



# Trickle-Down Social Security

## How Failure to Adjust Retirement Age for Longevity Favors Those with Higher Incomes

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Since Social Security began paying benefits in 1940, life expectancy at age 65 has increased significantly.<sup>1</sup> By failing to adjust retirement ages for increased longevity (other than a modest increase enacted in 1983) Congress has significantly increased the number of years of retirement support and Social Security lifetime benefits. Not only has this added to the program's outlays, it has also incentivized workers to retire for more years and pay fewer taxes. It thereby reduces both the Social Security revenues that could finance a richer old-age system and the general revenues that largely support programs for younger people.

People can retire today with full benefits at what is called the full retirement age (FRA) for about six more years than when Social Security first paid benefits. Adding to the extension of retirement years has been a decrease in the average Social Security claiming age by about three years,<sup>2</sup> making average retirement about nine years longer than when Social Security first began paying benefits. A typical individual surviving to retirement now receives benefits for about 20 years, or about one-third of the average adult life, while a typical married couple receives benefits for close to three decades (that is, one member of a couple typically lives close to 30 years after at least one claims benefits). Under current law, years of retirement support are expected to increase, particularly for higher-income workers and those who survive to retirement age.

This FRA policy might be considered as one way to provide some safety-net protection for those adults with lower incomes, whose life expectancy has not changed much in recent years. The poverty rate for those in lower-skilled work increases as they approach the Social Security eligibility age and then declines sharply once they reach it (Johnson and Mermin 2009). Moreover, nearly one-fifth of those who claim retirement benefits at 62 report work disabilities. While some workers with a disability receive support from Social Security disability insurance (DI), more than half of those ages 51

to 64 never do (Johnson, Favreault, and Mommaerts 2010). For a fraction of retirees, access to retirement benefits earlier in life provides a safety net. Finally, the racial aspect of this issue cannot be avoided. Because Black people have a lower life expectancy, are more likely to be in poor health, and have significantly lower lifetime earnings and wealth than white people, they are more likely to rely on early retirement benefits (Kijakazi, Smith, and Runes 2019).

However, the failure to adjust the retirement age targets poorly these groups that tend to have fewer resources. The current retirement age is not a policy aimed at those with disability or poor health, those with a lower life expectancy, or those experiencing poverty, whether aged or nonaged. As only one example of a better-targeted policy, Steuerle and Smith (2021) show how a minimum benefit could be structured under almost any Social Security reform in ways that would significantly expand the safety net and better target populations such as people experiencing poverty, people with disabilities, women, Black and Hispanic people, and others.

Increasing years of retirement support, on the other hand, redistributes substantial additional resources from workers to all retirees. It provides the largest shares to higher-income groups, without any clear-cut policy justification. This holds true whether the case for redistribution is based on need, problems associated with old age, or other criteria.

Two key questions arise:

1. How can Social Security, formally known as Old-Age, Survivors, and Disability Insurance, best protect those it is meant to protect: older adults, survivors, and those with disabilities?
2. Are there better ways to distribute the resources that are spent on their behalf?

Answers to these questions must be informed by how much retirement-age policy benefits each income group and how much it costs. Even if Social Security had no financing issues, we should still address whether similar resources could be targeted better, such as paying more to those with moderate disabilities in their fifties or in late old age when long-term care needs arise. Thus, whatever one thinks about the appropriate retirement-age policy, addressing these questions requires the type of data we try to provide in this study.

The issue becomes particularly acute when multiple Social Security features schedule benefits to grow faster than both the economy and available revenues at any tax rate (Steuerle 2014, 77). In other words, achieving long-term solvency in Social Security must address the ways that future benefits are scheduled to increase, largely because of both the failure to index Social Security for increases in life expectancy and the way that future benefits are indexed to rise with wage levels. Similarly, it must address the ways that revenues fail to keep pace, such as the declining tax base caused by increases in the share of earnings going to those earning more than the taxable maximum.

Another of our studies hints at the implications for reform by demonstrating that failure to index for life expectancy—that is, increasing the retirement age by one year when people live one year longer—contributes as much as 40 percent to the average deficit over the next 75 years, one-half of Social Security's insolvency in the 75th year, and an even higher fraction after that (Steuerle and Cosic

2018). Put another way, this failure doubles the amount of benefit cuts or tax increases required to restore 75th-year solvency.

