Distributional Effects of Increasing the Benefit Computation Period

by Mark Sarney

The computation period is the number of highest earning years, currently 35, that are used to compute the career average earnings on which Social Security benefits are based. The brief uses MINT model projections to compare the distributional effects of two policy options discussed by the Social Security Advisory Board; one extends the 35-year computation period 3 years and the second one extends it 5 years. Both would reduce benefits; by 2.5 percent for the 3-year extension and 4 percent for the 5-year extension. About one out of five beneficiaries are not affected, even after full implementation in 2070. Workers with the lowest lifetime average earnings would face the largest proportional benefit reductions because they generally would have more years of zero earnings in their computation period than other workers. Social Security's progressivity would not change substantially.

Summary

This policy brief analyzes the distributional effects of increasing the computation period used in the calculation of Social Security benefits. The computation period is the number of highest earning years, currently 35, that are used to compute the career average earnings on which benefits are based. The brief compares two policy options discussed by the Social Security Advisory Board; one extends the 35-year computation period 3 years (38 years) and the second one extends it 5 years (40 years). The distributional results presented here were estimated using MINT model projections of current and future Social Security beneficiaries.[1]

The major findings are:

- While neither option solves Social Security's long-range funding shortfall, both improve system financing by reducing benefits. The 40-year option would eliminate more of the 75-year actuarial deficit than the 38-year option, 24 percent versus 15 percent, respectively. It would do this through higher average benefit reductions: 4 percent versus 2.5 percent compared to scheduled levels in 2040 and later.[2] By contrast, payable benefit levels would be 27 percent lower than scheduled in 2050 and 31 percent lower in 2070.

- By design the options would not apply to disabled workers and by extension to survivors of workers who die prior to age 62. Thus,

about one out of five beneficiaries would be shielded from any reduction, even after full implementation in 2070.

- Workers with the lowest lifetime average earnings would face the largest proportional benefit reductions and poverty would increase slightly. This benefit reduction would happen because low lifetime earners generally have more years of zero earnings in their computation period than other workers.

- Social Security's progressivity, accounting for the distribution of lifetime benefits and taxes, would not change substantially because of small differences in the percentage benefit reductions and a greater proportion of low earners would be protected than high earners.

Current Computation Period Is 35 Years

The primary Social Security benefit is based on average lifetime earnings, adjusted for wage growth, called the average indexed monthly earnings (AIME). The computation period is the number of years of earnings used to calculate the AIME. Under current law, yearly earnings are adjusted for wage growth and the highest 35 years are averaged and divided by 12 to produce the AIME. If workers have fewer than 35 years of earnings, the adjusted earnings (including years with zero earnings) are averaged over 35 years; multiple years with no earnings can

Chart 1.
Average percentage differences from scheduled benefits level off under both options for all beneficiaries aged 62 and older

Percentage difference
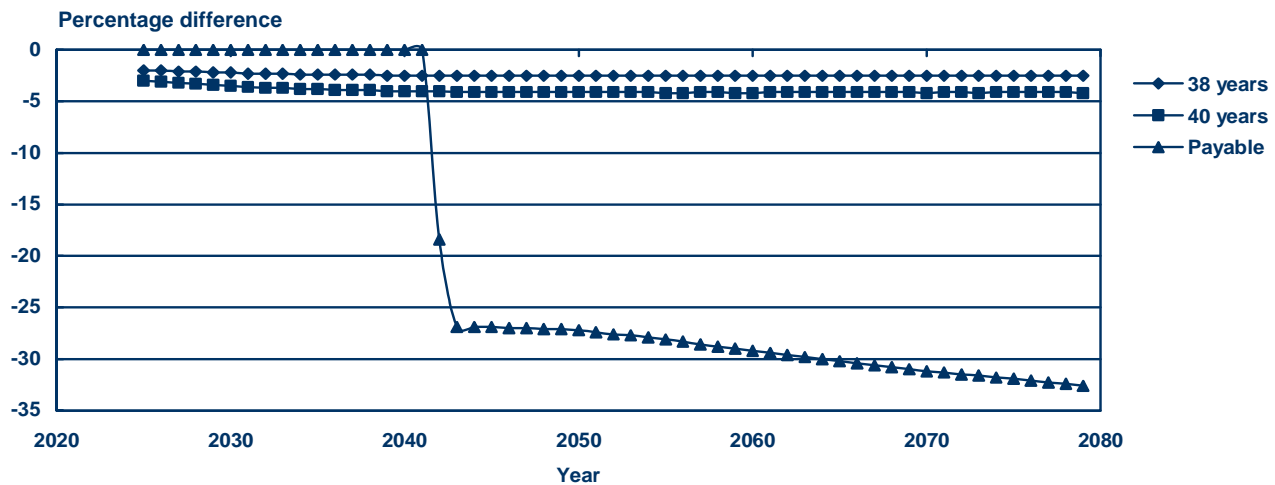
SOURCE: Author's calculations from MINT (Modeling Income in the Near Term) data.

