

ACTUARIAL NOTE

Number 137
November 1996

SOCIAL SECURITY ADMINISTRATION
Office of the Chief Actuary

OASDI SHORT-RANGE SENSITIVITY ANALYSIS

by Nettie J. Barrick, A.S.A.

Introduction

The financial and actuarial status of the OASDI program is traditionally evaluated for both short-range (the next 10 years) and long-range (the next 75 years) periods. For this note, the short-range period covers calendar years 1996 through 2005 as it did for the 1996 Trustees Report.¹

A number of different measures are calculated for evaluating the financial status of the program. For the long-range period, these measures are generally based on relative scales because of the difficulty in comparing dollar values for different periods. These relative measures include (1) the annual amounts of future income and outgo as a percentage of the amount of earnings subject to the OASDI payroll tax (income rates and cost rates), (2) the annual differences between these income and outgo figures, and (3) summarized values representing these figures over various periods. For the short-range period, the level of trust fund assets relative to annual expenditures is often used as a measure for evaluating the financial status of the program. The assets in the fund at the beginning of the year as a percentage of disbursements from the fund during the year is referred to as a "trust fund ratio" or "contingency fund ratio".

The Trustees Report includes estimates based on three alternative sets of assumptions regarding future economic and demographic trends. This is useful because of the inherent uncertainty in estimates for as long as 75 years into the future. Designated as alternatives I, II, and III, these sets of assumptions range from low cost (alternative I) to high cost (alternative III), with alternative II representing the set of intermediate cost assumptions. The low cost set is more optimistic from the standpoint of OASDI financing and the high cost set is more pessimistic. The intermediate set of assumptions is considered to be the "best estimate". The estimates based on the three

alternative sets of assumptions illustrate the effects of varying all of the principal assumptions simultaneously in order to portray a generally more optimistic or pessimistic future, in terms of the financial status of the OASDI program.

This note presents estimates which illustrate the sensitivity of the short-range trust fund ratios of the OASI, DI, and combined OASI and DI programs to changes in selected individual assumptions. The 1996 Trustees Report included a sensitivity analysis for the long-range period using summarized income rates and cost rates.² This note supplements that analysis.

In this note, the trust fund ratio of the combined OASI and DI Trust Funds will be referred to as the OASDI trust fund ratio. The following table shows the OASI, DI, and OASDI trust fund ratios after 5 years and after 10 years for each of the three alternative sets of assumptions used in the 1996 Trustees Report.

Table 1.—Estimated OASI, DI, and OASDI Trust Fund Ratios Based on Low Cost, Intermediate, and High Cost Assumptions

Trust fund ratios	Alternative		
	I	II	III
2000:			
OASI	210	193	172
DI	164	127	89
OASDI	204	183	159
2005:			
OASI	317	239	166
DI	264	127	11
OASDI	309	221	139

In the sensitivity analysis presented in this note, the intermediate (alternative II) analysis is used as the reference point, and one assumption at a time is varied within that alternative. Table 10 is provided at the end of this note, which summarizes the alternative values for each of the eight individual assumptions. Similar variations in the selected assumptions

¹The 1996 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, June 5, 1996.

²Section II.G, Long-Range Sensitivity Analysis.

within the other alternatives would result in similar relative variations in the short-range estimates. Each table that follows shows the effects of changing a particular assumption on the OASI, DI, and OASDI trust fund ratios after 5 years and after 10 years. All other assumptions remain the same as they were assumed to be for the intermediate estimates.

Total Fertility Rate

Table 2 shows the estimated OASI, DI, and OASDI trust fund ratios, on the basis of alternative II with various assumptions about the ultimate total fertility rate. These assumptions are that the ultimate total fertility rate will be 2.2 children per woman (as assumed for alternative I), 1.9 (as assumed for alternative II), and 1.6 (as assumed for alternative III). The rate is assumed to change gradually from its current level and to reach the various ultimate values in 2020. By the end of the short-range period, the projected fertility rates reach 2.1 children per woman (alternative I), 2.0 (alternative II), and 1.9 (alternative III).