This study compares the size and distributional effects of changes in life expectancy between a system that indexes the FRA by one month for each one-month increase in life expectancy and one that holds the retirement age constant. It then shows how different life expectancies among income classes, access to disability benefits, and marital benefits affect the eventual distribution of benefit increases from future failure to adjust for life expectancy. We then compare our results with past studies. This research extends and updates previous work by Mermin and Steuerle (2006), CBO (2015), and NASEM (2015).<sup>3</sup>

The study allows readers to examine the costs of providing more years of retirement, with large shares of additional benefits going to higher-income retirees, and then to consider whether those increased resources might better be targeted toward other goals, such as keeping almost all older adults well above a poverty level, a more progressive disability policy, needs associated with very old age, or other objectives.

We also explain why one might intuitively believe that more years of retirement benefits increase benefits proportionately (but not absolutely) more for lower-income than for higher-income groups, at least when people respond with different delays in the claiming of benefits. This intuition has been put forward even by distinguished groups such as the Government Accountability Office (GAO 2016).<sup>4</sup>

When we simulate Social Security benefits for the population, accounting for differences in earnings, marital patterns, disability claiming, and life expectancies, that intuition turns out to be wrong, or at least incomplete. We compare results for various cohorts starting with those born between 1940 and 1949 (turning 65 between 2005 and 2015) and ending with those born more recently (between 1990 and 1999). Our simulations show that the failure to adjust the FRA for mortality adds to benefits for higher-income groups absolutely and proportionately more than for all lower-income groups. Only when we examine just those who would be affected by a change in the FRA—those living to age 62 and not receiving disability benefits—does indexing the FRA for mortality turn out to be close to or only slightly less than proportional. Even then, high-income groups still garner significantly higher gains in absolute benefits.

Finally, we turn to implications for Social Security reform. Most proposals to date, whether from bipartisan groups or in bills sponsored by only Republicans or only Democrats, have tried to place most of the burden of restoring solvency on higher-income households. The proposed reforms typically achieve this goal by reducing the rate of growth in benefits disproportionately for higher-income retirees or increasing taxes disproportionately on higher-income workers. Such efforts at increased progressivity tend to be offset when significant benefit increases for higher-income individuals derive from failure to index for increases in life expectancy. As one consequence, almost all recent reform proposals leave a growing share of the older population with income below about one-quarter of the average earnings of workers, which currently approximates the poverty level (Steuerle and Smith 2021).

## Past Growth in Benefits Caused by Longevity Increases

To see how gains in life expectancy have spurred growth in benefits, consider a single earner, born in 1953 and claiming Social Security benefits in 2019 at age 66, the FRA for this birth cohort. Unisex life expectancy at the former FRA of 65 in 1940 was 13.8 years (Bell, Bye, and Morris 2019); about 6 years less than at the FRA in 2019 (authors' calculations based on Bell, Bye, and Morris 2019 and Bell and Miller 2005). The gain in years of benefits becomes even greater if contrasted with a Social Security system that would have set the FRA at the point over time when life expectancy was 13.8, as in 1940. For instance, the FRA in 2019 would have been about age 74 for the 1953 birth cohort that had an FRA at age 66 in that year.<sup>5</sup>

The benefit increases that arise from increased longevity compound with previously enacted benefit increases. Since the Social Security amendments of 1977, these benefit increases have set the primary insurance amount for subsequent cohorts to increase with average wage growth. While this is sometimes described as an effort to keep annual wage replacement rates constant as new cohorts of workers achieve higher wages, adding these gains to the gains from more years of benefits causes the lifetime replacement rate to increase at an even faster rate than the growth in annual wages. Further, as the ratio of workers to retirees falls, the tax rates on workers required to support the increase in both the annual and the lifetime replacement rates rise. As a result, the implicit replacement rate, if calculated on the basis of the after-tax, rather than before-tax, income of workers, rises further still.

In any case, for any given level of total annual Social Security spending, an increase in years of benefits received reduces the average annual benefits that can be paid. Continuing to increase years of retirement benefits leads to an ever-higher share of benefits in the years further from death. For instance, the share of benefits going to a typical person in the last 10 years of life will fall continually for succeeding generations.

Past increases in years of retirement support, along with their related costs and effects on patterns of work and leisure from one generation to the next, stand out as perhaps the most significant, yet underappreciated, US social policy expansion of the past 80 years. The implications are huge not just for government budgets but for the very way we spend time over a life cycle. It is against that background that we need to examine the impact of continuing to increase support over time based on longevity, as opposed to other criteria for how to increase benefits for future cohorts or retirees.