substantially reduce the AIME. For disabled workers and those who receive survivor benefits from workers who die prior to age 62, the computation period is shortened to reflect the onset of disability or death, respectively.[3]

Both Options Improve Solvency By Reducing Benefits

Both policy options would extend the computation period for retired workers and the survivors of some deceased workers, but not for disabled workers. Under both options the computation period would increase by one year for those reaching age 62 in 2006. One additional computation year would be added every two years after 2006. By extending the 35-year computation period by 3 or 5 years, the AIME is reduced because lower earning years are added to the benefit calculation. As a result, unless the individual remains in the labor force for additional years to replace these lower years with higher years, the proposals result in lower benefits compared to those scheduled under current law.

Increasing the computation period is generally considered an incentive for workers to extend their careers.[4] In this paper, however, no behavioral responses are modeled and the results reflect workers having the same careers that they would under current law. While some workers would extend their careers in response to an increased computation period, the various ways that behavioral reactions or lack thereof

could be distributed throughout the population is unknown. For these two policy options in particular, where, as explained below, one out of five beneficiaries would be shielded from reductions, estimating the expected behavioral response on an individual basis would be even more difficult.

Chart 1 shows benefit percentage reductions for those aged 62 and older would plateau in the 2040s when both options would be fully implemented for that population. The 38-year option would reduce average benefits for all beneficiaries aged 62 and older by 2.5 percent and the 40-year option would reduce benefits by slightly over 4 percent. By contrast, payable benefit levels would drop by about a third lower compared to scheduled benefits during this period.

Table 1 shows that the larger benefit reductions under the 40-year option will eliminate more of the

Table 1.
Effect of extending the computation period on solvency

	38 years	40 years
Change in actuarial balance (percentage of taxable payroll)	0.28	0.46
Percentage of long-range actuarial imbalance fixed	14.6	24.0
Percentage of annual shortfall fixed in the 75th year	7.5	12.8

SOURCE: Based on calculations by the Office of the Chief Actuary, Social Security Administration.

long-range imbalance than the 38-year option, but both options would fall short of eliminating the entire imbalance.

Disability and Survivor Rules Shield One-Fifth of Beneficiaries

About 20 percent of beneficiaries aged 62 and older would be unaffected by either of the two options in 2050 and even in 2070, 20 years after either option has been fully implemented. These findings may be surprising given that the two options are generally considered across-the-board reductions for all but the disabled and that they would phase in quickly after 2006. The unaffected beneficiaries under either option in 2070 include:

- **93 percent of disabled workers**—Disabled workers would make up about 3.8 percent of beneficiaries aged 62 and older in 2070. By design, nearly all disabled workers would be unaffected by either policy option. However, the 7 percent who would be affected are disabled workers who would receive lower spousal or survivor benefits from workers affected by the options.

- **78 percent of the retired disabled**—The retired disabled are workers who have reached the full retirement age and automatically convert from disability to retirement. They would make up about 10.8 percent of beneficiaries aged 62 and older in 2070. As noted before, all disabled worker benefits are unaffected by either policy option, even when those benefits convert to retirement benefits. However, over 20 percent of these workers would be affected because they would also receive spousal or survivor benefits from workers who would be affected by the options.

- **33 percent of dually entitled survivors**—Dually entitled survivors are beneficiaries receiving both their own worker benefit and a survivor benefit. They would make up about 17.7 percent of beneficiaries aged 62 and older in 2070. About one-third would be unaffected because they receive benefits from a worker who died before age 62. Under current law, the computation period for workers who die before age 62 is truncated to the number of years between age 22 and death, minus 5, if that number is lower than the retired worker computation period. Under both options, for instance, a worker who dies at age 60 will continue to have a current law computation period of 33 years from

which all survivor benefits paid from that earnings record will be calculated.

- **Almost 30 percent of those receiving only survivor benefits**—Survivor-only beneficiaries would make up about 0.7 percent of beneficiaries aged 62 and older in 2070. The existing computation period rules shield about one-third of survivor beneficiaries, as mentioned above.

More of the unaffected disabled and survivor beneficiaries would be low earners with over half in the bottom 40 percent of earners; 30 percent in the lowest quintile alone.

