aged	Child	Total
1960	371	37	19	94	521
1965	944	158	29	518	1,649
1970	1,436	230	40	861	2,568
1975	2,363	367	61	1,333	4,125
1976	2,602	399	69	1,462	4,532
1977	2,755	410	71	1,496	4,732
1978	2,858	415	76	1,512	4,861
1979	2,877	404	79	1,466	4,826
1980	2,866	394	77	1,413	4,750
1985	2,991	366	69	1,295	4,721
1990	3,313	386	74	1,358	5,131
1995	3,622	473	94	1,309	5,498
2000	4,192	518	107	1,471	6,288
2005	4,881	578	121	1,661	7,241
2010	5,479	637	134	1,843	8,093
2015	5,824	665	142	1,986	8,617
2020	5,899	669	143	2,088	8,799
2025	5,708	657	139	2,087	8,591
2030	5,454	634	132	1,996	8,216
2035	5,410	632	131	1,950	8,123
2040	5,560	644	135	1,984	8,323
2045	5,756	664	140	2,067	8,627
2050	5,829	673	142	2,113	8,757
2055	5,828	675	142	2,114	8,759

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 (in thousands)	OASDI Beneficiaries (in thousands)	Covered Workers per OASDI Beneficiary	OASDI Beneficiaries per 100 Covered Workers
1960	72,530	14,262	5.1	20
1965	80,680	20,157	4.0	25
1970	93,090	25,753	3.6	28
1975	100,200	31,369	3.2	31
1976	103,000	32,476	3.2	32
1977	106,100	33,333	3.2	31
1978	110,680	34,068	3.2	31
1979	114,000	34,737	3.3	30
1980	114,300	35,359	3.2	31
1985	126,600	38,569	3.3	30
1990	134,800	42,184	3.2	31
1995	137,800	44,664	3.1	32
2000	140,700	46,963	3.0	33
2005	145,900	49,962	2.9	34
2010	149,500	54,689	2.7	37
2015	151,300	61,039	2.5	40
2020	151,800	68,255	2.2	45
2025	152,400	74,943	2.0	49
2030	153,500	79,057	1.9	52
2035	155,300	80,775	1.9	52
2040	157,500	80,794	1.9	51
2045	159,600	81,270	2.0	51
2050	161,700	82,516	2.0	51
2055	163,700	83,905	2.0	51

NOTES: 1. Covered workers include those with taxable earnings at some time during the year.

2. OASDI beneficiaries include those with monthly benefits in current-payment status as of June 30, and include special age-72 beneficiaries.

Table 11. Past and Projected Average Annual Benefits Paid to Retired-Worker Beneficiaries and Disabled-Worker Beneficiaries, by Sex

Calendar Year	Retired Workers		Disabled Workers	
	Male	Female	Male	Female
1960	$ 973	$ 691	$ 1,111	$ 921
1965	1,107	802	1,223	1,022
1970	1,550	1,143	1,652	1,351
1975	2,622	1,935	2,817	2,154
1976	2,866	2,099	3,085	2,324
1977	3,109	2,259	3,353	2,502
1978	3,374	2,426	3,646	2,696
1979	3,741	2,660	4,045	2,971
1980	4,198	2,963	4,417	3,236
1985	7,025	4,958	7,006	5,133
1990	10,101	7,040	9,821	7,195
1995	13,778	9,519	13,597	9,961
2000	18,230	12,493	18,895	13,843
2005	23,780	16,284	25,504	18,684
2010	31,906	22,052	34,189	25,047
2015	42,922	30,147	45,493	33,328
2020	57,599	41,117	60,474	44,303
2025	76,309	55,193	80,525	58,993
2030	100,971	73,752	106,880	78,301
2035	133,063	97,770	141,744	103,843
2040	175,411	128,975	187,482	137,351
2045	233,503	171,450	247,920	181,627
2050	310,221	227,701	328,348	240,550
2055	410,991	301,875	434,207	318,103

NOTE: The average annual benefits exclude retroactive payments and payments attributable to dual entitlement to a secondary benefit.

Table 12. 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			
1980	3,383	5	37	277	10	45
1990	4,840	10	40	456	12	45
2000	5,238	10	40	598	12	45
2010	6,261	10	40	724	12	45
2020	9,917	10	40	944	12	45
2030	13,062	10	40	1,184	12	45
2040	12,632	10	40	1,281	12	45
2050	12,655	10	40	1,237	12	45
			female			
1980	3,406	28	33	3,140	48	47
1990	4,830	29	33	4,564	49	48
2000	5,269	29	33	5,330	49	48
2010	6,272	28	32	5,863	48	48
2020	9,895	27	31	7,132	48	47
2030	13,046	26	31	9,497	47	47
2040	12,670	25	30	11,396	47	46
2050	12,691	25	30	12,069	47	46

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 beneficiary has not actually applied for his or her retired-worker benefit, are not included in this tabulation. There are relatively few such spouses because married couples generally retire concurrently. However, the number of surviving spouses in this category is substantial.

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 13a. Past and Projected Benefit Payments to Retired Workers and Dependents of Retired Workers, as Percent of Taxable Payroll

Calendar Year	Retired Worker	Dependents of Retired Worker			
		Spouse			
		With Child	Aged	Child	Total
1960	3.52	.02	.50	.05	4.09
1965	4.54	.03	.54	.07	5.19
1970	4.56	.02	.48	.08	5.14
1975	5.88	.03	.55	.10	6.55
1976	5.99	.03	.55	.10	6.66
1977	6.07	.03	.55	.10	6.75
1978	5.97	.03	.53	.10	6.63
1979	5.81	.02	.51	.10	6.44
1980	6.21	.02	.54	.10	6.87
1985	6.68	.02	.54	.09	7.33
1990	6.64	.02	.49	.08	7.23
1995	6.74	.02	.47	.07	7.31
2000	6.64	.02	.43	.07	7.16
2005	6.72	.02	.41	.07	7.22
2010	7.46	.03	.41	.08	7.98
2015	8.74	.03	.44	.09	9.30
2020	10.35	.03	.47	.11	10.97
2025	11.83	.04	.49	.12	12.48
2030	12.76	.04	.49	.12	13.41
2035	13.00	.03	.47	.11	13.62
2040	12.77	.03	.43	.11	13.35
2045	12.71	.03	.42	.11	13.27
2050	12.83	.03	.42	.11	13.55
2055	12.97	.03	.42	.11	13.55
averages:					
1980-2004	6.65	.02	.49	.08	7.24
2005-2029	9.50	.03	.45	.10	10.09
2030-2054	12.83	.03	.44	.11	13.42
1980-2054	9.66	.03	.46	.10	10.25

Table 13b. Past and Projected Benefit Payments to Survivors of Deceased Workers and Lump-Sum Death Payments, as Percent of Taxable Payroll

Calendar Year	Spouse			Child	Parent	Total Monthly Benefits	Lump-Sum Death Payments
	With Child	Disabled	Aged				
1960	.14	---	.53	.47	.01	1.16	.08
1965	.16	---	.84	.63	.01	1.65	.09
1970	.14	.01	.99	.68	.01	1.84	.07
1975	.16	.03	1.45	.75	.01	2.40	.05
1976	.15	.03	1.47	.75	.01	2.41	.05
1977	.15	.03	1.49	.73	.01	2.40	.04
1978	.14	.03	1.46	.68	.01	2.32	.04
1979	.14	.03	1.42	.64	.01	2.23	.03
1980	.14	.03	1.51	.65	.00	2.33	.03
1985	.12	.03	1.56	.53	.00	2.25	.02
1990	.10	.02	1.45	.42	.00	2.00	.01
1995	.10	.02	1.39	.39	.00	1.90	.01
2000	.10	.02	1.30	.37	.00	1.79	.01
2005	.09	.02	1.23	.35	.00	1.69	.01
2010	.09	.02	1.22	.34	.00	1.66	.00
2015	.09	.02	1.24	.34	.00	1.68	.00
2020	.09	.02	1.30	.34	.00	1.75	.00
2025	.08	.02	1.36	.34	.00	1.81	.00
2030	.08	.02	1.40	.34	.00	1.85	.00
2035	.08	.02	1.43	.34	.00	1.87	.00
2040	.08	.02	1.43	.33	.00	1.86	.00
2045	.08	.02	1.43	.33	.00	1.86	.00
2050	.08	.02	1.41	.33	.00	1.84	.00
2055	.08	.02	1.38	.33	.00	1.81	.00
averages:							
1980-2004	.11	.02	1.43	.45	.00	2.01	.01
2005-2029	.09	.02	1.28	.34	.00	1.73	.00
2030-2054	.08	.02	1.42	.33	.00	1.85	.00
1980-2054	.09	.02	1.37	.38	.00	1.86	.01