## Future Growth in Benefits with and without Indexing of the FRA to Life Expectancy

We use the Urban Institute's Dynamic Simulation of Income 4 (DYNASIM4) microsimulation model to compare current-law scheduled benefits with benefits under a policy that raises the FRA to keep pace with increases in life expectancy. The simulated policy indexes the FRA to unisex life expectancy to hold the average retirement length constant.<sup>6</sup> Current law gradually raises the FRA for successive birth

cohorts until it reaches 67 for people born in 1960 and later. The simulated policy is identical to the current law for people born before 1961 (and turning 67 no later than 2028) and diverges from the current law only for those born in 1961 and later. As under current law, early claiming would still be available starting at age 62, though benefits for early claimers would be reduced. The reduction follows the current formula that lowers benefits based on the difference between the FRA and the claiming age. Benefits are reduced 6.7 percent for each of the first three years of this difference and 5 percent a year for each additional year. For example, claiming three years before the FRA reduces annual benefits 20 percent; claiming four years before the FRA reduces them 25 percent.

We assume that workers respond to a higher FRA in the following way: those who, under the baseline, claimed before their new FRA will postpone claiming by half of the increase in their FRA under the simulated policy. This increase is roughly in line with the effects of an FRA increase on claiming age estimated by Song and Manchester (2007).

Consider a person whose FRA increases by 12 months, from 67 under the baseline to 68 under the simulated policy. If that person claimed before their 68th birthday under the baseline, they would claim six months later under the simulated policy—one half of the increase in their FRA, and one-half of the increase in the average life expectancy of their cohort. If they claimed at age 63 under the baseline, they would claim at 63 and six months under the new policy; if they claimed at 67 and six months under the baseline, they would claim at 68 under the new policy. Their claiming age would not change if they claimed at age 68 or later under the baseline.

In these analyses, we do not model alternative labor supply adjustments or other behavioral responses, and we do not focus on changes in taxes and non-Social Security income. Increases in work years, of course, can add significantly to both total personal income and to annual Social Security income if people delay retirement, but our focus here is on the distribution of changes in lifetime Social Security benefits.

## Mean Lifetime Benefits by Cohort with and without Indexing for Life Expectancy

Looking only at the recipients of old-age benefits who survive to the eligibility age, it is easy to see how a similar delay in claiming benefits by all individuals could decrease lifetime benefits disproportionately more for lower earners than for higher earners. Suppose a low earner's life expectancy at the age of retirement is two years shorter than a higher earner's life expectancy, such as 18 years versus 20 years. Then, approximately speaking (and ignoring discounting), a one-year delay in benefit claiming reduces the number of years of benefits by 1/18th for the lower earner but only by 1/20th for the higher earner. Of course, if the higher earner receives three times the benefit of the lower earner, then in absolute terms, the cut for the higher earner is still significantly larger.

That example assumes the same period of delay before claiming benefits. In fact, an increase in the FRA is nothing more than a proportionate cut in every year's worth of benefits, so that if people

do not adjust their year of claiming benefits, and the only difference among recipients was in life expectancy, then the cut would simply be proportional for every year and every person. However, the picture becomes more nuanced once we include recipients of disability and survivor benefits and take into account those who die before their 62nd birthday.

The first panel in table 1 shows that under current projections like those of the Social Security Administration, mean lifetime benefits for beneficiaries in the bottom quintile of lifetime earnings are scheduled to increase from \$141,000 for the 1940 to 1949 birth cohort (who would be ages 60 to 70 in 2020 had they survived) to \$223,000 for the 1980 to 1989 birth cohort, an increase of \$82,000. Over the same period, mean lifetime benefits for the top quintile of shared lifetime earnings increase from \$353,000 to \$672,000, or \$319,000—almost four times as much as for the bottom quintile. In relative terms, the top group gains 90 percent, the bottom group, 58 percent.

This increase in lifetime benefits is driven mostly by the indexing of annual benefits to average real wage growth and, next, by the projected increase in life expectancy.

The lifetime benefits shown in the second panel of table 1 are estimated under a simulated policy that adjusts the FRA after 2028 for increases in life expectancy. Again, comparing birth cohorts from the 1940s and the 1980s, we see that average lifetime benefits increase 50 percent (from \$141,000 to \$212,000) for the bottom earnings quintile and 73 percent (from \$353,000 to \$611,000) for those in the top quintile. Although the benefits still grow faster for high earners than for low earners, the disparity between the two is smaller. In this FRA-adjusted scenario, the benefit growth over time is driven primarily by the indexing of future annual benefits to average rates of wage growth.

