

D. PRINCIPAL ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

The future income and outgo of the combined OASDI program depend on many economic and demographic factors, including gross domestic product, labor force, unemployment, average earnings, productivity, inflation, fertility, mortality, net immigration, marriage, divorce, retirement patterns, and disability incidence and termination. The income will depend on how these factors affect the size and composition of the working population and the level and distribution of earnings. Similarly, the outgo will depend on how these factors affect the size and composition of the beneficiary population and the general level of benefits.

Because precise prediction of these various factors is impossible, estimates are shown in this report on the basis of three sets of assumptions, designated as alternatives I, II, and III. The intermediate set, alternative II, represents the Board's best estimate of the future course of the population and the economy. In terms of the net effect on the status of the OASDI program, alternative I is the more optimistic, and alternative III is the more pessimistic of the plausible economic and demographic conditions.

Although these sets of economic and demographic assumptions have been developed using the best available information, the resulting estimates should be interpreted with care. In particular, they are not intended to be exact predictions of the future status of the OASDI program, but rather, they are intended to be indicators of the trend and range of future income and outgo, under a variety of plausible economic and demographic conditions.

The measure of national output of goods and services for the United States that is used in this report has been changed to gross domestic product (GDP) from gross national product (GNP), which was used in prior reports. This change is consistent with the shift to GDP at the end of 1991 by the Department of Commerce, as their principal measure of national output in the National Income and Product Accounts. GDP represents the total dollar value of goods and services produced by labor and property located in the United States, regardless of who supplies them. GNP represents the value of production by labor and property supplied by United States residents, regardless of the location in which the production occurs. GDP is thus thought to be a better indicator of the level of national output, and its use is consistent with the practice of

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most other industrialized nations. In the long range, very little difference between the growth of GDP and GNP is expected; changing from GNP to GDP in this report has no significant effect on the estimates for the OASDI program.

1. Economic Assumptions

The principal economic assumptions for the three alternatives are summarized in table II.D.1.

TABLE II.D.1.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2070

Calendar year	Average annual percentage change in—				Average annual interest rate ⁴ (percent)	Average annual unemployment rate ⁵ (percent)	Average annual percentage increase in labor force ⁶
	Real GDP ¹	Average annual wage in covered employment	Consumer Price Index ²	Real-wage differential ³ (percent)			
Historical data:							
1960-64.....	3.9	3.4	1.3	2.1	3.7	5.7	1.3
1965-69.....	4.4	5.4	3.4	2.0	5.2	3.8	2.1
1970-74.....	2.4	6.3	6.1	.2	6.7	5.4	2.3
1975.....	-8	6.7	9.1	-2.4	7.4	8.5	1.9
1976.....	4.9	8.7	5.7	3.0	7.1	7.7	2.4
1977.....	4.5	7.3	6.5	.8	7.1	7.1	2.9
1978.....	4.8	9.7	7.7	2.0	8.2	6.1	3.2
1979.....	2.5	9.8	11.4	-1.6	9.1	5.8	2.6
1980.....	-5	9.1	13.4	-4.3	11.0	7.1	1.9
1981.....	1.8	9.6	10.3	-.7	13.3	7.6	1.6
1982.....	-2.2	6.6	6.0	.6	12.8	9.7	1.4
1983.....	3.9	5.1	3.0	2.1	11.0	9.6	1.2
1984.....	6.2	7.3	3.5	3.8	12.4	7.5	1.8
1985.....	3.2	4.2	3.5	.7	10.8	7.2	1.7
1986.....	2.9	5.1	1.6	3.5	8.0	7.0	2.0
1987.....	3.1	4.4	3.6	.8	8.4	6.2	1.7
1988.....	3.9	4.8	4.0	.8	8.8	5.5	1.4
1989.....	2.5	4.2	4.8	-.7	8.7	5.3	1.8
1990.....	1.0	5.2	5.2	.0	8.6	5.5	.7
Alternative I:							
1991.....	-7	3.6	4.0	-4	8.0	6.8	.4
1992.....	2.3	4.4	2.6	1.9	6.8	7.0	.7
1993.....	3.9	4.8	2.8	2.0	6.0	6.5	1.2
1994.....	3.7	5.0	3.0	2.0	5.7	6.0	1.2
1995.....	3.5	5.2	3.0	2.2	5.8	5.7	1.2
1996.....	3.4	5.2	3.0	2.2	5.9	5.4	1.1
1997.....	3.2	5.1	3.0	2.1	6.0	5.1	1.1
1998.....	3.1	5.0	3.0	2.1	6.0	5.0	1.1
1999.....	2.9	5.1	3.0	2.1	6.0	4.9	1.1
2000.....	2.8	5.1	3.0	2.1	6.0	4.8	1.0
2001.....	2.8	5.0	3.0	2.0	6.1	4.8	1.0
2005.....	2.6	4.7	3.0	1.7	6.0	5.0	1.0
2010&later.....	*2.3	4.7	3.0	1.7	6.0	5.0	*.7
Alternative II:							
1991.....	-8	3.6	4.0	-4	8.0	6.8	.4
1992.....	1.5	4.3	2.9	1.3	6.8	7.1	.6
1993.....	2.9	4.5	3.3	1.1	6.2	6.9	1.0
1994.....	2.7	4.8	3.6	1.2	6.0	6.6	1.0
1995.....	2.5	5.2	3.9	1.3	6.3	6.4	1.0
1996.....	2.4	5.4	4.0	1.4	6.4	6.3	.9
1997.....	2.3	5.3	4.0	1.3	6.5	6.2	.9
1998.....	2.3	5.3	4.0	1.3	6.5	6.1	.9
1999.....	2.3	5.4	4.0	1.4	6.5	6.0	.9
2000.....	2.3	5.5	4.0	1.4	6.5	5.9	.9
2001.....	2.2	5.4	4.0	1.4	6.4	5.8	.9
2005.....	1.9	5.1	4.0	1.1	6.3	6.0	.7
2010&later.....	*1.8	5.1	4.0	1.1	6.3	6.0	*.5