Table 2.—Estimated OASI, DI, and OASDI Trust Fund Ratios Based on Intermediate Estimates With Various Fertility Assumptions

Trust fund ratios	Ultimate total fertility rate based on alternative—		
	I	II	III
2000:			
OASI	193	193	193
DI	127	127	127
OASDI	183	183	183
2005:			
OASI	239	239	239
DI	127	127	127
OASDI	221	221	221

During the short-range period, changes in fertility have little, if any, effect on the working population. Higher fertility rates result in an increase in benefit payments as a result of an increase in the number of child beneficiaries. Hence, the program cost slightly increases, in the short range, with higher fertility. This slightly larger level of benefit payments results in a small, but growing, decrease in interest income to the trust funds. During the short-range period, however, changes in fertility have such a small impact on trust fund income and outgo that there is no change, within rounding, in the trust fund ratios.

Death Rates

Table 3 shows the estimated OASI, DI, and OASDI trust fund ratios, on the basis of alternative II with various assumptions about future reductions in death rates. The analysis was developed by varying the per-

centage decrease assumed to occur in future death rates. The decreases assumed for the short-range period, summarized as changes in the age-sex-adjusted death rate, are about 4.0 percent (as assumed for alternative I), 9.7 percent (as assumed for alternative II), and 13.9 percent (as assumed for alternative III). It should be noted that these reductions do not apply uniformly to all ages. Some variation by age was assumed consistent with the objective of selecting assumptions for alternatives I and III that are relatively more optimistic and more pessimistic, respectively, in terms of the long-range financing of the OASDI program. For example, under alternative III, death rates are lower than they are under alternative II for people who have attained the retirement eligibility age of 62 but are higher than under alternative II at many of the ages at which people are usually in the labor force.

Table 3.—Estimated OASI, DI, and OASDI Trust Fund Ratios, Based on Intermediate Estimates With Various Death-Rate Assumptions

Trust fund ratios	Reduction in death rates based on alternative—		
	I	II	III
2000:			
OASI	194	193	191
DI	127	127	127
OASDI	185	183	182
2005:			
OASI	248	239	231
DI	127	127	127
OASDI	229	221	214

Under the death rates assumed for alternative I, the number of retired-worker and survivor beneficiaries are lower than under alternative II death rate assumptions and, therefore, the amount of retirement and survivors benefits paid from the OASI Trust Fund is lower. At the same time, the variation of death rates by age causes the number of covered workers and, therefore, contributions to both the OASI and DI Trust Funds to be higher than they would otherwise be. Due to this lower outgo and higher income, the OASI trust fund ratios increase when a smaller reduction in death rates is assumed. The variation of death rates by age leads to an increase, from alternative II levels, in the number of DI beneficiaries and, hence, DI benefit payments. These higher benefit payments and the increased contributions mentioned above are virtually offsetting.

If the death rates from alternative III are substituted in place of the alternative II rates, the effects on the trust fund ratios are of about the same magnitude, but in the opposite direction, as compared to the effects of the alternative I rates. The OASI trust fund ratio varies by 8-9 percent in 2005 due to alternative

assumptions in death rates, while the DI trust fund ratio does not change.

Net Immigration

Table 4 shows the estimated OASI, DI, and OASDI trust fund ratios, under alternative II with various assumptions about the magnitude of net immigration. These assumptions are that the annual net immigration, in the year 2000 and later, will be 1,150,000 persons (as assumed for alternative I), 900,000 persons (as assumed for alternative II), and 750,000 persons (as assumed for alternative III). The net immigration estimates are projected to phase into these levels from assumed 1995 levels of 1,100,000 persons, 865,000 persons, and 700,000 persons for alternatives I, II, and III, respectively.