Table 13c. Past and Projected Benefit Payments to Disabled Workers and Dependents of Disabled Workers, as Percent of Taxable Payroll

Calendar Year	Disabled Worker	Dependents of Disabled Worker			Total Monthly Benefits
		Spouse			
		With Child	Aged	Child	
1960	.24	.01	.00	.02	.28
1965	.52	.03	.01	.02	.28
1970	.61	.03	.01	.11	.76
1975	1.07	.05	.01	.17	1.30
1976	1.14	.05	.01	.18	1.39
1977	1.19	.05	.01	.19	1.44
1978	1.16	.05	.01	.19	1.40
1979	1.09	.05	.01	.17	1.32
1980	1.11	.05	.01	.17	1.34
1985	1.03	.03	.01	.12	1.19
1990	.98	.02	.01	.10	1.10
1995	1.00	.03	.01	.08	1.11
2000	1.14	.03	.01	.09	1.26
2005	1.29	.03	.01	.10	1.43
2010	1.43	.03	.01	.11	1.58
2015	1.51	.04	.01	.11	1.66
2020	1.53	.04	.01	.12	1.69
2025	1.48	.04	.01	.12	1.64
2030	1.41	.03	.01	.11	1.56
2035	1.39	.03	.01	.11	1.54
2040	1.41	.03	.01	.11	1.56
2045	1.44	.03	.01	.11	1.59
2050	1.44	.03	.01	.11	1.59
2055	1.42	.03	.01	.11	1.58
averages:					
1980-2004	1.07	.03	.01	.10	1.21
2005-2029	1.46	.03	.01	.11	1.61
2030-2054	1.42	.03	.01	.11	1.57
1980-2054	1.31	.03	.01	.11	1.46

Table 14. Past and Projected Expenditures as Percent of Taxable Payroll and Comparison with Scheduled Tax Rates

Calendar Year	OASI			DI			OASDI		
	Expenditures	Taxes	Balance	Expenditures	Taxes	Balance	Expenditures	Taxes	Balance
1960	5.59	5.50	- .09	.30	.50	+ .20	5.89	6.00	+ .11
1965	7.23	6.75	- .48	.70	.50	- .20	7.93	7.25	- .68
1970	7.32	7.30	- .02	.81	1.10	+ .29	8.12	8.40	+ .28
1975	9.29	8.75	- .54	1.36	1.15	- .21	10.65	9.90	- .75
1976	9.42	8.75	- .67	1.44	1.15	- .29	10.86	9.90	- .96
1977	9.47	8.75	- .72	1.50	1.15	- .35	10.97	9.90	-1.07
1978	9.30	8.55	- .75	1.45	1.55	+ .10	10.75	10.10	- .65
1979	8.95	8.66	- .29	1.36	1.50	+ .14	10.31	10.16	- .15
1980	9.48	8.66	- .82	1.39	1.50	+ .11	10.87	10.16	- .71
1985	9.79	9.50	- .29	1.22	1.90	+ .68	11.02	11.40	+ .38
1990	9.39	10.20	+ .81	1.13	2.20	+1.07	10.52	12.40	+1.88
1995	9.35	10.20	+ .85	1.14	2.20	+1.06	10.49	12.40	+1.91
2000	9.08	10.20	+1.12	1.29	2.20	+ .91	10.37	12.40	+2.03
2005	9.02	10.20	+1.18	1.46	2.20	+ .74	10.48	12.40	+1.92
2010	9.75	10.20	+ .45	1.62	2.20	+ .58	11.36	12.40	+1.04
2015	11.09	10.20	- .89	1.70	2.20	+ .50	12.79	12.40	- .39
2020	12.82	10.20	-2.62	1.73	2.20	+ .47	14.55	12.40	-2.15
2025	14.40	10.20	-4.20	1.68	2.20	+ .52	16.08	12.40	-3.68
2030	15.37	10.20	-5.17	1.60	2.20	+ .60	16.98	12.40	-4.58
2035	15.59	10.20	-5.39	1.57	2.20	+ .63	17.16	12.40	-4.76
2040	15.31	10.20	-5.11	1.59	2.20	+ .61	16.90	12.40	-4.50
2045	15.23	10.20	-5.03	1.63	2.20	+ .57	16.86	12.40	-4.46
2050	15.33	10.20	-5.13	1.63	2.20	+ .57	16.96	12.40	-4.56
2055	15.45	10.20	-5.25	1.61	2.20	+ .59	17.07	12.40	-4.67
averages:									
1980-2004	9.42	9.83	+ .41	1.24	2.02	+ .78	10.66	11.85	+1.19
2005-2029	11.92	10.20	-1.72	1.65	2.20	+ .55	13.57	12.40	-1.17
2030-2054	15.37	10.20	-5.17	1.61	2.20	+ .59	16.98	12.40	-4.58
1980-2054	12.24	10.08	-2.16	1.50	2.14	+ .64	13.74	12.22	-1.52

Table 15. Past and Projected Expenditures as Percent of Gross National Product

Calendar Year	OASI	DI	OASDI
1960	2.21	.12	2.33
1965	2.54	.25	2.79
1970	3.01	.33	3.34
1975	3.94	.58	4.51
1976	3.98	.61	4.59
1977	3.96	.63	4.58
1978	3.90	.61	4.51
1979	3.93	.60	4.53
1980	4.18	.61	4.79
1985	4.29	.54	4.83
1990	4.06	.49	4.55
1995	4.00	.49	4.49
2000	3.81	.54	4.35
2005	3.71	.60	4.32
2010	3.94	.65	4.59
2015	4.39	.68	5.07
2020	4.99	.67	5.66
2025	5.50	.64	6.14
2030	5.76	.60	6.36
2035	5.73	.58	6.31
2040	5.52	.57	6.09
2045	5.39	.58	5.97
2050	5.32	.57	5.89
2055	5.27	.55	5.82
averages:			
1980-2004	4.05	.53	4.58
2005-2029	4.67	.65	5.32
2030-2054	5.50	.58	6.08
1980-2054	4.74	.59	5.33

Table 16. Past and Projected Assets of the Trust Funds at the Beginning of the Year as Percent 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
1976	54	71	57
1977	47	48	47
1978	39	26	37
1979	30	30	30
1980	23	35	24
1985	-17	142	0
1990	-28	442	23
1995	12	902	109
2000	64	1,193	204
2005	127	1,330	295
2010	159	1,393	335
2015	135	1,482	315
2020	57	1,613	242
2025	a/	1,820	137
2030	a/	2,093	13
2035	a/	2,324	a/
2040	a/	2,483	a/
2045	a/	2,610	a/
2050	a/	2,780	a/
2055	a/	2,995	a/
trust fund is projected to be first exhausted in the year:	1981	b/	1983

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

b/ the fund is not projected to be exhausted within the projection period.

NOTE: The OASI and Total ratio for 1982 and later are theoretical because they are calculated on the assumption that the exhaustion of the OASI trust fund in 1981 can be resolved by allowing the fund to borrow money.

Table 17. Past and Projected Numbers of OASDI Beneficiaries by Broad Age Group 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	1,828	1,797	10,548	3	2	62
1965	2,729	3,627	13,977	3	3	73
1970	3,608	4,886	16,711	5	4	81
1975	4,250	6,888	20,080	5	6	87
1976	4,328	7,287	20,734	6	6	88
1977	4,337	7,628	21,412	6	6	88
1978	4,341	7,807	22,113	6	6	89
1979	4,196	7,815	22,798	6	6	90
1980	3,964	7,869	23,284	5	6	90
1985	3,537	8,008	26,988	5	6	93
1990	3,393	8,434	30,349	5	6	94
1995	3,292	9,016	32,352	5	6	94
2000	3,467	9,782	33,710	5	6	94
2005	3,650	11,276	35,033	5	7	94
2010	3,859	12,914	37,913	5	7	94
2015	4,081	13,913	43,043	5	8	94
2020	4,288	14,657	49,307	5	8	94
2025	4,372	14,524	56,043	5	8	94
2030	4,283	13,442	61,329	5	8	95
2035	4,194	13,192	63,386	5	8	95
2040	4,179	13,169	63,444	5	8	95
2045	4,278	13,932	63,060	5	8	95
2050	4,366	14,291	63,853	5	8	95
2055	4,394	14,264	65,244	5	8	95

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 beneficiareis on the long-range cost of the System is negligible. Age refers to "age last birthday".