TABLE II.D.1.—SELECTED ECONOMIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1960-2070 (Cont.)

Calendar year	Average annual percentage change in—						Average annual percentage increase in labor force ⁶
	Real GDP ¹	Average annual wage in covered employment	Consumer Price Index ²	Real-wage differential ³ (percent)	Average annual interest rate ⁴ (percent)	Average annual unemployment rate ⁵ (percent)	
Alternative III:							
1991	-0.8	3.6	4.1	-0.5	8.0	6.8	0.4
19925	4.0	3.6	.4	7.0	7.3	.5
1993	2.6	5.3	5.2	.1	6.8	7.0	.9
1994	2.4	6.8	6.4	.3	7.5	6.6	1.0
19957	6.3	6.2	.2	8.3	6.4	.9
1996	-.7	4.2	4.8	-.6	8.0	7.4	.6
1997	3.2	6.8	5.0	1.8	7.4	6.9	.8
1998	1.7	5.8	5.0	.8	6.9	6.7	.9
1999	1.5	5.9	5.0	.9	6.9	6.7	.8
2000	1.6	6.1	5.0	1.0	6.8	6.7	.8
2001	1.6	6.0	5.0	1.0	6.6	6.7	.7
2005	1.4	5.6	5.0	.6	6.5	7.0	.5
2010&later.....	⁶ 1.3	5.6	5.0	.6	6.5	7.0	⁸ .4

¹The real GDP (gross domestic product) is the value of total output of goods and services, expressed in 1987 dollars.

²The Consumer Price Index is the annual average value for the calendar year of the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

³The real-wage differential is the difference between the percentage increases, before rounding, in (1) the average annual wage in covered employment, and (2) the average annual Consumer Price Index.

⁴The average annual interest rate is the average of the nominal interest rates, which, in practice, are compounded semiannually, for special public-debt obligations issuable to the trust funds in each of the 12 months of the year.

⁵Through 2001, the rates shown are unadjusted civilian unemployment rates. After 2001, the rates are total rates (including military personnel), adjusted by age and sex based on the estimated total labor force on July 1, 1990.

⁶Labor force is the total for the U.S. (including military personnel) and reflects the average of the monthly numbers of persons in the labor force for each year.

⁷Preliminary.

⁸This value is for 2010. The annual percentage increase in labor force and real GDP is assumed to continue to change after 2010 for each alternative to reflect the dependence of labor force growth on the size and age-sex distribution of the population. The increases in real GDP for 2070 are 2.3, 1.3, and 0.3 percent for alternatives I, II, and III, respectively. The changes in total labor force for 2070 are 0.6, 0.0, and -0.5 percent for alternatives I, II, and III, respectively.

Alternatives I, II, and III present a range of generally consistent sets of economic assumptions which have been designed to encompass most of the possibilities that might be encountered. The intermediate set of assumptions—alternative II—represents the Trustees’ consensus expectation of a return to moderate economic growth in the second half of 1992, following successive periods of recession and modest economic growth. Alternative I presents a more optimistic outlook, with a return to sustained robust economic growth and low inflation by the second quarter of 1992, following the recession and a period of modest growth, which is assumed to end with the first quarter of 1992.

Alternative III is a relatively pessimistic forecast in which the economy experiences a second, but small, dip in the first half of 1992 following the first trough of the recession and a period of modest growth through the end of 1991. A second recession is assumed to occur beginning with the second quarter of 1995 and spanning 4 quarters. The total declines in real GDP for the current and projected recessions in alternative III are slightly less than those of recent recessions; however, the ensuing recoveries are assumed to be substantially weaker than those experienced in the recent past. This scenario presents an assessment of the combined effects on the OASDI program of business cycles and generally weak economic growth. Economic cycles are not included in assumptions beyond the first 5 to 10 years of the projection period because inclusion of such cycles has little effect on the long-range estimates of financial status.