Table 4.—Estimated OASI, DI, and OASDI Trust Fund Ratios, Based on Intermediate Estimates With Various Net-Immigration Assumptions

Trust fund ratios	Net immigration per year based on alternative—		
	I	II	III
2000:			
OASI	193	193	192
DI	128	127	127
OASDI	184	183	183
2005:			
OASI	242	239	237
DI	131	127	124
OASDI	224	221	219

Immigration occurs at relatively young ages, thereby increasing the numbers of covered workers earlier than the numbers of beneficiaries. Therefore, the short-range trust fund ratios increase with increasing rates of net immigration. Although higher net immigration assumptions eventually lead to higher projected benefit payments, the additional outgo in the short range is much more than offset by additional contributions due to more people in the labor force.

Real-Wage Differential

The real-wage differential is the difference between the assumed annual percentage increase in average wages in covered employment and the assumed annual percentage increase in the Consumer Price Index (CPI). Table 5 shows the estimated OASI, DI, and OASDI trust fund ratios, on the basis of alternative II with various assumptions about the real-wage differential. These assumptions are that the ultimate real-wage differential will be 1.5 percentage points (as assumed for alternative I), 1.0 percentage point (as assumed for alternative II), and 0.5 percentage point (as assumed for alternative III). In each case, the ultimate annual increase in the CPI is assumed to

be 4.0 percent (as assumed for alternative II), yielding ultimate percentage increases in average annual wages in covered employment of 5.5, 5.0, and 4.5 percent under alternatives I, II, and III, respectively. These ultimate levels are assumed to be reached at the end of, or just after, the short-range period. For each year of the short-range period, the real-wage differential is assumed to be at the level projected, for that year, for that alternative, in the Trustees Report, while the percentage increase in the CPI is assumed to be at the level projected, for that year, for alternative II.

Table 5.—Estimated OASI, DI, and OASDI Trust Fund Ratios, Based on Intermediate Estimates With Various Real-Wage Assumptions

Trust fund ratios	Annual real-wage differential based on alternative—		
	I	II	III
2000:			
OASI	198	193	185
DI	133	127	120
OASDI	189	183	175
2005:			
OASI	267	239	206
DI	149	127	101
OASDI	248	221	189

Higher real-wage levels increase the taxable payroll and, therefore, the contributions. Since benefit increases are not affected, the trust fund ratios increase with increasing real-wage differentials. Although the initial benefit levels are higher because of the higher wages, these increases are more than offset by the increases in the contributions of future workers. Because of the surplus of additional contributions over additional outgo, there is also increased interest income.

For each increase of 0.5 percentage point in the ultimate real-wage differential, the OASDI trust fund ratio increases by approximately 6 to 8 percentage points by 2000 and by approximately 27 to 32 percentage points by 2005.

Consumer Price Index

Table 6 shows the estimated OASI, DI, and OASDI trust fund ratios, on the basis of alternative II with various assumptions about the rate of increase of the Consumer Price Index. These assumptions are that the ultimate annual increase in the CPI will be 3.0 percent (as assumed for alternative I), 4.0 percent (as assumed for alternative II), and 5.0 percent (as assumed for alternative III). These ultimate levels are reached before the end of the short-range period. In each case, the ultimate real-wage differential is assumed to be 1.0 percentage point (as assumed for

alternative II), yielding ultimate percentage increases in average annual wages in covered employment of 4.0, 5.0, and 6.0 percent under alternatives I, II, and III, respectively. For each year of the short-range period, the percentage increase in the Consumer Price Index is assumed to be at the level projected, for that year, for that alternative, in the Trustees Report, while the real-wage differential is assumed to be at the level projected, for that year, for alternative II.