Table 18. Projected Long-Range Income and Expenditures on a Present Value Basis

Item	Present Value (billion $)			As Percent of Taxable Payroll		
	OASI	DI	OASDI	OASI	DI	OASDI
			Open Group Concept			
Trust Fund Balance as of January 1, 1980	24.7	5.6	30.3	.03	.01	.03
Income:						
Net Contributions	9,396.7	1,997.6	11,394.3	10.04	2.13	12.18
Military Service and Prouty Reimbursements	8.8	3.2	12.0	.01	.00	.01
Total Income	9,405.5	2,000.7	11,406.3	10.05	2.14	12.19
Outgo:						
Benefit Payments	11,301.6	1,367.9	12,669.5	12.08	1.46	13.54
Administrative Expense	95.0	42.1	137.1	.10	.04	.15
Railroad Interchange	18.4	-8.9	9.5	.02	.01	.01
Total Outgo	11,415.0	1,401.1	12,816.1	12.20	1.50	13.70
Actuarial Surplus (+) or Deficiency (-)	-1,984.9	605.3	-1,379.6	-2.12	.65	-1.47
Payroll			93,578.1			
			Closed Group Concept			
Trust Fund Balance as of January 1, 1980	24.7	5.6	30.3	.07	.02	.08
Income:						
Net Contributions	3,507.7	727.9	4,235.6	9.85	2.04	11.89
Military Service and Prouty Reimbursements	7.3	2.4	9.6	.02	.01	.03
Total Income	3,514.9	730.3	4,245.2	9.87	2.05	11.92
Outgo:						
Benefit Payments	8,757.2	684.2	9,441.4	24.59	1.92	26.51
Administrative Expense	74.4	21.4	95.8	.21	.06	.27
Railroad Interchange	21.7	-4.2	17.5	.06	-.01	.05
Total Outgo	8,853.3	701.4	9,554.7	24.86	1.97	26.82
Actuarial Surplus (+) or Deficiency (-)	-5,313.7	34.6	-5,279.2	-14.92	.10	-14.82
Payroll			35,619.9			

NOTE: Present values are as of January 1, 1980. The open group figures include all projected income and outgo during the period 1980-2054. The closed group figures include all projected income and outgo due to earnings of workers who are aged 15 or older in 1980 (born in 1965 or earlier).

Table 19. Projected Normal Cost as Percent of Taxable Payroll for Persons Aged 15-19 in 1980

Type of Benefit	Normal Cost
Retired Worker	11.91
Dependents of Retired Worker	.51
Aged Spouse	.38
Spouse with Child	.03
Child	.10
Disabled Worker	1.35
Dependents of Disabled Worker	.12
Spouse	.04
Child	.09
Survivors of Deceased Worker	1.55
Aged Spouse	1.16
Disabled Spouse	.02
Child	.30
Spouse with Child	.08
Parent	.00
Lump-Sum Death Benefit	.00
Total Benefits	15.44
Administrative Expense	.16
Total	15.60

Table 20a. Projected Average OASDI Expenditures and Actuarial Balances Assuming Various Real-Wage Differentials

(as percent of taxable payroll)

Calendar Years	Ultimate Percentage in Wages - CPI		
	5 1/4 - 4	5 3/4 - 4	6 1/4 - 4
	average expenditures		
1980-2004	10.99	10.66	10.35
2005-2029	14.24	13.57	12.94
2030-2054	17.93	16.98	16.09
1980-2054	14.38	13.74	13.13
	actuarial balance		
1980-2004	+ .86	+1.19	+1.50
2005-2029	-1.84	-1.17	- .54
2030-2054	-5.73	-4.58	-3.69
1980-2054	-2.16	-1.52	- .91

NOTE: An ultimate real-wage differential of 1 3/4 percent is assumed in the intermediate cost projection.

Table 20b. Projected Average OASDI Expenditures and Actuarial Balances Assuming Various Rates of Increase in the Consumer Price Index

(as percent of taxable payroll)

Calendar Years	Ultimate Percentage in Wages - CPI		
	3 3/4 - 2	5 3/4 - 4	7 3/4 - 6
	average expenditures		
1980-2004	10.82	10.66	10.48
2005-2029	13.98	13.57	13.16
2030-2054	17.60	16.98	16.36
1980-2054	14.13	13.74	13.34
	actuarial balance		
1980-2004	+1.03	+1.19	+1.37
2005-2029	-1.58	-1.17	- .76
2030-2054	-5.40	-4.58	-3.96
1980-2054	-1.91	-1.52	-1.12

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

Table 20c. Projected Average OASDI Expenditures and Actuarial Balances Assuming Various Total Fertility Rates

(as percent of taxable payroll)

Calendar Years	Ultimate Total Fertility Rate 1.5	2.1	2.5
	average expenditures		
1980-2004	10.67	10.66	10.65
2005-2029	14.78	13.57	12.89
2030-2054	22.25	16.98	14.54
1980-2054	15.90	13.74	12.70
	actuarial balance		
1980-2004	+1.18	+1.19	+1.20
2005-2029	-2.38	-1.17	- .49
2030-2054	-9.85	-4.58	-2.14
1980-2054	-3.68	-1.52	- .48

NOTE: The total fertility rate is the total number of children expected to be born per woman. A rate of 2.1 is assumed in the intermediate cost projection.

Table 20d. Projected Average OASDI Expenditures and Actuarial Balances Assuming Various Rates of Mortality Improvement

(as percent of taxable payroll)

Calendar Years	Ultimate Percentage Mortality Improvement 19	34	56
	average expenditures		
1980-2004	10.50	10.66	10.97
2005-2029	12.94	13.57	14.70
2030-2054	15.73	16.98	19.49
1980-2054	13.05	13.74	15.05
	actuarial balance		
1980-2004	+1.35	+1.19	+ .88
2005-2029	- .54	-1.17	-2.30
2030-2054	-3.33	-4.58	-7.09
1980-2054	- .83	-1.52	-2.83

NOTE: The rate of mortality improvement is the ratio of the age-adjusted mortality rate in the year 2050 to that in 1977. A rate of improvement of 34 percent is assumed in the intermediate cost projection.

Table 20e. Projected Average OASDI Expenditures and Actuarial Balances Assuming Various Levels of Net Immigration

(as percent of taxable payroll)

Calendar Years	Annual Net Immigration 400,000	800,000	1,200,000
		average expenditures	
1980-2004	10.66	10.46	10.27
2005-2029	13.57	12.96	12.44
2030-2054	16.98	16.16	15.50
1980-2054	13.74	13.20	12.74
		actuarial balance	
1980-2004	+1.19	+1.39	+1.58
2005-2029	-1.17	- .56	- .04
2030-2054	-4.58	-3.76	-3.10
1980-2054	-1.52	- .98	- .52

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

Table 20f. Projected Average OASDI Expenditures and Actuarial Balances Assuming Various Disability Incidence Rates

(as percent of taxable payroll)

Calendar Years	Ultimate Percentage Disability Incidence Increase		
	-1	16	34
	average expenditures		
1980-2004	10.56	10.66	10.76
2005-2029	13.34	13.57	13.80
2030-2054	16.76	16.98	17.20
1980-2054	13.55	13.74	13.92
	actuarial balance		
1980-2004	+1.29	+1.19	+1.09
2005-2029	- .94	-1.17	-1.40
2030-2054	-4.36	-4.58	-4.80
1980-2054	-1.33	-1.52	-1.70

NOTE: The disability incidence increase is based on the ratio of the age-sex adjusted incidence rate in 1999 and later to the average age-sex adjusted incidence rate during 1978-79. An increase of 16 percent is assumed in the intermediate cost projection.