The period of sustained real economic growth, which began in 1982, ended with the recession that started with the fourth quarter of 1990. After a total decline in real GDP of 1.3 percent through the first quarter of 1991, and a roughly 1-year period of slow, but positive, growth following the recession, a return to steady economic growth is assumed through the end of the decade for alternatives I and II. Real growth is assumed to be stronger for alternative I than for alternative II.

For alternative III, the recession that began in 1990 is assumed to be followed by a period of slow, but positive, growth and then a second dip in the first half of 1992, during which the real GDP declines by 0.3 percent. After 11 quarters of recovery, a second recession, with a total decline in real GDP of 3.0 percent, is assumed to begin in the second quarter of 1995, lasting through the first quarter of 1996. Thereafter, steady, but relatively slow, growth is assumed for alternative III.

After the year 2001, the projected rates of growth in real GDP, for all three alternatives, are determined by the assumed rates of growth in employment, average hours worked, and labor productivity.

Assumed values for the unemployment rates reflect the pattern of real GDP growth for each alternative. For alternatives I and II, the unemployment rate is assumed to move gradually toward its ultimate average level after 1992. For alternative III, the unemployment rate is assumed to reach its ultimate average level after the recovery that is assumed to follow the second recession.

Unemployment rates through 2001 are in the most commonly cited form, the civilian rate, which describes the differences between aggregate civilian labor force and aggregate civilian employment. For years after 2001, however, total rates are presented. These include the military (which reduces the rate by about 0.1 percent relative to the civilian rate) and are age-sex adjusted to the 1990 labor force. Such total rates better represent the total population covered by the OASDI program and adjust for the changing age-sex distribution of the labor force, which can obscure the comparison of unemployment rates over different time periods.

For the intermediate alternative II projection, each of the other economic parameters is selected reflecting what the Trustees believe to be the most likely future course of the economy at the time of preparation of this report, consistent with the assumed pattern of real GDP growth. The average annual unemployment rate is assumed to rise from the level experienced for 1990, 5.5 percent, to 6.8 percent for 1991 and 7.1 percent for 1992 as a result of the recession and the ensuing period of slow growth. After 1992 the unemployment rate is assumed to decline gradually reaching 5.8 percent in 2001, which is about equivalent to the assumed ultimate total unemployment rate (age-sex adjusted to the 1990 labor force) of 6.0 percent. Thereafter, the adjusted total unemployment rate remains at about 6.0 percent while the non-age-sex-adjusted rate declines slightly, reflecting the changing age-sex distribution of the labor force.

The annual rate of increase in the average wage in covered employment is assumed to decline from the estimated 5.2-percent increase for 1990 to 3.6 percent for 1991, reflecting the economic recession. After 1991, the average wage grows at about 4.5 percent for 3 years and then by 5.2 to 5.5 percent per year through 2001. After 2001, the average covered wage growth rate gradually declines to the ultimate assumed rate of 5.1 percent. Wage growth rates are higher than the ultimate assumption until after the year 2001 reflecting the gradual recovery from the 1990-91 recession and the increasing coverage of Federal civilian employees, who have higher average annual earnings than the average employee in the U.S. The annual rate of increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is assumed to decline from 5.2 percent in 1990 to a low of 2.9 percent for 1992, thereafter increasing steadily to the ultimate rate of 4.0 percent by 1996. The CPI-W (hereinafter denoted as "CPI") is used to determine automatic cost-of-living benefit increases under the OASDI program.

The real-wage differential (i.e., the difference between the annual rates of change in the average wage in covered employment and in the CPI) is assumed to be -0.4 percent for 1991 following differentials of -0.7 percent and 0.0 percent for 1989 and 1990, respectively. After 1991, the real-wage differential is projected to be between 1.1 and 1.4 percent through the year 2001, thereafter declining gradually toward the ultimate assumed differential of 1.1 percent.

The average annual interest rate is assumed to decline from 8.6 percent for 1990, reaching its ultimate value of 6.3 percent by 2005. The annual rate of growth in total labor force is projected to increase from 0.4 percent estimated for 1991 to 1.0 percent by 1993. After 1995 the labor force is projected to increase at less than 1.0 percent per year, reflecting the slower growth in the working-age population than was experienced through the 1980s and early 1990s.

For alternatives I and III, respectively, values for each of the economic parameters are selected which, in general, result in a more optimistic and a more pessimistic future financial status of the program.

2. Demographic Assumptions

The principal demographic assumptions for the three alternatives are shown in table II.D.2.

For the intermediate alternative II projection, the assumed ultimate total fertility rate of 1.9 children per woman is attained in 2016 after a gradual decline from the estimated 1990 level of 2.08 children per woman. The age-sex-adjusted death rate is assumed to decrease gradually during the entire projection period, with a total reduction of 36 percent from the 1990 level by 2066. The resulting life expectancies at birth in 2066 are 77.5 years for men and 83.9 years for women, compared to 71.6 and 78.6 years, respectively, in 1990. Life expectancies at age 65 in 2066 are projected to be 18.1 years for men and 22.4 years for women, compared to 14.8 and 18.8 years, respectively, in 1990. The projected death rates reflect the effects of assumed cases of Acquired Immunodeficiency Syndrome (AIDS), using projections through 1992 prepared by the Centers for Disease Control (CDC) as a starting point. Total net immigration is assumed to be 750,000 persons per year beginning in 1992. The assumed level of net annual immigration is the combination of 550,000 net legal immigrants per year and 200,000 net other-than-legal immigrants per year.