Table 6.—Estimated OASI, DI, and OASDI Trust Fund Ratios, Based on Intermediate Estimates With Various CPI-Increase Assumptions

Trust fund ratios	Annual percentage increase in CPI based on alternative—		
	I	II	III
2000:			
OASI	193	193	189
DI	127	127	126
OASDI	184	183	180
2005:			
OASI	241	239	239
DI	126	127	131
OASDI	223	221	222

When assuming a change in the rate of increase in the CPI (in conjunction with a constant real-wage differential), both taxable payroll and benefit payments increase with a higher rate of CPI increase. During the short-range period, the increase in benefit payments is largely attributable to the increase in the annual cost-of-living adjustments (COLAs). In the long-range period, the effect of the higher COLAs “fades out”. That is, a few years after a benefit increase is effective, the percentage of people on the rolls who received that benefit increase has diminished. The effect of the COLAs “fades out” faster for DI than for OASI. During the long-range period, the increase in benefit payments is largely attributable to the increase in average annual wages in covered employment (which affects initial benefit levels).

Since both taxable payroll and benefit payments increase when a higher CPI increase is assumed, both the level of assets in the fund at the beginning of the year and the disbursements from the fund during the year increase. Therefore, the effect on the “trust fund ratio” is not immediately clear.

In this sensitivity analysis, the following effects were observed. Under alternative I CPI increase assumptions (with CPI increases that are lower than those under alternative II), disbursements during the year decrease faster than assets at the beginning of the year for both OASI and OASDI. This results in higher OASI and OASDI trust fund ratios throughout the short-range period. For DI, assets at beginning of

year decrease faster than disbursements. This results in a decrease in DI trust fund ratios during the short-range period. Under alternative III CPI increase assumptions, disbursements increase faster than assets at beginning of year for OASI, DI, and OASDI during the first half of the short-range period. This results in lower trust fund ratios in 2000. During the latter half of the short-range period, the increase in assets at beginning of year is faster than the increase in disbursements, particularly for DI. By 2005, the trust fund ratios are as high or higher than those projected for alternative II.

The figures shown in table 6 are especially asymmetrical about alternative II due to the specific annual CPI increases assumed for the economic scenarios in alternatives I and III (see table 12).

Real Interest Rate

Table 7 shows the estimated OASI, DI, and OASDI trust fund ratios, on the basis of alternative II with various assumptions about the annual nominal real interest rate for special public-debt obligations issuable to the trust funds. These assumptions are that the ultimate annual real interest rate will be 3.0 percent (as assumed for alternative I), 2.3 percent (as assumed for alternative II), and 1.5 percent (as assumed for alternative III). These levels are reached at the end of the short-range period. In each case, the ultimate annual increase in the CPI is assumed to be 4.0 percent (as assumed for alternative II), resulting in ultimate annual yields of 7.1, 6.4, and 5.6 percent under alternatives I, II, and III, respectively.

Table 7.—Estimated OASI, DI, and OASDI Trust Fund Ratios, Based on Intermediate Estimates With Various Real-Interest Assumptions

Trust fund ratios	Ultimate annual real interest rate based on alternative—		
	I	II	III
2000:			
OASI	193	193	192
DI	127	127	127
OASDI	183	183	183
2005:			
OASI	241	239	236
DI	129	127	126
OASDI	223	221	219

In general, higher interest rates lead to higher trust fund ratios. However, during the short-range period, varying the real interest rate has little effect on the trust fund ratios because the changed rates only affect new bond purchases, not the existing stock of bonds. Each year, assets allowing, bonds are purchased which have maturity dates from 1 year to 15 years in the future. The amounts of the bonds are cal-

culated such that bonds totaling approximately one-fifteenth of the total bond amount mature each year. Therefore, after 5 years only about one third of the total bond amount would be subject to the changed real interest rates.

Since the real interest rates are graded into the ultimate assumed rate, projected real interest rates for the first few years vary little from one alternative to another. Therefore, in the fifth year, the trust fund ratios remain the same, within rounding, as they were using the alternative II ultimate annual real interest rate. By the tenth year, the OASDI trust fund ratio varies slightly (by 2 percentage points) when the ultimate real interest rate is changed to the level assumed for alternative I or III.

Disability Incidence Rates

Table 8 shows the estimated OASI, DI, and OASDI trust fund ratios, on the basis of alternative II with various assumptions concerning future disability incidence (award) rates.