This result suggests that removing the growth in benefits that arises from additional life expectancy would have made lifetime benefits grow more equally over time. Failure to do that, combined with the increase in life expectancy that favored people with higher lifetime earnings, caused lifetime benefits to grow faster for high earners than for those with low earnings. The differential compounds over time.

The bottom two panels in table 1 detail this net impact of the failure to index, which equals the difference in lifetime benefits between the two scenarios. In the 1980 to 1989 birth cohort, the highest lifetime earners gain an additional \$61,000 (10 percent), middle earners gain \$32,000 (9 percent), and low earners gain \$11,000 (5 percent), solely because of additional years of support. The differences grow over time. In the 1990 to 1999 birth cohort, the highest lifetime earners gain \$90,000 (14 percent), middle earners gain \$50,000 (12 percent), and low earners gain \$17,000 (7 percent).

TABLE 1

**Mean Lifetime Scheduled Social Security Benefits by Quintile of Lifetime Earnings and Birth Year**  
*Thousands of 2021 inflation-adjusted dollars*

	Quintile of Lifetime Earnings				
	Bottom	Second	Third	Fourth	Top
<b>Lifetime benefits, current law</b>					
1940-1949	141	222	263	303	353
1950-1959	154	237	285	330	418
1960-1969	168	254	312	384	494
1970-1979	182	288	349	443	586
1980-1989	223	325	404	509	672
1990-1999	254	368	461	575	751
<b>Lifetime benefits, indexed FRA</b>					
1940-1949	141	222	263	303	353
1950-1959	154	237	284	329	417
1960-1969	165	249	305	375	481
1970-1979	176	275	331	417	551
1980-1989	212	303	372	463	611
1990-1999	237	334	411	508	661
<b>Increase in lifetime benefits from failure to index FRA</b>					
1940-1949	0	0	0	0	0
1950-1959	0	0	1	1	1
1960-1969	3	5	7	9	13
1970-1979	6	13	18	26	35
1980-1989	11	22	32	46	61
1990-1999	17	34	50	67	90
<b>Percentage increase in lifetime benefits from failure to index FRA</b>					
1940-1949	0.00	0.00	0.00	0.00	0.00
1950-1959	0.00	0.00	0.35	0.30	0.24
1960-1969	1.82	2.01	2.30	2.40	2.70
1970-1979	3.41	4.73	5.44	6.24	6.35
1980-1989	5.19	7.26	8.60	9.94	9.98
1990-1999	7.17	10.18	12.17	13.19	13.62

Source: Authors' calculations based on DYNASIM4.

Notes: FRA = full retirement age. Under current law, the FRA increases until it reaches 67 for the 1960 birth cohort. The simulated policy raises the FRA for subsequent cohorts by 0.72 months for each year. Lifetime earnings, benefits, and taxes are discounted present values at age 65 for all people with covered earnings who survive until age 50. The real discount rate is 2.5 percent. In years in which a person was married, annual earnings are calculated as the average of the two spouses' earnings.

## Further Decomposition of Results

This finding, that higher-income groups benefit more than lower-income groups from holding the FRA constant, contradicts both the simple intuition that lower-income groups would benefit more from holding the FRA constant and the slightly more complex intuition that an increase in the FRA operates like a proportional increase for all Social Security participants. To understand how other factors come into play, we decompose the total result into several components. In table 2, we first estimate the effects the policy would have on workers' retirement benefits alone by (1) excluding spousal and

survivor benefits, (2) dropping people from the sample who claimed disability, and (3) minimizing the effect of differential mortality before claiming age by restricting the sample to people who survive to age 62. Then we sequentially add back to the analysis spousal and survivor benefits, people with disabilities, and those who die before age 62. Data limitations restrict all samples to those who survived to age 50.

TABLE 2

**Mean Lifespan and Decomposition of the Impact of Indexing the FRA on Projected Mean Lifetime Benefits**

*Thousands of 2021 inflation-adjusted dollars, people born between 1980 and 1989*

	Quintile of Lifetime Earnings				
	Bottom	Second	Third	Fourth	Top
Mean lifespan (years)	81.7	82.7	85.0	87.0	87.3
<b>Lifetime benefits, current law</b>					
Worker's retirement benefit	153	304	416	530	673
+ Spousal and survivor benefits	182	341	444	555	698
+ Disability Insurance beneficiaries	241	350	430	533	683
+ Died before age 62	223	325	404	509	672
<b>Lifetime benefits, indexed FRA</b>					
Worker's retirement benefit	137	272	373	477	608
+ Spousal and survivor benefits	165	309	401	501	632
+ Disability Insurance beneficiaries	228	325	394	485	621
+ Died before age 62	212	303	372	463	611
<b>Increase in lifetime benefits from failure to index FRA</b>					
Worker's retirement benefit	16	32	43	53	65
+ Spousal and survivor benefits	1	0	0	1	1
+ Disability Insurance beneficiaries	-4	-7	-7	-6	-4
+ Died before age 62	-2	-3	-4	-2	-1
Total	11	22	32	46	61