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For alternative I, the total fertility rate is assumed to rise to an ultimate level of 2.2 children per woman by 2016. The age-sex-adjusted death rate is assumed to decrease more slowly than for alternative II, with the total reduction from the 1990 level being 18 percent by 2066. The resulting life expectancies at birth in 2066 are 75.0 years for men and 80.8 years for women, while at age 65 they are 15.8 and 19.7 years, respectively. Total net immigration is assumed to be 1,000,000 persons per year. The assumed level of net annual immigration is the combination of 650,000 net legal immigrants per year and 350,000 net other-than-legal immigrants per year.

For alternative III, the total fertility rate is assumed to decrease to an ultimate level of 1.6 by 2016. The age-sex-adjusted death rate is assumed to decrease more rapidly than for alternative II, with the total reduction from the 1990 level being 53 percent by 2066. The resulting life expectancies at birth in 2066 are 80.4 years for men and 87.6 years for women, while at age 65 they are 21.2 and 25.5 years, respectively. Total net immigration is assumed to be 600,000 persons per year, the combination of 500,000 net legal immigrants per year and 100,000 net other-than-legal immigrants per year.

TABLE II.D.2.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1940-2070

Calendar year	Total fertility rate ¹	Age-sex-adjusted death rate ² (per 100,000)	Life expectancy ³				
			At birth		At age 65		
			Male	Female	Male	Female	
Historical data:							
1940.....	2.23	1,532.8	61.4	65.7	11.9	13.4	
1945.....	2.42	1,366.4	62.9	68.4	12.6	14.4	
1950.....	3.03	1,225.3	65.6	71.1	12.8	15.1	
1955.....	3.50	1,134.2	66.7	72.8	13.1	15.6	
1960.....	3.61	1,128.6	66.7	73.2	12.9	15.9	
1965.....	2.88	1,103.6	66.8	73.8	12.9	16.3	
1970.....	2.43	1,041.8	67.1	74.9	13.1	17.1	
1975.....	1.77	934.0	68.7	76.6	13.7	18.0	
1976.....	1.74	923.2	69.1	76.8	13.7	18.1	
1977.....	1.79	898.0	69.4	77.2	13.9	18.3	
1978.....	1.76	892.4	69.6	77.2	13.9	18.3	
1979.....	1.82	864.2	70.0	77.7	14.2	18.6	
1980.....	1.85	878.0	69.9	77.5	14.0	18.4	
1981.....	1.83	853.4	70.4	77.9	14.2	18.6	
1982.....	1.83	827.8	70.8	78.2	14.5	18.8	
1983.....	1.81	835.0	70.9	78.1	14.3	18.6	
1984.....	1.80	828.2	71.1	78.2	14.4	18.7	
1985.....	1.84	830.0	71.1	78.2	14.4	18.6	
1986.....	1.84	822.8	71.2	78.3	14.5	18.7	
1987.....	1.87	813.9	71.3	78.4	14.6	18.7	
1988.....	1.93	821.9	71.4	78.4	14.6	18.7	
1989 ⁴	2.00	801.2	71.6	78.6	14.8	18.9	
1990 ⁴	2.08	802.5	71.6	78.6	14.8	18.8	

TABLE II.D.2.—SELECTED DEMOGRAPHIC ASSUMPTIONS BY ALTERNATIVE, CALENDAR YEARS 1940-2070(Cont.)