Alternative II short-range incidence rates are developed, by sex and single year of age, through a series of preliminary projections reflecting judgment on the expected number of awards from non-HIV related impairments. This forms the “baseline” projection for award rates. HIV-related impairments are then considered and the two categories are aggregated to produce one series of award rates for each age and sex. As a final step, award rates may be modified to reflect recent legislative changes to the DI program. Disability incidence rates for alternatives I and III are developed by varying the alternative II baseline projection of non-HIV related impairments and combining the results with separate alternative I and III projections of HIV-related impairments.

Table 8.—Estimated OASI, DI, and OASDI Trust Fund Ratios, Based on Intermediate Estimates With Various Disability Incidence Assumptions

Trust fund ratios	Disability incidence rates based on alternative—		
	I	II	III
2000:			
OASI	193	193	193
DI	144	127	108
OASDI	186	183	180
2005:			
OASI	239	239	240
DI	186	127	64
OASDI	231	221	209

Under the relatively low incidence rates assumed for alternative I, the DI trust fund ratio increases by 17 percentage points from the level reached under alter-

native II disability incidence rates, by the fifth year. The DI trust fund ratio decreases by 19 percentage points under the relatively high incidence rates assumed for alternative III. For the tenth year, the DI trust fund ratio increases from the alternative II level by 59 percentage points under the incidence rates assumed for alternative I and decreases by 63 percentage points under the incidence rates assumed for alternative III. Varying the disability incidence rates has only a minimal effect on the OASI trust fund ratios. An increase in the disability incidence rates results in more disabled workers, and hence, fewer workers who might retire prior to normal retirement age.

The OASDI trust fund ratios move in the same direction as the DI trust fund ratios, but to a smaller extent, because of the relative sizes of the OASI and DI programs. The OASDI trust fund ratio changes by approximately 3 percentage points for the fifth year and by approximately 10 to 12 percentage points for the tenth year under alternative DI incidence rate assumptions.

Disability Termination Rates

Table 9 shows the estimated OASI, DI, and OASDI trust fund ratios, on the basis of alternative II with various assumptions about future disability termination rates.

Termination of disability benefits are categorized by reason which includes death, recovery, conversion at normal retirement age, and “other”. Alternative II short-range disability termination rates are developed by reason, sex, and single year of age. Termination rates based on death and “other” are expected to vary little from their current levels, whereas recovery rates are highly sensitive to the number of continuing disability reviews (CDRs) performed and, therefore, fluctuate with budget estimates on the future volume of such reviews. Disability termination rates for alternatives I and III are determined based on a flat percentage-point increase (alternative I) or decrease (alternative III) in the annual change in termination rates for alternative II.

Table 9.—Estimated OASI, DI, and OASDI Trust Fund Ratios, Based on Intermediate Estimates With Various Disability Termination Assumptions

Trust fund ratios	Disability termination rates based on alternative—		
	I	II	III
2000:			
OASI	193	193	193
DI	131	127	123
OASDI.....	184	183	183
2005:			
OASI	239	239	239
DI	140	127	114
OASDI.....	223	221	219

For the fifth year, the DI trust fund ratio increases by four percentage points, from the alternative II level, under the relatively high termination rates assumed for alternative I. The ratio decreases, from the alternative II level, by four percentage points under the relatively low termination rates assumed for alternative III. For the tenth year, the DI trust fund ratio changes by 13 percentage points under the termination rates assumed for alternatives I and III. Within rounding, the OASI trust fund ratios do not change.

The OASDI trust fund ratios move in the same direction as the DI trust fund ratios, but to a smaller extent, because of the relative sizes of the OASI and DI programs. For the tenth year, the OASDI trust fund ratio changes by 2 percentage points under alternative DI termination rates.