Table 21. Long-Range Actuarial Balance by Date of Valuation

(as percent of taxable payroll)

Date of Valuation	Act	OASI Expenditures	OASI Taxes	OASI Balance	DI Expenditures	DI Taxes	DI Balance	OASDI Expenditures	OASDI Taxes	OASDI Balance
				valuation to perpetuity under level assumptions (present value)						
1935	1935	5.36	5.36	.00	--	--	--	--	--	--
1939	1939	5.22	5.30	+ .08	--	--	--	--	--	--
1950	1939 a/	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
1963	1961	8.69	8.52	- .17	.64	.50	- .14	9.33	9.02	- .31
1964	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	8.98	9.11	+ .13	1.18	1.10	- .08	10.16	10.21	+ .05

(continued next page)

Table 21. Long-Range Actuarial Balance by Date of Valuation (Continued)

(as percent of taxable payroll)

Date of Valuation	Act	OASI Expenditures	OASI Taxes	OASI Balance	DI Expenditures	DI Taxes	DI Balance	OASDI Expenditures	OASDI Taxes	OASDI Balance
		valuation for 75 years under dynamic assumptions (average current cost) b/								
1972	1971	7.81	9.19	+1.38	1.15	1.10	- .05	8.96	10.29	+1.33
1972	1971 c/	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	1972 d/	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 expenditures)								
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

a/ as amended in the 1940's

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

c/ as amended through Public Law 92-336

d/ as amended through Public Law 93-66

NOTE: Taxable payroll is adjusted to take into account the lower tax rates on self-employment income, on tips, and on multiple-employer "excess wages" as compared to the combined employer-employee rate.

Table 22a. Alternate Optimistic OASDI Long-Range Economic Assumptions

Calendar Year	Real GNP	Increase in... Average Annual... Wages in Covered Employment	Consumer Price Index	Benefits Due to Automatic Adjustment	Real Wage Differential	Interest Rate	Total Unemployment Rate
1980	-0.01%	9.99%	14.35%	14.3%	-4.36%	11.750%	6.4%
1981	2.28	10.94	10.40	11.2	0.54	11.000	7.0
1982	4.75	10.81	8.61	9.4	2.20	9.375	6.6
1983	5.03	9.44	7.26	7.5	2.18	8.125	6.0
1984	4.89	8.56	6.50	6.8	2.06	7.500	5.3
1985	4.80	7.65	5.67	6.0	1.98	6.750	4.6
1986	4.19	6.95	4.90	5.2	2.05	6.000	4.1
1987	3.26	6.51	4.09	4.4	2.42	5.625	4.0
1988	3.32	5.94	3.34	3.6	2.60	5.625	4.0
1989	3.36	5.70	3.01	3.0	2.69	5.625	4.0
1990	3.37	5.77	3.01	3.0	2.76	5.625	4.0
1991	3.41	5.68	3.00	3.0	2.68	5.575	4.0
1992	3.22	5.47	3.00	3.0	2.47	5.575	4.0
1993	3.15	5.37	3.00	3.0	2.37	5.575	4.0
1994	2.99	5.27	3.00	3.0	2.27	5.575	4.0
1995	2.96	5.25	3.00	3.0	2.25	5.575	4.0
1996	2.95	5.25	3.00	3.0	2.25	5.575	4.0
1997	2.92	5.25	3.00	3.0	2.25	5.575	4.0
1998	2.92	5.25	3.00	3.0	2.25	5.575	4.0
1999	2.90	5.25	3.00	3.0	2.25	5.575	4.0
2000	2.89	5.25	3.00	3.0	2.25	5.575	4.0
2001	3.50	5.25	3.00	3.0	2.25	5.575	4.0
2002	3.46	5.25	3.00	3.0	2.25	5.575	4.0
2003	3.45	5.25	3.00	3.0	2.25	5.575	4.0
2004	3.47	5.25	3.00	3.0	2.25	5.575	4.0
2005+	3.44	5.25	3.00	3.0	2.25	5.575	4.0

NOTES:

1. The real GNP (Gross National Product) is the total output of goods and services expressed in constant dollars.

2. The percentage increases in benefits due to automatic adjustment are calculated to be consistent with the assumed increases in the Consumer Price Index.

3. 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.

4. 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.

5. The annual percentage increase in real GNP is projected to change after the year 2005. The value for the year 2055 is 3.36 percent.

6. The characterization "optimistic" is relative to the assumptions contained in Table 1a., which are used in the intermediate projection.

Table 22b. Alternate Optimistic OASDI Long-Range Demographic Assumptions

Calendar Year	Total Fertility Rate	Age-Adjusted Mortality Rate (per 100,000) 0-19	20-64	65+	Total
			males		
1980	n.a.	139	621	6,303	912
1985	n.a.	132	590	6,132	878
1990	n.a.	129	577	6,025	861
1995	n.a.	126	564	5,925	845
2000	n.a.	123	552	5,833	830
2005	n.a.	122	545	5,786	822
2010	n.a.	122	538	5,741	814
2015	n.a.	121	531	5,696	807
2020	n.a.	121	524	5,653	799
2025	n.a.	121	517	5,611	792
2030	n.a.	120	511	5,570	785
2035	n.a.	120	505	5,530	778
2040	n.a.	120	498	5,491	772
2045	n.a.	120	492	5,454	765
2050	n.a.	120	487	5,417	759
2055	n.a.	119	481	5,381	753
			females		
1980	1,832	91	321	4,003	649
1985	2,001	86	306	3,806	617
1990	2,171	83	299	3,701	601
1995	2,346	81	293	3,602	585
2000	2,464	79	287	3,508	571
2005	2,500	78	283	3,472	565
2010	2,500	78	280	3,437	559
2015	2,500	77	277	3,402	553
2020	2,500	77	274	3,368	548
2025	2,500	76	271	3,335	542
2030	2,500	76	268	3,303	537
2035	2,500	76	265	3,271	532
2040	2,500	75	262	3,240	527
2045	2,500	75	259	3,210	522
2050	2,500	75	256	3,181	517
2055	2,500	75	254	3,152	512

NOTES: 1. The total fertility rate is the number of children who would be born to 1,000 women in their lifetime if they were to experience the observed age-specific birth rates and were to survive the entire child-bearing period. It is not applicable ("n.a.") to males.

2. The age-adjusted mortality rate is the annual number of deaths per 100,000 persons that would occur in the enumerated male or female population, respectively, as of April 1, 1970, if the current age-specific death rates were to be experienced.

3. The characterization "optimistic" is relative to the assumptions contained in Table 1b., which are used in the intermediate projection.

Table 22c. Alternate Optimistic OASDI Long-Range Programmatic Assumptions

Year	Age-Adjusted Rate 1/				
	Coverage	Insured Status		Retirement Prevalence	Disability Incidence
		Fully	Disability		
			males		
1980	78.2%	94.6%	83.7%	82.9%	4.95
1985	81.0	94.7	84.0	84.3	5.01
1990	82.5	94.9	84.1	85.0	5.21
1995	81.2	95.0	84.1	85.0	5.33
2000	81.2	95.0	84.1	85.0	5.35
2005	81.4	95.0	84.1	85.0	5.35
2010+	81.5	95.0	84.1	85.0	5.35
			females		
1980	57.1%	57.9%	51.3%	83.1%	3.77
1985	63.7	61.2	54.5	84.0	3.81
1990	67.1	64.2	57.3	85.0	3.97
1995	67.0	66.2	59.7	85.5	4.05
2000	65.8	68.1	61.8	85.6	4.07
2005	66.3	70.4	63.1	85.6	4.07
2010	66.4	73.1	63.8	85.7	4.07
2015	66.4	76.2	64.3	85.7	4.07
2020	66.4	79.3	64.5	85.9	4.07
2025	66.4	81.7	64.5	86.1	4.07
2030	66.4	83.2	64.5	86.2	4.07
2035	66.4	84.2	64.5	86.3	4.07
2040	66.4	84.6	64.5	86.4	4.07
2045	66.4	84.8	64.5	86.4	4.07
2050	66.4	84.9	64.5	86.5	4.07
2055	66.4	85.0	64.5	86.5	4.07

NOTES: 1. The coverage rates, insured status rates, and retirement prevalence are age-adjusted to the male or female population, respectively, as of April 1, 1970. The disability incidence rates are age-adjusted to the male or female population, respectively, as of July 1, 1977, per 1,000.

2. The coverage rates are adjusted to the population aged 15 to 74. The fully insured and retirement prevalence rates are adjusted to the population aged 62 and over. The disability insured and disability incidence rates are adjusted to the population aged 20-64.

3. The coverage rates and insured status rates are adjusted to the total population in each applicable age group. The retirement prevalence rates are adjusted to the fully insured population. The disability incidence rates are adjusted to the disability insured population less those receiving disability insurance benefits.