**Source:** Authors' calculations based on DYNASIM4.

**Notes:** FRA = full retirement age. Under current law, FRA increases until it reaches 67 for the 1960 birth cohort. The simulated policy raises FRA for subsequent cohorts by 0.72 months for each year. The four cases incrementally add various features of Social Security and populations by (1) including only workers' benefits for nondisabled people who survive until age 62; (2) adding workers and spousal/survivor's benefits for nondisabled people who survive until age 62; (3) adding worker's and spousal/survivor's benefits for all, including disabled people, who survive until age 62; and (4) adding worker's and spousal/survivor's benefits for all who die between ages 51 and 61. We define Disability Insurance beneficiaries based on Disability Insurance receipt at age 62. Lifetime earnings, benefits, and taxes are present values at age 65, using a real discount rate of 2.5 percent. In years in which a person was married, annual earnings are calculated as the average of the two spouses' earnings. The increase in lifetime benefits is the difference between the current law and the simulated policy. For each subsequent subset of beneficiaries, we calculate its contribution to the increase. Lifespan is calculated for people who survive to age 50.

Considering only workers' retirement benefits for the subset of retirees who never received disability benefits and survived to age 62, mean projected scheduled lifetime benefits for people in the bottom quintile of lifetime earnings are about \$16,000 higher than they would be if the FRA were adjusted for life expectancy (\$153,000 minus \$137,000). The increase for the top quintile of lifetime earnings is \$65,000, more than four times as much. Measured as a percentage of base benefits, the



gains are close to proportional, though the surviving, nondisabled group in the lowest-earning quintile gains a bit more (12 percent) than its counterpart in the highest earning quintile (11 percent).

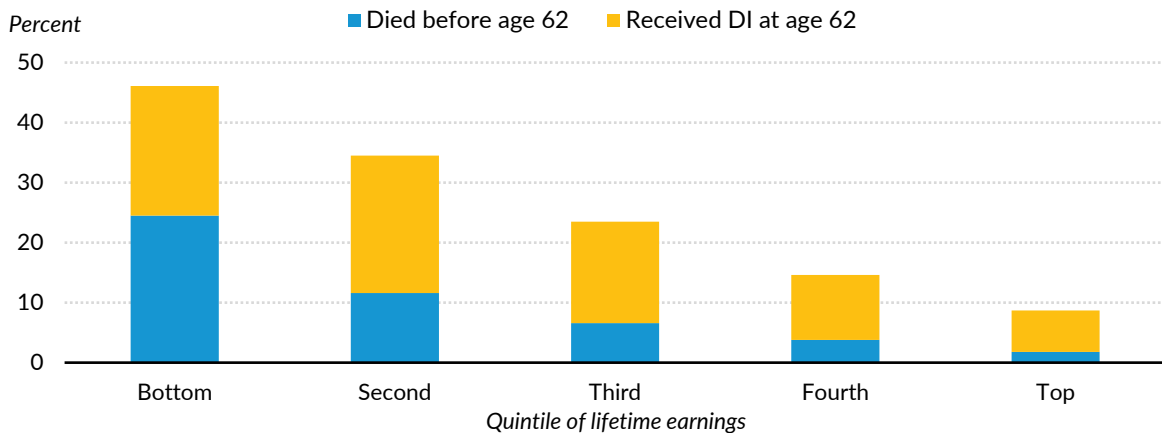
The remaining rows of table 2 show why this almost-proportionate or very slightly progressive result turns regressive when counting the entire population. To be clear, here we are using a public finance definition of progressivity; in most spending policies, one would not call, say, a distribution of food supports to be progressive if it gave \$10,000 to someone making \$100,000 and \$2,500 to someone making \$15,000 even though the increase in supports would more than proportionately favor the \$15,000 worker.