Summary

By varying only one assumption at a time, we are able to see the relative size of the effect of changing each assumption. Table 10 below shows the ranking, for the short-range period, of the effect on the trust fund ratios of changing each of the assumptions. The assumptions are ranked from 1 to 8 for OASI and DI with 1 representing the greatest effect and 8 representing the smallest effect. Table 11 which follows shows the ranking, for both the short-range period and the long-range period, of the effect on the OASI and DI Trust Funds, combined, of changing each of the assumptions.

From tables 10 and 11, we can see that, of the eight categories considered, varying the real-wage differential has the greatest effect on the OASI and OASDI trust fund ratios and the second greatest effect on the DI trust fund ratio during the short-range period. Under alternative I real-wage assumptions, the OASDI trust fund ratio for 2005 increases by 27 percentage points. Under alternative III real-wage assumptions, the OASDI trust fund ratio for 2005 decreases by 32 percentage points. For the long-range period, varying the real-wage differential has the sec-

ond greatest effect on the combined OASI and DI Trust Funds.

During the short-range period, varying the disability incidence rates has the greatest effect on the DI trust fund ratio and the second greatest effect on the OASDI trust fund ratio. Under alternative I or III disability incidence rate assumptions, the DI trust fund ratio for 2005 changes by 59-63 percentage points. The OASDI trust fund ratio for 2005 increases by 10 percentage points (alternative I) and decreases by 12 percentage points (alternative III).

In the short-range period, the second largest effect on the OASI trust fund ratio and the third largest effect on the OASDI trust fund ratio is seen when death rate assumptions are varied. Under alternative I death rate assumptions, the OASDI trust fund ratio for 2005 increases by 8 percentage points. Under alternative III death rate assumptions, the OASDI trust fund ratio for 2005 decreases by 7 percentage points. For the long-range period, varying the death rate assumptions has the greatest effect on the combined OASI and DI Trust Funds.

Varying each of the other five assumption categories has little effect on the OASDI trust fund ratio during the short-range period. Using alternative disability termination assumptions has the third largest effect on the DI trust fund ratio, but, because of the relative sizes of the OASI and DI Trust Funds, this has little effect on the OASDI trust fund ratio.

The reader should note that the effects of varying the eight assumption categories individually does not add up to the effect noted when all assumptions are changed simultaneously. This analysis does not take into account the interaction among assumptions which occurs when two or more assumptions are varied at the same time. This analysis also does not include the effect of varying unemployment assumptions.

Table 10.—Ranking of effect of changing assumptions in the short-range period (1=greatest, 8=least)

Assumption	OASI	DI
Fertility Rate	6	7
Death Rates	2	6
Net Immigration.....	3	4
Real-Wage Differential	1	2
Consumer Price Index.....	5	8
Real Interest Rate.....	4	5
Disability Incidence Rates.....	8	1
Disability Termination Rates.....	7	3

Table 11.—Ranking of short-range and long-range effects of changing assumptions on OASDI (1=greatest, 8=least)

Assumption	Short range	Long range
Fertility Rate	8	4
Death Rates	3	1
Net Immigration.....	4	7
Real-Wage Differential	1	2
Consumer Price Index.....	7	6
Real Interest Rate.....	5	3
Disability Incidence Rates.....	2	5
Disability Termination Rates.....	6	8