Table 23a. Alternate Pessimistic OASDI Long-Range Economic Assumptions

Calendar Year	Real GNP	Increase in... Average Annual... Wages in Covered Employment	Consumer Price Index	Benefits Due to Automatic Adjustment	Real Wage Differential	Interest Rate	Total Unemployment Rate
1980	-0.75%	10.03%	16.64%	14.3%	-6.61%	12.750%	7.0%
1981	-0.96	11.41	13.67	16.8	-2.26	13.000	9.1
1982	5.49	12.00	10.95	11.1	-1.05	10.750	8.0
1983	3.99	10.92	10.59	10.7	0.33	10.500	7.3
1984	3.00	10.37	10.20	10.3	0.17	10.500	7.0
1985	3.00	10.22	9.82	9.9	0.40	10.250	6.8
1986	3.00	9.95	9.38	9.5	0.57	10.000	6.6
1987	2.85	9.93	9.01	9.2	0.92	9.750	6.4
1988	2.75	9.54	8.59	8.8	0.95	9.750	6.2
1989	2.30	9.23	8.22	8.3	1.01	9.625	6.0
1990	2.08	8.98	8.05	8.1	0.93	9.500	6.0
1991	2.23	8.77	7.80	7.8	0.97	9.400	6.0
1992	2.34	8.68	7.60	7.6	1.08	9.200	6.0
1993	2.41	8.58	7.40	7.4	1.18	9.000	6.0
1994	2.39	8.46	7.20	7.2	1.26	8.800	6.0
1995	2.35	8.26	7.00	7.0	1.26	8.600	6.0
1996	2.25	8.06	6.80	6.8	1.26	8.400	6.0
1997	2.20	7.86	6.60	6.6	1.26	8.200	6.0
1998	2.16	7.65	6.40	6.4	1.25	8.000	6.0
1999	2.20	7.45	6.20	6.2	1.25	7.800	6.0
2000	2.17	7.25	6.00	6.0	1.25	7.590	6.0
2001	2.12	7.25	6.00	6.0	1.25	7.590	6.0
2002	2.12	7.25	6.00	6.0	1.25	7.590	6.0
2003	2.09	7.25	6.00	6.0	1.25	7.590	6.0
2004	2.10	7.25	6.00	6.0	1.25	7.590	6.0
2005+	2.10	7.25	6.00	6.0	1.25	7.590	6.0

NOTES:

1. The real GNP (Gross National Product) is the total output of goods and services expressed in constant dollars.

2. The percentage increases in benefits due to automatic adjustment are calculated to be consistent with the assumed increases in the Consumer Price Index.

3. 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.

4. 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.

5. The annual percentage increase in real GNP is projected to change after the year 2005. The value for the year 2055 is 0.86 percent.

6. The characterization "pessimistic" is relative to the assumptions contained in Table 1a., which are used in the intermediate projection.

Table 23b. Alternate Pessimistic OASDI Long-Range Demographic Assumptions

Calendar Year	Total Fertility Rate	Age-Adjusted Mortality Rate (per 100,000) 0-19	20-64	65+	Total
			males		
1980	n.a.	134	601	6,189	890
1985	n.a.	110	487	5,542	766
1990	n.a.	99	446	5,164	708
1995	n.a.	90	408	4,831	657
2000	n.a.	83	376	4,537	612
2005	n.a.	81	356	4,396	590
2010	n.a.	80	339	4,262	569
2015	n.a.	79	322	4,135	549
2020	n.a.	79	306	4,015	531
2025	n.a.	78	292	3,901	513
2030	n.a.	77	279	3,793	497
2035	n.a.	77	266	3,690	481
2040	n.a.	76	255	3,593	467
2045	n.a.	76	244	3,501	454
2050	n.a.	76	234	3,414	441
2055	n.a.	76	225	3,332	429
			females		
1980	1,758	87	311	3,875	628
1985	1,677	69	255	3,159	512
1990	1,598	61	234	2,824	460
1995	1,545	54	214	2,533	415
2000	1,519	49	197	2,280	376
2005	1,500	47	188	2,189	361
2010	1,500	46	180	2,102	346
2015	1,500	45	171	2,020	332
2020	1,500	44	164	1,942	319
2025	1,500	43	157	1,867	307
2030	1,500	43	150	1,796	295
2035	1,500	42	144	1,729	284
2040	1,500	42	138	1,665	274
2045	1,500	41	132	1,604	264
2050	1,500	41	127	1,546	254
2055	1,500	40	122	1,491	246

NOTES: 1. The total fertility rate is the number of children who would be born to 1,000 women in their lifetime if they were to experience the observed age-specific birth rates and were to survive the entire child-bearing period. It is not applicable ("n.a.") to males.

2. The age-adjusted mortality rate is the annual number of deaths per 100,000 persons that would occur in the enumerated male or female population, respectively, as of April 1, 1970, if the current age-specific death rates were to be experienced.

3. The characterization "pessimistic" is relative to the assumptions contained in Table 1b., which are used in the intermediate projection.

Table 23c. Alternate Pessimistic OASDI Long-Range Programmatic Assumptions

Year	Age-Adjusted Rate 1/				
	Coverage	Insured Status		Retirement Prevalence	Disability Incidence
		Fully	Disability		
			males		
1980	77.8%	94.6%	83.7%	82.9%	4.97
1985	78.5	94.7	84.0	85.0	5.56
1990	79.5	94.9	84.1	85.8	5.98
1995	80.1	95.0	84.1	85.8	6.22
2000	78.6	95.0	84.1	85.8	6.28
2005	78.5	95.0	84.1	85.8	6.28
2010	78.4	95.0	84.1	85.8	6.28
2015	78.3	95.0	84.1	85.8	6.28
2020	78.3	95.0	84.1	85.8	6.28
2025	78.3	95.0	84.1	85.8	6.28
2030	78.3	95.0	84.1	85.8	6.28
2035	78.2	95.0	84.1	85.8	6.28
			females		
1980	56.8%	57.9%	51.3%	83.1%	3.79
1985	61.5	61.2	54.5	84.8	4.24
1990	65.0	64.2	57.5	85.8	4.55
1995	65.4	66.2	60.2	86.4	4.73
2000	65.3	68.1	62.4	86.7	4.78
2005	65.6	70.4	63.7	86.8	4.78
2010	65.6	73.1	64.4	87.0	4.78
2015	65.6	76.2	64.9	87.0	4.78
2020	65.5	79.3	65.1	87.3	4.78
2025	65.5	81.7	65.1	87.6	4.78
2030	65.5	83.2	65.1	87.8	4.78
2035	65.5	84.2	65.1	87.9	4.78
2040	65.4	84.6	65.1	88.0	4.78
2045	65.4	84.8	65.1	88.0	4.78
2050	65.4	84.9	65.1	88.1	4.78
2055	65.4	85.0	65.1	88.2	4.78

NOTES: 1. The coverage rates, insured status rates, and retirement prevalence rates are age-adjusted to the male or female population, respectively, as of April 1, 1970. The disability incidence rates are age-adjusted to the male or female population, respectively, as of July 1, 1970, and are per 1,000.

2. The coverage rates are adjusted to the population aged 15 to 74. The fully insured and retirement prevalence rates are adjusted to the population aged 62 and over. The disability insured and disability incidence rates are adjusted to the population aged 20-64.

3. The coverage rates and insured status rates are adjusted to the total population in each applicable age group. The retirement prevalence rates are adjusted to the fully insured population. The disability incidence rates are adjusted to the disability insured population less those receiving disability insurance benefits.