Calendar year	Total fertility rate ¹	Age-sex-adjusted death rate ² (per 100,000)	Life expectancy ³			
			At birth		At age 65	
			Male	Female	Male	Female
Alternative I:						
1995.....	2.11	779.7	72.4	78.9	14.8	18.8
2000.....	2.14	769.8	72.8	79.0	14.8	18.7
2005.....	2.16	761.4	73.1	79.1	14.9	18.7
2010.....	2.18	751.5	73.3	79.3	14.9	18.7
2015.....	2.20	741.7	73.5	79.4	15.0	18.8
2020.....	2.20	732.3	73.7	79.6	15.1	18.9
2025.....	2.20	723.1	73.8	79.7	15.2	19.0
2030.....	2.20	714.3	74.0	79.9	15.3	19.1
2035.....	2.20	705.7	74.1	80.0	15.3	19.2
2040.....	2.20	697.3	74.3	80.2	15.4	19.3
2045.....	2.20	689.2	74.4	80.3	15.5	19.3
2050.....	2.20	681.3	74.6	80.4	15.6	19.4
2055.....	2.20	673.7	74.7	80.6	15.6	19.5
2060.....	2.20	666.3	74.9	80.7	15.7	19.6
2065.....	2.20	659.1	75.0	80.8	15.8	19.7
2070.....	2.20	652.0	75.1	80.9	15.9	19.8
Alternative II:						
1995.....	2.06	771.0	72.0	79.2	15.1	19.1
2000.....	2.02	740.5	72.6	79.7	15.3	19.3
2005.....	1.99	706.9	73.5	80.2	15.6	19.5
2010.....	1.95	682.0	74.1	80.5	15.8	19.8
2015.....	1.91	662.0	74.5	80.9	16.0	20.0
2020.....	1.90	643.6	74.8	81.2	16.2	20.2
2025.....	1.90	626.1	75.1	81.5	16.4	20.5
2030.....	1.90	609.4	75.4	81.8	16.7	20.7
2035.....	1.90	593.5	75.7	82.1	16.9	21.0
2040.....	1.90	578.4	76.0	82.4	17.1	21.2
2045.....	1.90	563.9	76.3	82.7	17.3	21.4
2050.....	1.90	550.1	76.6	83.0	17.5	21.6
2055.....	1.90	537.0	76.9	83.3	17.7	21.9
2060.....	1.90	524.4	77.1	83.5	17.9	22.1
2065.....	1.90	512.3	77.4	83.8	18.1	22.3
2070.....	1.90	500.8	77.7	84.1	18.3	22.5
Alternative III:						
1995.....	1.99	755.0	71.9	79.6	15.4	19.5
2000.....	1.90	731.0	71.7	80.1	15.8	20.0
2005.....	1.80	681.1	73.0	80.8	16.2	20.4
2010.....	1.71	621.3	74.8	81.7	16.6	20.8
2015.....	1.62	583.3	75.8	82.4	17.0	21.2
2020.....	1.60	555.6	76.3	82.9	17.5	21.7
2025.....	1.60	531.9	76.7	83.4	17.9	22.1
2030.....	1.60	509.7	77.1	83.9	18.3	22.5
2035.....	1.60	488.6	77.5	84.4	18.7	22.9
2040.....	1.60	468.1	77.9	85.0	19.1	23.4
2045.....	1.60	448.6	78.4	85.5	19.5	23.8
2050.....	1.60	429.9	78.8	86.0	19.9	24.2
2055.....	1.60	412.2	79.3	86.5	20.3	24.6
2060.....	1.60	395.3	79.8	87.0	20.7	25.0
2065.....	1.60	379.3	80.3	87.5	21.1	25.4
2070.....	1.60	364.1	80.7	87.9	21.5	25.8

¹The total fertility rate for any year is the average number of children who would be born to a woman in her lifetime if she were to experience the birth rates by age observed in, or assumed for, the selected year, and if she were to survive the entire child-bearing period. The ultimate total fertility rate is assumed to be reached in 2016.

²The age-sex-adjusted death rate is the crude rate that would occur in the enumerated total population as of April 1, 1980, if that population were to experience the death rates by age and sex observed in, or assumed for, the selected year.

³The life expectancy for any year is the average number of years of life remaining for a person if that person were to experience the death rates by age observed in, or assumed for, the selected year.

⁴Estimated.

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The values assumed after the early years for both the economic and the demographic factors are intended to represent the average experience and are not intended to be exact predictions of year-by-year values. Actual future values will likely exhibit fluctuations or cyclical patterns, as in the past.

In addition to the assumptions discussed above, many other factors are necessary to prepare the estimates presented in this report. Section II.H includes a discussion of some of those factors.

The ultimate values presented in tables II.D.1 and II.D.2 reflect little change from the ultimate values used for the 1991 Annual Report. Different levels, as opposed to rates of change, in several factors reflect, primarily, different starting levels based on additional data collected since the last report. The effect on the financing of the OASDI program of these and other changes is discussed in section II.F.2.

E. AUTOMATIC ADJUSTMENTS

The Social Security Act specifies that certain program amounts affecting the determination of OASDI benefits are to be adjusted annually, in general, to reflect changes in the economy. The law prescribes specific formulas which, when applied to reported statistics, produce "automatic" revisions in these program amounts and hence in the benefit-computation procedures.

In this section, values are shown for the program amounts which are subject to automatic adjustment, from the time that such adjustments became effective through 2001. Projected values for future years are based on the economic assumptions described in the preceding section of this report. Appendix F, in addition to providing the most recent determinations of program amounts under the automatic adjustment provisions, also provides a more complete description of such amounts.