Table 12.—Alternative assumptions used for the short-range sensitivity analysis

Year	Fertility rate ^a	Death rate ^b (per 100,000)	Net immigration (in thousands)	Real-wage differential ^c (percent)	Increase in Consumer Price Index ^d (percent)	Real interest rate ^e (percent)	Disability incidence rate ^f (per 1,000)	Disability termination rate ^g
Alternative II								
1995.....	2.039	764	865	1.3	2.8	3.9	5.25	.0944
1996.....	2.034	757	875	1.3	2.8	3.5	5.23	.0894
1997.....	2.030	750	885	1.1	3.2	3.2	5.32	.0924
1998.....	2.025	744	885	.8	3.3	3.1	5.26	.0885
1999.....	2.020	738	885	.9	3.4	3.1	5.24	.0876
2000.....	2.015	731	900	.8	3.5	2.9	5.21	.0864
2001.....	2.010	725	900	.7	3.7	2.7	5.17	.0863
2002.....	2.005	719	900	.7	3.9	2.5	5.13	.0863
2003.....	2.000	712	900	.9	4.0	2.4	5.12	.0805
2004.....	1.994	706	900	1.0	4.0	2.4	5.10	.0804
2005.....	1.989	701	900	1.1	4.0	2.3	5.11	.0804
Alternative I								
1995.....	2.050	758	1,100	1.3	2.8	3.9	5.25	.0944
1996.....	2.057	756	1,110	1.7	2.4	3.5	4.92	.0928
1997.....	2.063	755	1,125	1.8	2.8	3.3	4.92	.0970
1998.....	2.070	753	1,125	1.5	3.0	3.3	4.78	.0943
1999.....	2.076	751	1,125	1.7	3.0	3.3	4.68	.0935
2000.....	2.082	750	1,150	1.6	3.0	3.2	4.59	.0923
2001.....	2.088	749	1,150	1.5	3.0	3.1	4.49	.0921
2002.....	2.094	748	1,150	1.5	3.0	3.0	4.40	.0922
2003.....	2.100	747	1,150	1.6	3.0	3.0	4.36	.0863
2004.....	2.106	746	1,150	1.6	3.0	3.0	4.30	.0861
2005.....	2.112	745	1,150	1.6	3.0	3.0	4.28	.0861
Alternative III								
1995.....	2.026	765	700	1.2	2.8	3.9	5.26	.0944
1996.....	2.009	754	700	.5	2.7	3.5	5.58	.0859
1997.....	1.993	744	725	.4	3.1	3.1	5.81	.0876
1998.....	1.976	734	725	.2	5.4	3.0	5.90	.0826
1999.....	1.959	728	725	-1.0	5.4	2.8	6.01	.0816
2000.....	1.943	720	750	.3	4.5	2.6	6.12	.0802
2001.....	1.925	712	750	.3	5.0	2.3	6.16	.0799
2002.....	1.908	702	750	.0	5.0	2.0	6.17	.0798
2003.....	1.891	691	750	.2	5.0	1.9	6.14	.0742
2004.....	1.874	680	750	.3	5.0	1.7	6.09	.0740
2005.....	1.856	668	750	.5	5.0	1.5	6.05	.0740

a. The 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 assumed for the selected year, and if she were to survive the entire childbearing period. The ultimate total fertility rate is assumed to be reached in 2020.

b. These are the age-sex adjusted death rates. The age-sex adjusted death rates are calculated as 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 for the selected year.

c. The real-wage differential is the difference between the assumed annual percentage increase in average wages in covered employment and the assumed annual percentage increase in the Consumer Price Index. For each year of the short-range period, the real-wage differential is assumed to be at the level projected, for that year, for that alternative, in the Trustees Report, while the percentage increase in the Consumer Price Index is assumed to be at the level projected, for that year, for alternative II.

d. For each year of the short-range period, the percentage increase in the Consumer Price Index is assumed to be at the level projected, for that year, for that alternative, in the Trustees Report, while the real-wage differential is assumed to be at the level projected, for that year, for alternative II.

e. The alternative real interest rates shown here are those used for the estimates illustrated in this note. These were phased in from the current level to the ultimate level. These real interest rates differ from those shown for alternatives I and III in the original Trustees Report estimates because of fluctuations built into the CPI increases (to simulate recessions) in those estimates. These also differ from the alternative real interest rates which were calculated when CPI sensitivity estimates were prepared.

f. These are the age-sex adjusted disability incidence rates. These rates were standardized to the 1995 disability incidence rates, by sex, using 5-year age groups.

g. These rates are derived by dividing the number of terminations (including conversions) by the exposure of disabled workers in force at the beginning of the year plus the exposure of disabled workers awarded during the year.