Table 2 shows clearly that policies that hold the FRA constant favor higher-earning groups even more than proportionately because they contain a higher share of people who receive worker retirement benefits and thus gain when the FRA does not adjust. Lower-earning groups disproportionately include people who receive DI benefits or die before reaching the early entitlement age and thus would not see a cut in Social Security benefits if the FRA were increased.<sup>7</sup>

Figure 1 shows the significant negative correlation between lifetime earnings and the likelihood of collecting DI or dying before age 62. On average, 9.7 percent of people born from 1980 to 1989 who survived until age 25 did not survive to age 62. However, only 1.8 percent of those in the top quintile of lifetime earnings died before age 62, compared with 24.5 percent of those in the bottom. Further, while 15.8 percent of people in this cohort were receiving disability benefits at age 62, the share was 6.9 percent in the top quintile and 21.6 percent in the bottom quintile.

**FIGURE 1**  
**Percentage of People Who Died Before Age 62 and Percentage Who Received DI at Age 62, by Quintile of Lifetime Earnings**

*People born between 1980 and 1989*



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**Source:** Authors' calculations based on DYNASIM4.

**Notes:** DI = Disability Insurance. Annual earnings are indexed by the average wage in the year in which the earner would turn 62. In years in which a person was married, annual earnings are calculated as the average of the two spouses' earnings. The sample used to estimate the share of people who survive to age 62 is restricted to those who survive to age 25, and the sample used to estimate the share who receive DI is rested to those who survive to age 62.

In table 2, we were not able to show the full effect of these mortality differences, as we could capture there only those who died between ages 50 and 62. The effect of dying between ages 25 and 50 would add further to the regressivity of providing benefit increases to successive cohorts by the failure to adjust for longevity.<sup>8</sup>

In short, indexing Social Security for life expectancy decreases benefits only for those who retire on old-age pensions, not those who retire on disability or die before age 62.

The almost-proportionate increase in lifetime Social Security retirement benefits for workers only, before considering disability, mortality, and marital benefits, may at first appear surprising, given the work adjustments that we incorporated into the analysis. (With no work adjustments, the results would be proportional.) Among other factors, mortality differentials across earning groups are much smaller after age 65 than at earlier ages (Bosley, Morris, and Glenn 2018).

None of this is to deny that those who die early, such as at ages 50, 63, or 75, receive old-age benefits for a smaller share of their life than those who live longer. This is true in the existing system within every income class. Because Social Security is designed to provide insurance protection against long lives, it annuitizes benefits and does not offer lump sum benefits or even life-certain policies (minimum years of benefits received) to lessen these differences. Annuitization by itself will always favor, ex-post, those who live longer.

One take-away is that to offset the impact of annuitization on the progressivity of benefits along various economic, social, and racial lines, adding more years of benefits in line with longevity is not the way to do it; that only makes the system less progressive.

## Our Results Compared with Other Studies

Several other studies performed an analysis similar to ours that estimated changes in lifetime benefits prompted by an increase in life expectancy and the effects of an FRA increase on the benefits distribution. As in our current study, some found that raising the FRA, and even the early retirement age (ERA), would increase the progressivity of the Social Security system (CBO 2015; Mermin and Steuerle 2006).<sup>9</sup> Others found that raising the FRA would make the system less progressive (GAO 2016; NASEM 2015). Although each analysis involves too many assumptions to list here, two key methodological choices can largely determine into which of the two categories a study falls. One is the assumption about how individuals delay claiming as a response to an increase in the FRA; the other is the choice of the population being examined and whether it excludes DI beneficiaries and those who die before having access to Social Security benefits.

In the absence of any behavioral response, CBO found that increasing the FRA one year reduces lifetime benefits between 5 and about 7.5 percent depending on claiming age (CBO 2015, 56). In general, those who claim later would experience a bigger reduction. Those who claimed three or more years before the baseline FRA would receive a 5 percent reduction; those who claimed at the baseline

FRA or up to two years before would receive a 6.67 percent reduction, and those who claimed between their FRA and age 70 would have their benefits cut between 6.67 and 7.41 percent.

Because beneficiaries with low lifetime earnings tend to claim earlier than those with high lifetime earnings, an increase in the FRA would have a slightly more negative impact on those with higher lifetime earnings. Although most studies assume that an increase in the FRA would cause at least some behavioral response, it is useful to understand this baseline case determined solely by the mechanics of the Social Security rules.