Table 24a. Projected Expenditures as Percent of Taxable Payroll Under Alternate Optimistic Assumptions and Comparison with Scheduled Tax Rates

Calendar Year	OASI			DI			OASDI		
	Expenditures	Taxes	Balance	Expenditures	Taxes	Balance	Expenditures	Taxes	Balance
1980	9.43	8.66	- .77	1.38	1.50	+ .12	10.81	10.16	- .65
1985	9.33	9.50	+ .17	1.13	1.90	+ .77	10.46	11.40	+ .94
1990	8.74	10.20	+1.46	.99	2.20	+1.21	9.73	12.40	+2.67
1995	8.61	10.20	+1.59	.99	2.20	+1.21	9.60	12.40	+2.80
2000	8.30	10.20	+1.90	1.10	2.20	+1.10	9.40	12.40	+3.00
2005	8.12	10.20	+2.08	1.22	2.20	+ .98	9.33	12.40	+3.07
2010	8.62	10.20	+1.58	1.32	2.20	+ .88	9.95	12.40	+2.45
2015	9.61	10.20	+ .59	1.37	2.20	+ .83	10.98	12.40	+1.42
2020	10.87	10.20	- .67	1.38	2.20	+ .82	12.25	12.40	+ .15
2025	11.90	10.20	-1.70	1.32	2.20	+ .88	13.22	12.40	- .82
2030	12.33	10.20	-2.13	1.24	2.20	+ .96	13.56	12.40	-1.16
2035	12.04	10.20	-1.84	1.20	2.20	+1.00	13.24	12.40	- .84
2040	11.36	10.20	-1.16	1.21	2.20	+ .99	12.57	12.40	- .17
2045	10.94	10.20	- .74	1.24	2.20	+ .96	12.18	12.40	+ .22
2050	10.78	10.20	- .58	1.25	2.20	+ .95	12.03	12.40	+ .37
2055	10.73	10.20	- .53	1.23	2.20	+ .97	11.97	12.40	+ .43
averages:									
1980-2004	8.81	9.83	+1.02	1.10	2.02	+ .92	9.91	11.85	+1.94
2005-2029	10.16	10.20	+ .04	1.32	2.20	+ .88	11.48	12.40	+ .92
2030-2054	11.36	10.20	-1.16	1.23	2.20	+ .97	12.59	12.40	- .19
1980-2054	10.11	10.08	- .03	1.22	2.14	+ .92	11.33	12.22	+ .89

NOTE: The characterization "optimistic" is relative to the assumptions which are used in the intermediate projection.

Table 24b. Projected Expenditures as Percent of Taxable Payroll Under Alternate Pessimistic Assumptions and Comparison with Scheduled Tax Rates

Calendar Year	OASI			DI			OASDI		
	Expenditures	Taxes	Balance	Expenditures	Taxes	Balance	Expenditures	Taxes	Balance
1980	9.50	8.66	- .84	1.39	1.50	+ .11	10.89	10.16	- .73
1985	10.52	9.50	- 1.02	1.33	1.90	+ .57	11.85	11.40	- .45
1990	10.48	10.20	- .28	1.27	2.20	+ .93	11.74	12.40	+ .66
1995	10.47	10.20	- .27	1.31	2.20	+ .89	11.78	12.40	+ .62
2000	10.21	10.20	- .01	1.48	2.20	+ .72	11.69	12.40	+ .71
2005	10.29	10.20	- .09	1.69	2.20	+ .51	11.98	12.40	+ .42
2010	11.42	10.20	- 1.22	1.90	2.20	+ .30	13.32	12.40	- .92
2015	13.38	10.20	- 3.18	2.04	2.20	+ .16	15.42	12.40	- 3.02
2020	16.01	10.20	- 5.81	2.12	2.20	+ .08	18.13	12.40	- 5.73
2025	18.78	10.20	- 8.58	2.12	2.20	+ .08	20.89	12.40	- 8.49
2030	21.15	10.20	-10.95	2.06	2.20	+ .14	23.22	12.40	-10.82
2035	22.82	10.20	-12.62	2.07	2.20	+ .13	24.88	12.40	-12.48
2040	23.95	10.20	-13.75	2.11	2.20	+ .09	26.05	12.40	-13.65
2045	25.29	10.20	-15.09	2.14	2.20	+ .06	27.43	12.40	-15.03
2050	26.68	10.20	-16.48	2.12	2.20	+ .08	28.80	12.40	-16.40
2055	27.76	10.20	-17.56	2.08	2.20	+ .12	29.83	12.40	-17.43
averages:									
1980-2004	10.35	9.83	- .52	1.38	2.02	+ .64	11.73	11.85	+ .12
2005-2029	14.83	10.20	- 4.63	2.00	2.20	+ .20	16.84	12.40	- 4.44
2030-2054	24.50	10.20	-14.30	2.10	2.20	+ .10	26.60	12.40	-14.20
1980-2054	16.56	10.08	- 6.48	1.83	2.14	+ .31	18.39	12.22	- 1.52

Table 25a. Projected Expenditures as Percent of Gross National Product under Alternate Optimistic Assumptions

Calendar Year	OASI	DI	OASDI
1980	4.16	.61	4.77
1985	4.15	.50	4.65
1990	3.93	.45	4.37
1995	3.80	.44	4.23
2000	3.60	.48	4.08
2010	3.47	.52	3.99
2015	3.98	.57	4.55
2020	4.43	.56	4.99
2025	4.77	.53	5.30
2030	4.87	.49	5.36
2035	4.68	.47	5.15
2040	4.35	.46	4.81
2045	4.12	.47	4.59
2050	4.00	.46	4.46
2055	3.92	.45	4.37
averages:			
1980-2004	3.89	.49	4.37
2005-2029	4.17	.54	4.71
2030-2054	4.33	.47	4.80
1980-2054	4.13	.50	4.63

NOTE: The characterization "optimistic" is relative to the assumptions which are used in the intermediate projection.

Table 25b. Projected Expenditures as Percent of Gross National Product under Alternate Pessimistic Assumptions

Calendar Year	OASI	DI	OASDI
1980	4.21	.62	4.83
1985	4.50	.57	5.07
1990	4.38	.53	4.91
1995	4.22	.53	4.75
2000	4.02	.58	4.60
2005	3.96	.65	4.61
2010	4.29	.71	5.00
2015	4.90	.75	5.65
2020	5.73	.76	6.49
2025	6.56	.74	7.30
2030	7.22	.70	7.93
2035	7.61	.69	8.30
2040	7.80	.69	8.49
2045	8.05	.68	8.73
2050	8.29	.66	8.95
2055	8.42	.63	9.05
averages:			
1980-2004	4.27	.57	4.83
2005-2029	5.35	.73	6.08
2030-2054	7.89	.68	8.57
1980-2054	5.83	.66	6.49

NOTE: The characterization "pessimistic" is relative to the assumptions which are used in the intermediate projection.

Table 26a. Projected Assets of the Trust Funds at the Beginning of the Year as Percent of Expenditures During the Year under Alternate Optimistic Assumptions

Calendar Year	OASI	DI	OASDI
1980	23	36	24
1985	-8	169	11
1990	11	594	70
1995	96	1,186	208
2000	199	1,573	360
2005	315	1,792	507
2010	393	1,957	601
2015	407	2,160	626
2020	360	2,428	593
2025	281	2,822	535
2030	192	3,317	477
2035	111	3,730	438
2040	47	3,995	426
2045	2	4,169	426
2050	a/	4,303	430
2055	a/	4,703	435
trust fund is projected to be first exhausted in the year:	1982	b/	b/

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

b/ The fund is not projected to be exhausted within the projection period.

NOTES: 1. The OASI and Total ratio for 1983 and later are theoretical because they are calculated on the assumption that the exhaustion of the OASI trust fund in 1982 can be resolved by allowing the fund to borrow money.

2. The characterization "optimistic" is relative to the assumptions which are used in the intermediate projection.

Table 26b. Projected Assets of the Trust Funds at the Beginning of the Year as Percent of Expenditures During the Year under Alternate Pessimistic Assumptions

Calendar Year	OASI	DI	OASDI
1980	23	35	24
1985	a/	109	-17
1990	a/	332	-38
1995	a/	667	-16
2000	a/	872	10
2005	a/	941	35
2010	a/	954	27
2015	a/	970	a/
2020	a/	1,001	a/
2025	a/	1,071	a/
2030	a/	1,177	a/
2035	a/	1,265	a/
2040	a/	1,327	a/
2045	a/	1,395	a/
2050	a/	1,503	a/
2055	a/	1,644	a/
trust fund is projected to be first exhausted in the year:	1982	b/	1982

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

b/ The fund is not projected to be exhausted within the projection period.

NOTES: 1. The OASI and Total ratio for 1982 and later are theoretical because they are calculated on the assumption that the exhaustion of the OASI trust fund in 1981 can be resolved by allowing the fund to borrow money.