Affected Low Lifetime Earners Receive Larger Benefit Reductions

The roughly 70 percent of low lifetime earners who are affected would, on average, receive larger percentage benefit reductions under both options than those with higher lifetime earnings.[5] Table 2 shows that

Table 2.
Low lifetime earners in 2050 would have the highest average benefit reductions (percent)

Shared lifetime	38 years	40 years
Highest quintile	-2.0	-3.4
2nd highest quintile	-2.6	-4.4
Middle quintile	-3.2	-5.3
2nd lowest quintile	-3.6	-5.9
Lowest quintile	-4.5	-7.1

SOURCE: Author's calculations from MINT (Modeling Income in the Near Term) model data.

NOTE: Includes only those beneficiaries aged 62 and older affected by the options.

reductions under the 38-year option in 2050 would be steeper for the lowest quintile than they would be for the highest quintile. Under the 40-year option, the difference between the highest and lowest quintiles would be greater. Shared lifetime earnings is a present value measure that accounts for household earnings of married couples by attributing half of the couple's earnings to each person in each year they are married. The year 2050 is used in Table 2 because by that year both options would be fully phased in for retirees aged 62 to 106.

Poverty levels would increase slightly

The poverty rate for all beneficiaries aged 62 and older would increase compared to scheduled benefits, but would be less than payable benefits, as shown

in Table 3. As a result, the number in poverty would increase under both options, but not by as much as they would under payable benefits, as shown in Table 4. It is worth noting that the number in poverty and the poverty rates under scheduled benefits and both options would decline over time. This is not due to any change in Social Security or any options to change it, but because the poverty threshold grows with inflation while household income would grow at the generally higher rate of wage growth.

Low lifetime earners have fewer years of work

Affected low lifetime earners would receive greater percentage reductions, and the poverty rate would increase, because of differences in earnings history patterns. Table 5 illustrates that lower wage workers generally have fewer years of work, and thus greater number of zero earnings years than other workers. In large part, it is the greater number of zero years, rather than low annual earnings levels, that helps define them as low lifetime earners relative to those with fewer or no zero earning years.

As discussed earlier, benefit reductions would occur under both options because the number of lower or zero earnings years included in the longer computa-

Table 3.
Aged beneficiary poverty rate increases slightly (percent)

	Scheduled benefits	Payable benefits	38 years	40 years
2030	2.4	2.4	2.5	2.6
2050	1.3	3.4	1.4	1.6
2070	0.6	2.2	0.6	0.7

SOURCE: Author's calculations from MINT (Modeling Income in the Near Term) model data.

Table 4.
Number of poor aged beneficiaries increases above scheduled benefits (in thousands)

	Scheduled benefits	Payable benefits	38 years	40 years
2030	1,732	+0	+132	+200
2050	1,048	+1,751	+130	+293
2070	547	+1,414	+37	+79

SOURCE: Author's calculations from MINT (Modeling Income in the Near Term) model data.

Table 5.
Low lifetime earners in 2050 would have the highest average number of zero years in the AIME calculation (average number of zero years)

Shared lifetime earnings	Current law [a]	38 years	40 years
Highest quintile	0.4	0.7	0.9
2nd highest quintile	1.0	1.5	1.9
Middle quintile	1.4	2.1	2.7
2nd lowest quintile	2.4	3.5	4.4
Lowest quintile	9.1	11.5	13.2

SOURCE: Author's calculations from MINT (Modeling Income in the Near Term) model data.

NOTES: Includes nondisabled beneficiaries aged 62 and older who are affected by the options.

AIME = average indexed monthly earnings.

a. Current law refers here to both scheduled and payable benefits because the number of zero years would be the same under both.

tion period would increase for all workers. While this means that the lifetime average will drop for all workers, the average will drop the most for those whose additional computation years contain any zero earnings.

Social Security Progressivity Unchanged

While both policy options would reduce the benefits of low lifetime earners more than others, Social Security's progressivity, considering the distribution of the lifetime value of benefits and taxes, would be unchanged, as seen in Chart 2. The progressivity index examines the distribution of total lifetime benefit and tax dollars to measure progressivity on a scale of -1 to 1, with -1 being the most regressive and 1 being the most progressive.[6] A value of zero would indicate that lifetime benefits are exactly proportional to lifetime contributions. A flat dollar benefit system would have an index value in the .30s. Scheduled Social Security benefits score around .15 to .17 percent for the birth cohorts affected by the two options, and these values are almost unchanged under the 38-year and 40-year options. Payable benefits would score higher than scheduled benefits and higher than both options because the payable reductions grow over time, lowering lifetime benefits more for those with longer life spans, who are generally higher wage workers.