Researchers usually make one of two assumptions: (1) all beneficiaries postpone claiming by the same amount or (2) people with higher lifetime earnings postpone claiming more than people with lower lifetime earnings. The first choice, adopted by this study and GAO (2016), tends to make outcomes worse for low-income recipients. Because they have shorter life expectancies than high-income recipients, the percentage reduction in the length of their retirement is greater. Although postponing claiming raises annual benefits, this increase is less than actuarially fair for people with lower life expectancies. The studies that assume that people with high lifetime earnings postpone claiming more than those with low lifetime earnings (NASEM 2015) fall somewhere between the extremes of no response and equal response.<sup>10</sup>

The choice of treatment of disability benefits, which are disproportionately claimed by people with low lifetime earnings, has a substantial impact on results. Disability benefits are calculated according to the same formula as retirement benefits, but they are not reduced when claimed early. These benefits can be received only until the beneficiary reaches the FRA, when they are converted into old-age and survivor (OASI) benefits. Consequently, the sum of disability and retirement benefits that people with disabilities receive over their lifetime is not affected by an increase in the FRA (and, for most, the ERA).<sup>11</sup>

Studies that analyze impact on only OASI benefits (GAO 2016; NASEM 2015) find that OASI benefits decrease for DI beneficiaries (who are converted to OASI beneficiaries at the FRA) when the FRA increases. This can be confusing. Because DI beneficiaries are disproportionately low-income people, raising the FRA would decrease the measured progressivity of OASI, but the result is superficial, since each year of lost OASI benefits is offset exactly by one more year of DI benefits. Thus, studies that analyze the combined DI and OASI benefits (CBO 2015; Mermin and Steuerle 2006) come to the opposite conclusion, as we did here. Because DI recipients are concentrated among low-income people, an increase in the FRA would lead to a more progressive outcome in aggregate by disproportionately reducing benefits for higher-income people, who are less likely to be receiving DI.

Finally, the more years that a study accounts for mortality before the earliest claiming age, the more progressive will be the consequence of adjusting the FRA for longevity. We and NASEM were unable to account fully for deaths before age 50, which then understates the progressivity of an increase in the FRA more than we were able to show here.

# Implications for Social Security Reform

Many Social Security reforms aim to increase progressivity while attempting to restore solvency. Some include a slowdown in the rate of benefit increase, both annual and lifetime, mainly or at least disproportionately for higher-income members of future cohorts; some target the highest-earning households through tax increases; and some do both.

This drive for greater progressivity is driven partly by a desire to limit the burden of reform for low- and middle-income households. But it is also a reaction to an increased understanding that the progressivity of the annual benefit rate schedule has long been offset largely by different rates of mortality among different earning groups, as well as increasing wage inequality. In a few recent years, an actual decline in life expectancy has sometimes been invoked as a reason to be concerned about adjusting benefits for life expectancy. Table 3 reveals, however, that the mortality increases in some pre-pandemic years, due partly to drug abuse, suicide, and similar causes, so far has been concentrated mainly in deaths before retirement age.

**TABLE 3**  
**Changes in Mortality between 2010 and 2017 by Age**

<u>Age</u>	<u>Change in mortality (%)</u>
Younger than 1	-9.0
1-4	-8.7
5-14	5.4
15-24	9.3
25-34	29.0
35-44	14.5
45-54	-1.4
55-64	4.0
65-74	-4.5
75-84	-6.6
85 and older	-2.6

Source: Authors' calculations based on DYNASIM4.

Thus, reform efforts aimed more directly at increased progressivity or increased attention to deaths in middle age swim against the tendency of Social Security to allow longer life expectancy to provide significantly higher benefit increases—and, by some measures, disproportionately higher rates of benefit growth—to higher-income groups. Even among workers without disabilities who survive to old age, an approximately proportionate increase among that subset of the population works against efforts to favor low- and middle-income groups as part of sustainable reform efforts. When attempting to allocate future benefit increases within a sustainable system, why start from a base of built-in changes that make the system continually less progressive over time for the whole population, while also doubling the 75th year's actuarial imbalance?

## Conclusion

Of course, the future is uncertain. The results shown here are based largely on assumptions about lifetime earnings and longevity that mimic those of the Social Security Administration. For comparison purposes, the simulations assume benefits currently scheduled, although Congress may change Social Security benefits long before today's young adults reach retirement age. Still, a law designed decades ago provides a poor guide for how benefits should be structured to accommodate unknown economic and social conditions decades later.

Reformers must decide the right balance between progressivity and proportionality. A proportionality standard follows an individual equity principle, as applied to 401(k) and similar plans, whereby people get back benefits proportionate to what they contribute. A progressivity standard favors those with greater needs or lesser ability to pay taxes.