2. The characterization "pessimistic" is relative to the assumptions which are used in the intermediate projection.

Table 27. Projected Average OASDI Expenditures and Actuarial Balances under Alternate Assumptions

(as percent of taxable payroll)

Calendar Years	Assumptions that are... Optimistic	Intermediate	Pessimistic
	average expenditures		
1980-2004	9.91	10.66	11.73
2005-2029	11.48	13.57	16.84
2030-2054	12.59	16.98	26.60
1980-2054	11.33	13.74	18.39
	actuarial balance		
1980-2004	+1.94	+1.19	+ .22
2005-2029	+ .92	-1.17	- 4.44
2030-2054	- .19	-4.58	-14.20
1980-2054	+ .89	-1.52	- 6.17

NOTE: The characterizations "optimistic" and "pessimistic" are relative to the assumptions which are used in the intermediate projection.

I. CHARTS

Chart 1. Comparison of the Projected Expenditures and Scheduled Tax Rates of the OASDI System under Optimistic, Intermediate, and Pessimistic Assumptions

(As Percent of Taxable Payroll)

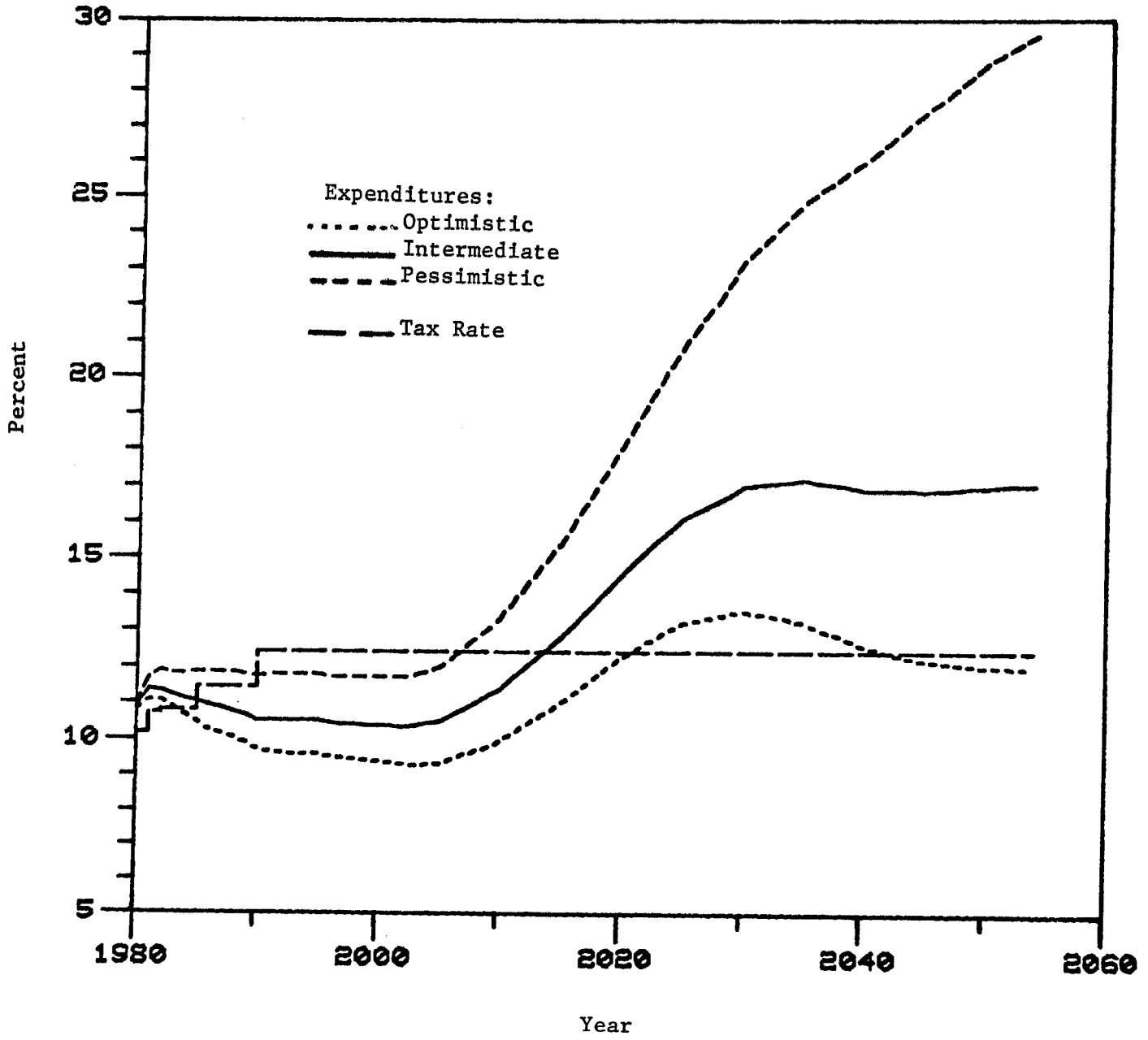


Chart 2a. Projected OASI Trust Fund Assets at the Beginning of the Year as Percent of Expenditures During the Year under Optimistic, Intermediate, and Pessimistic Assumptions

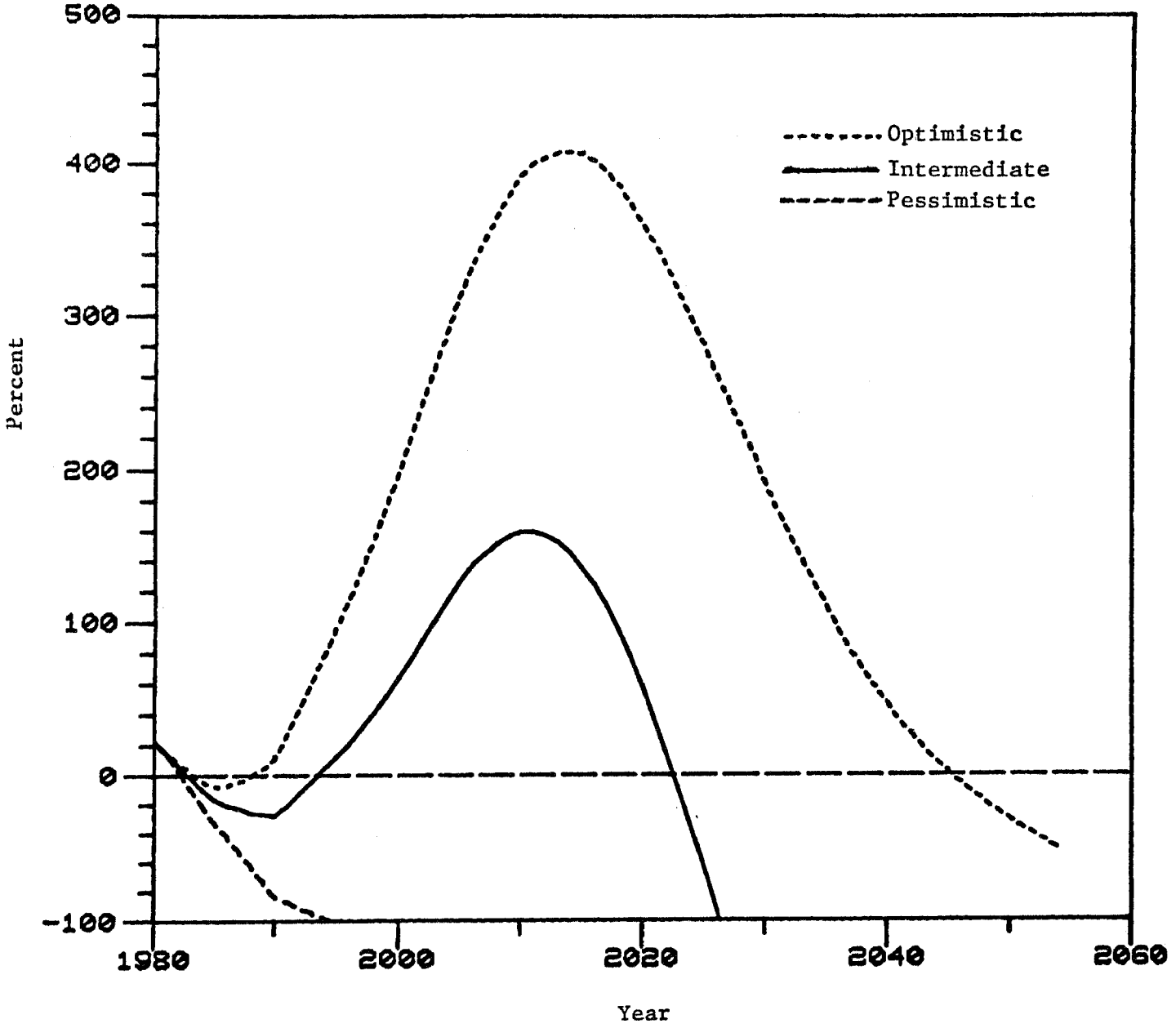


Chart 2b. Projected DI Trust Fund Assets at the Beginning of the Year as Percent of Expenditures During the Year under Optimistic, Intermediate, and Pessimistic Assumptions