There are likely two reasons that the distribution of benefit dollars relative to tax dollars does not shift much under either option. First, the average differ-

Chart 2.
Progressivity would not change

Progressivity index
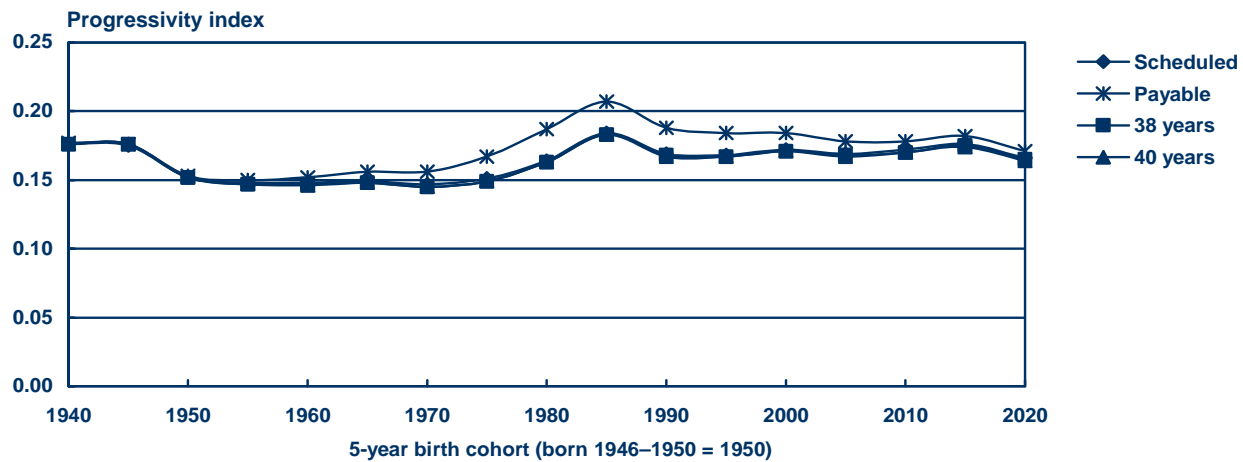
SOURCE: Author's calculations from MINT (Modeling Income in the Near Term) data.

ence between the percentage reductions of higher and lower wage earners is relatively small. Second, while lower earning individuals affected by the provisions would have larger percentage reductions than affected higher earners, up to one-fifth of beneficiaries would be unaffected, even as late as 2070, and a majority of the unaffected would be low earners.

Notes

[1] The simulations of these options use data from the MINT (Modeling Income in the Near Term) model and are compared to benefits scheduled to be paid under current law (scheduled benefits) and benefits payable without any other changes to current law (payable). The comparison is a static one with no behavioral response to the policy options' effects on benefits or income. The MINT model is based on Social Security administrative data matched to the Survey of Income and Program Participation. Work, marriage, death, and retirement are projected for real and imputed individuals based on real earnings, marital histories, and education levels.

[2] All solvency estimates come from the Web site of the Social Security Administration's Office of the Chief Actuary. 38 years: http://www.ssa.gov/OACT/solvency/provisions/charts/chart_run131.html; 40 years: http://www.ssa.gov/OACT/solvency/provisions/charts/chart_run132.html.

[3] The computation period of a deceased worker will be the lower of the number of years between age 22 and the year of death, minus 5, or the computation period, so long as the resulting computation period is at least 2 years. The computation period of a disabled worker follows the same rules, except the year of disability onset is used instead of year of death, and the dropout years (usually 5) is scaled based on how much the worker's career was truncated by the period of disability.

[4] For example, in the Final Report of the 1994-1996 Advisory Council on Social Security, the Council stated as a group (although some members disagreed) that increasing the computation period would provide an incentive for workers to work longer and thought that the 38-year option should be implemented. See the report at http://www.ssa.gov/history/reports/adcouncil/index.html.

[5] Based on the present value at age 62 of lifetime covered earnings that are attributed to both people in a married couple. This measure accounts for low earners in high earner households and annual fluctuations in income better than an individual measure would. The discount rate used here is the effective trust fund interest rate.

[6] The index is calculated using a modified Suits index formula, which is much like a Gini coefficient, except that the distribution of benefits replaces the income distribution and the distribution of taxes replaces the population distribution. For more information on the progressivity index, please see "Toward a Progressivity Index," Biggs, Sarney, and Tamborini, (forthcoming).

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