Under the automatic-adjustment provisions affecting cost-of-living increases, benefits generally are increased once a year. These provisions were originally enacted in 1972 and first became effective with the benefit increase effective for June 1975. The 1983 amendments changed the effective month to December for years after 1982. For persons becoming eligible for benefits in 1979 and later, the increases generally begin with the year in which the worker reaches age 62, or becomes disabled or dies, if earlier. An automatic cost-of-living benefit increase of 3.7 percent, effective for December 1991, was announced in October 1991, as described in Appendix F. The automatic cost-of-living benefit increase for any year is normally based on the change in the CPI from the third quarter of the previous year to the third quarter of the current year.¹

¹ If the combined assets of the OASI and DI Trust Funds at the beginning of a year represent less than 20 percent of annual expenditures for that year, then the automatic benefit increase for December is limited to the lesser of the increases in wages or prices. This "stabilizer" provision has not affected any benefit increases since its enactment in 1983. Based on the projected operations of the trust funds shown in this report under the alternative sets of assumptions, the stabilizer provision is unlikely to affect any future OASDI benefit increases under present law.

Under section 215(b)(3) of the Social Security Act, the average amount of total wages¹ for each year after 1950 is used to index the earnings of most workers first becoming eligible for benefits in 1979 or later. This procedure converts a worker's past earnings to approximately their equivalent values near the time of the worker's retirement or other eligibility, and these values are used to calculate the worker's Average Indexed Monthly Earnings (AIME). The average amount of total wages for each year, generally referred to as the "average wage index," is also used to adjust most of the program amounts that are subject to the automatic-adjustment provisions. Table II.E.1 shows the average wage index as determined for each year 1951 through 1990.

TABLE II.E.1.—AVERAGE WAGE INDEX, CALENDAR YEARS 1951-90

Year	Amount	Year	Amount	Year	Amount
1951	\$2,799.16	1966	\$4,938.36	1981	\$13,773.10
1952	2,973.32	1967	5,213.44	1982	14,531.34
1953	3,139.44	1968	5,571.76	1983	15,239.24
1954	3,155.64	1969	5,893.76	1984	16,135.07
1955	3,301.44	1970	6,186.24	1985	16,822.51
1956	3,532.36	1971	6,497.08	1986	17,321.82
1957	3,641.72	1972	7,133.80	1987	18,426.51
1958	3,673.80	1973	7,580.16	1988	19,334.04
1959	3,855.80	1974	8,030.76	1989	20,099.55
1960	4,007.12	1975	8,630.92	1990	21,027.98
1961	4,086.76	1976	9,226.48		
1962	4,291.40	1977	9,779.44		
1963	4,396.64	1978	10,556.03		
1964	4,576.32	1979	11,479.46		
1965	4,658.72	1980	12,513.46		

The law provides for an automatic increase in the contribution and benefit base, generally based on the increase in the average wage index, for the year following a year in which an automatic benefit increase became effective. The base for 1975 was the first one determined on this basis. (Amendments enacted in December 1973 provided that the 11-percent general benefit increase that became effective in 1974 would be considered an automatic cost-of-living benefit increase for purposes of the automatic-adjustment provisions.) The bases for 1979-81 were specified by the 1977 amendments at levels above those which were expected to occur under the automatic-adjustment provisions (and which, in fact, as the experience developed, were above such levels). Starting again in 1982, the bases have been determined automatically on the basis of increases in average wages. The bases for years after 1989 are slightly higher than they otherwise would have been through the effects of a

¹Includes wages in noncovered employment and wages in covered employment without regard to either the OASDI or HI contribution bases.

new procedure to determine the base, as required by Public Law 101-239.

The Omnibus Budget Reconciliation Act of 1990 (Public Law 101-508) established a separate contribution base for the Hospital Insurance program. The base was set at \$125,000 for 1991, and is to be adjusted annually following the same procedures used for the OASDI contribution and benefit base. As described in Appendix F, the Hospital Insurance contribution base for 1992 was determined to be \$130,200.

Table II.E.2 shows historical automatic cost-of-living benefit increases for the years 1975-91 and assumed increases through 2001. The table also shows historical year-to-year percentage increases in the average wage index for 1975-90 and assumed increases through 2001. As noted above, the OASDI contribution and benefit base and the Hospital Insurance contribution base are generally adjusted on the basis of such wage increases. The historical and projected amounts for these two bases are also shown in table II.E.2. The projections are shown under the three alternative sets of economic assumptions described in the previous section.

TABLE II.E.2.—COST-OF-LIVING BENEFIT INCREASES, AVERAGE WAGE INDEX INCREASES, OASDI CONTRIBUTION AND BENEFIT BASES, AND HOSPITAL INSURANCE CONTRIBUTION BASES, 1975-2001

Calendar year	OASDI benefit increases ¹ (percent)	Increase in average wage index ² (percent)	OASDI contribution and benefit base ³	Hospital Insurance contribution base ⁴
Historical data:				
1975	8.0	7.5	\$14,100	\$14,100
1976	6.4	6.9	15,300	15,300
1977	5.9	6.0	16,500	16,500
1978	6.5	7.9	17,700	17,700
1979	9.9	8.7	⁵ 22,900	⁵ 22,900
1980	14.3	9.0	⁶ 25,900	⁶ 25,900
1981	11.2	10.1	⁷ 29,700	⁷ 29,700
1982	7.4	5.5	32,400	32,400
1983	3.5	4.9	35,700	35,700
1984	3.5	5.9	37,800	37,800
1985	3.1	4.3	39,600	39,600
1986	1.3	3.0	42,000	42,000
1987	4.2	6.4	43,800	43,800
1988	4.0	4.9	45,000	45,000
1989	4.7	4.0	48,000	48,000
1990	5.4	4.6	51,300	51,300
1991	3.7	⁶ 4.0	53,400	125,000
Alternative I:				
1992	2.6	4.2	⁷ 55,500	⁷ 130,200
1993	2.8	4.7	57,900	135,600
1994	3.0	4.8	60,300	141,300
1995	3.0	5.0	63,000	147,900
1996	3.0	5.0	66,000	155,100