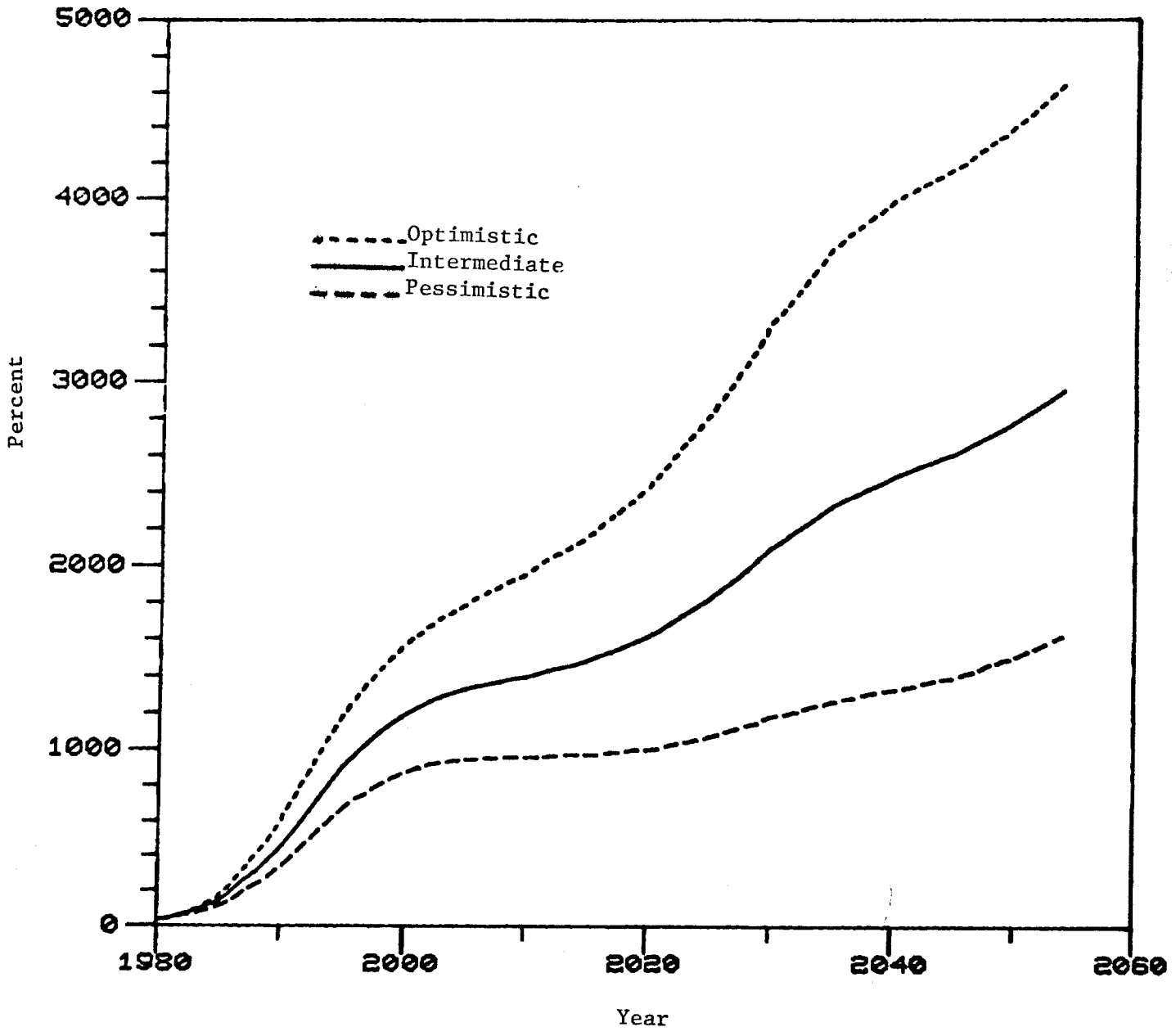
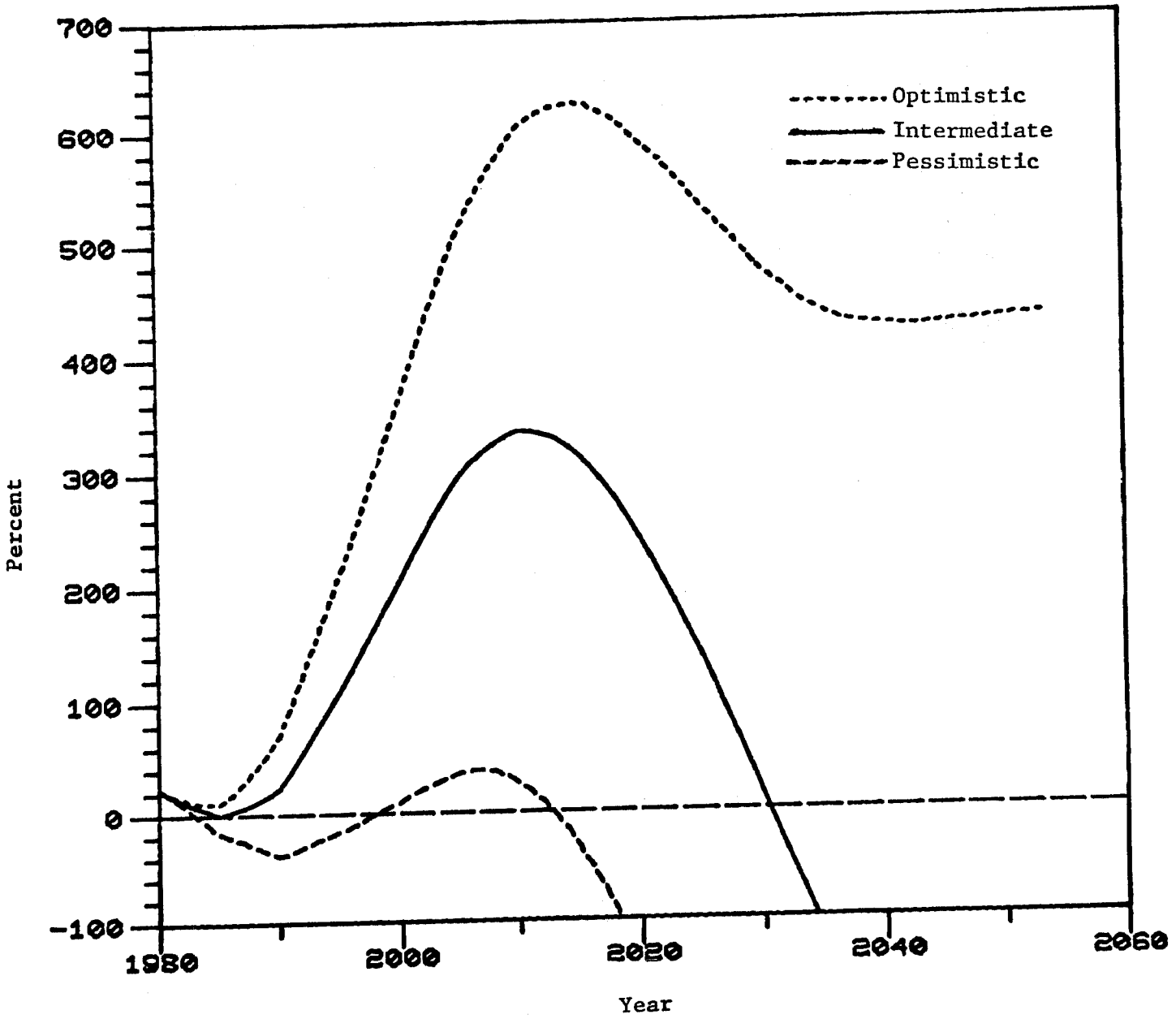


Chart 2c. Projected OASDI Trust Fund Assets at the Beginning of the Year as Percent of Expenditures During the Year under Optimistic, Intermediate, and Pessimistic Assumptions



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