TABLE II.E.2.—COST-OF-LIVING BENEFIT INCREASES, AVERAGE WAGE INDEX INCREASES, OASDI CONTRIBUTION AND BENEFIT BASES, AND HOSPITAL INSURANCE CONTRIBUTION BASES, 1975-2001 (Cont.)

Calendar year	OASDI benefit increases ¹ (percent)	Increase in average wage index ² (percent)	OASDI contribution and benefit base ³	Hospital Insurance contribution base ⁴
Alternative I: (Cont.)				
1997	3.0	5.0	\$69,300	\$162,900
1998	3.0	4.9	72,900	171,000
1999	3.0	5.0	76,500	179,400
2000	3.0	5.0	80,400	188,100
2001	3.0	4.9	84,300	197,400
Alternative II:				
1992	3.0	4.1	55,500	130,200
1993	3.4	4.3	57,600	135,300
1994	3.6	4.6	60,000	140,700
1995	4.0	5.1	62,700	146,700
1996	4.0	5.2	65,700	153,300
1997	4.0	5.2	69,000	161,100
1998	4.0	5.2	72,600	169,500
1999	4.0	5.3	76,500	178,200
2000	4.0	5.3	80,400	187,500
2001	4.0	5.3	84,600	197,400
Alternative III:				
1992	3.9	3.8	55,500	130,200
1993	5.4	5.1	57,300	134,700
1994	6.6	6.5	59,400	139,800
1995	6.0	6.2	62,400	147,000
1996	4.7	4.1	66,600	156,600
1997	5.0	6.6	70,800	166,200
1998	5.0	5.6	73,800	173,100
1999	5.0	5.8	78,600	184,500
2000	5.0	5.9	83,100	195,000
2001	5.0	5.8	87,900	206,100

¹ Effective with benefits payable for June in each year 1975-82, and for December in each year after 1982.

² Increase in the average wage index from prior year to the year shown. See table III.B.1 for projected dollar amounts of the average wage index.

³ The bases for years after 1989 were increased slightly through the effect of a new procedure to determine the base, as required by Public Law 101-239.

⁴ Prior to 1991, the Hospital Insurance (HI) contribution base was the same as the OASDI contribution and benefit base. The separate HI base for 1991 was specified by Public Law 101-508.

⁵ Amount specified by the Social Security Amendments of 1977.

⁶ Estimated.

⁷ Actual amount.

Other wage-indexed amounts are shown in table II.E.3. The table provides historical values from 1975, when the retirement earnings test exempt amounts were first indexed, through 1992, and also shows projected amounts under the alternative II assumptions through the year 2001. These other wage-indexed program amounts are described in the following paragraphs.

Under the retirement earnings test, earnings below certain amounts are exempted from the withholding of benefits. Two exempt amounts apply for each year of earnings—one for beneficiaries under age 65 and

another for those aged 65 and over. The automatic adjustment provisions require that such exempt amounts be increased in the year following a year in which an automatic cost-of-living benefit increase becomes effective.

The basic formula used to compute the Primary Insurance Amount (PIA) for workers who reach age 62, become disabled or die in 1992 is:

90 percent of the first \$387 of AIME, plus
32 percent of AIME in excess of \$387
but not in excess of \$2,333, plus
15 percent of AIME in excess of \$2,333.

The amounts separating the individual's AIME into intervals—the “bend points”—are adjusted automatically by the changes in average wages as specified in section 215(a)(1)(B) of the Social Security Act.

A similar formula is used to compute the maximum total amount of monthly benefits payable on the basis of the earnings of a retired or deceased individual. This formula is a function of the individual's PIA, and is shown below for workers who first became eligible for benefits, or who died before becoming eligible, in 1992:

150 percent of the first \$495 of PIA, plus
272 percent of the PIA in excess of \$495
but not in excess of \$714, plus
134 percent of the PIA in excess of \$714
but not in excess of \$931, plus
175 percent of the PIA in excess of \$931.

These PIA-interval bend points are adjusted automatically in accordance with section 203(a)(2) of the Act.

Actuarial Analysis

An individual's insured status depends on the number of quarters of coverage he or she has earned while in covered employment. The 1977 amendments specified the amount of earnings required in 1978 to be credited with a quarter of coverage and provided for automatic adjustment of this amount for years thereafter.

The law provides for the determination of the OASDI contribution and benefit bases that would have been in effect in each year after 1978 under the automatic-adjustment provisions as in effect before the enactment of the 1977 amendments. (For years after 1989, the "old-law" bases were modified in the same way as the current-law bases, as described above.) This old-law base is used in determining special-minimum benefits for certain workers who have many years of low earnings in covered employment.¹ Beginning in 1986, the old-law base is also used in the calculation of OASDI benefits for certain workers who are eligible to receive pensions based on noncovered employment.² In addition, it is used for certain purposes under the Railroad Retirement program and the Employee Retirement Income Security Act of 1974.

Past values for these wage-indexed amounts, together with estimates of future values under alternative II, are shown in the following table.

¹ For special minimum purposes, "low earnings" means earnings of at least 15 percent of the old-law base. Prior to 1991, the definition was more stringent, requiring earnings of at least 25 percent of the old-law base.

² The first percentage applied to a person's AIME to calculate his or her Primary Insurance Amount varies from 40 percent to 90 percent, depending on the individual's years of coverage. An individual earns a year of coverage when his earnings for the year are at least 25 percent of the old-law base.

TABLE II.E.3.—SELECTED OASDI PROGRAM AMOUNTS DETERMINED UNDER THE AUTOMATIC-ADJUSTMENT PROVISIONS, CALENDAR YEARS 1975-92, AND PROJECTED FUTURE AMOUNTS, CALENDAR YEARS 1993-2001, ON THE BASIS OF THE INTERMEDIATE SET OF ASSUMPTIONS

Calendar year	Retirement earnings test exempt amount		AIME "bend points" in PIA formula		PIA "bend points" in maximum-family-benefit formula			Amount of earnings required for quarter of coverage ²	"Old law" contribution and benefit base ³
	Under age 65	Ages 65 and over ⁴	First	Second	First	Second	Third		
Historical data:									
1975.....	\$2,520	\$2,520	(4)	(4)	(4)	(4)	(4)	(5)	(4)
1976.....	2,760	2,760	(4)	(4)	(4)	(4)	(4)	(5)	(4)
1977.....	3,000	3,000	(4)	(4)	(4)	(4)	(4)	(5)	(4)
1978.....	3,240	⁴ \$4,000	(4)	(4)	(4)	(4)	(4)	² \$250	(4)
1979.....	3,480	⁴ \$4,500	⁷ \$180	⁷ \$1,085	⁷ \$230	⁷ \$332	⁷ \$433	260	\$18,900
1980.....	3,720	⁵ 5,000	194	1,171	248	358	467	290	20,400
1981.....	4,080	⁵ 5,500	211	1,274	270	390	508	310	22,200
1982.....	4,440	⁶ 6,000	230	1,388	294	425	554	340	24,300
1983.....	4,920	6,600	254	1,528	324	468	610	370	26,700
1984.....	5,160	6,960	267	1,612	342	493	643	390	28,200
1985.....	5,400	7,320	280	1,691	358	517	675	410	29,700
1986.....	5,760	7,800	297	1,790	379	548	714	440	31,500
1987.....	6,000	8,160	310	1,866	396	571	745	460	32,700
1988.....	6,120	8,400	319	1,922	407	588	767	470	33,600
1989.....	6,480	8,880	339	2,044	433	626	816	500	35,700
1990.....	6,840	9,360	356	2,145	455	656	856	520	38,100
1991.....	7,080	9,720	370	2,230	473	682	890	540	39,600
1992.....	7,440	10,200	387	2,333	495	714	931	570	41,400
Estimates:									
1993.....	7,680	10,560	403	2,426	514	742	968	590	43,200
1994.....	8,040	11,040	419	2,525	535	773	1,008	620	45,000
1995.....	8,400	11,520	437	2,634	558	806	1,051	640	46,800
1996.....	8,760	12,000	457	2,755	584	843	1,099	670	48,900
1997.....	9,240	12,600	480	2,895	614	886	1,155	710	51,300
1998.....	9,720	13,200	505	3,046	646	932	1,215	740	54,000
1999.....	10,200	13,920	532	3,204	679	980	1,279	780	56,700
2000.....	10,680	14,640	559	3,371	715	1,032	1,345	820	59,700
2001.....	11,280	15,360	589	3,549	752	1,086	1,416	870	62,700

¹In 1955-82, retirement earnings test did not apply at ages 72 and over; beginning in 1983, it does not apply at ages 70 and over.

²See Appendix F for a description of quarter-of-coverage requirements prior to 1978.

³Contribution and benefit base that would have been determined automatically under the law in effect prior to enactment of the Social Security Amendments of 1977. The bases for years after 1989 were increased slightly through the effect of a new procedure to determine the base, as required by Public Law 101-239.

⁴No provision in law for this amount in this year.

⁵Amount not subject to automatic-adjustment provisions in this year.

⁶Amount specified by Social Security Amendments of 1977.

⁷Amount specified for first year by Social Security Amendments of 1977; amounts for subsequent years subject to automatic-adjustment provisions.