Social Security's progressive benefit formula was meant to strike a balance: providing a lower rate of return to higher earners, but offering at least some return, even at the highest dollars of taxed lifetime earnings. Yet by almost everyone's measure, that formula failed to achieve much progressivity once mortality and some other regressive features are considered (Steuerle, Carasso, and Cohen 2004a, 2004b). Recent mortality trends seem to have made the old age part of the system, which excludes disability benefits, even less progressive and perhaps more regressive.

We conclude that an automatic increase in years of support for everyone at best engages in a type of trickle-down economics—trying to help those with lower lifetime earnings by doing much more for those with higher lifetime earnings. It thereby targets almost any goal for more vulnerable populations inefficiently and inequitably. Consider how failure to index affects all the following:

- *Mortality before retirement age.* It does nothing to tackle problems of early mortality, including the increasing problem of opioids, obesity, and suicide, thought to be a major cause of a (hopefully temporary) decline in life expectancy (NASEM 2015).
- *Mortality after retirement age.* If one is concerned about the lifetime benefits received by those who die early in retirement, such as at age 70, the failure to index for life expectancy still extends the largest benefit increases to richer and longer-living earners. Far more target efficient would be to tackle the problems that cause financial insecurity for those who tend to die young, such as by bumping up minimum benefits, liberalizing eligibility for DI benefits near the retirement age, or providing a life-certain policy that guarantees a few years' worth of benefits for households with workers who die early.
- *Problems of old-age and long-term care.* For any level of total benefits to be paid, more years of retirement support continually decrease the share of total benefits paid in very old age, such as the last 10 years of life, when disabilities rise and spousal care is less available. By continually decreasing the share of benefits to the oldest old, the lack of indexing works counter to efforts to deal with long-term care needs.

- *Disability.* Beyond issues of old-age incapacities, an increase in years of support provides a poor basis for dealing with disability, which starts rising in late middle ages, with age 62 only moderately distinguishable from ages 55 or 65.
- *Poverty.* A strong minimum benefit for most or all the old and people with disabilities would more directly and far more efficiently attack poverty and near poverty among them.
- *Needs across the life cycle.* While Congress often wants to provide higher levels of support on a fairly universal basis as society grows richer, it still might consider allocating those additional resources to times within the life cycle when greater needs and opportunities take precedence. Consider young people today. Money scheduled for them through more years of retirement support might prove inferior to a more balanced mix of benefit increases that include non-Social Security supports for child support, education, or housing when they are in school and the workforce or raising a family.

Our goal here was mainly to show actual numbers on who gains the largest increases in lifetime benefits from failure to index Social Security for life expectancy. Two other issues deserve further treatment elsewhere: the ERA and the financial effects of working longer. Many of the same issues arise in considering the ERA, both in terms of the needs of some early retirees and whether those needs might be met better with such efforts as strengthened disability protections and a better unemployment safety net for the near-old. More years of work also increase lifetime earnings, Social Security tax revenues, and income tax revenues, and the gains on these fronts can be substantial (Butrica, Smith, and Steuerle 2006).

Target efficiency remains a vital issue regardless of whether Congress eventually requires average Social Security benefits to grow faster, slower, or at a similar rate to current law. Any reform commission or Congressional action must decide their objectives with respect to the size and distribution of lifetime benefits across earnings classes and across the lives of beneficiaries. It should set those objectives relative to current, not past, understandings of needs and economic conditions. It is better to start with today's lifetime benefit levels and then determine how much they should be increased for different groups over time, how those increases could best be targeted to meet various objectives, and how they can best be distributed across the life cycle.

## Notes

- <sup>1</sup> Unisex life expectancy at age 65 in 1940 was 13.8 years (Bell, Bye, and Morris 2019); at age 66 in 2020, the full retirement age in that year, it is 19.8 years, six years longer (authors' calculations based on Bell and Miller 2005 and Bell, Bye, and Morris 2019).
- <sup>2</sup> The average Social Security claiming age was 68 in 1940 and 64.8 in 2018 (authors' calculations based on Social Security Administration 2019, table 6.B5).
- <sup>3</sup> See also Andrew Biggs, "Revisiting the GAO Retirement Age Debate." *Forbes*, April 8, 2016, <https://www.forbes.com/sites/andrewbiggs/2016/04/08/revisiting-the-gao-retirement-age-debate/>.

- <sup>4</sup> See Biggs, “Revisiting the GAO Retirement Age Debate,” for his early and initial criticism of the GAO analysis, which corresponds closely with the findings shown here.
- <sup>5</sup> The unisex cohort life expectancy at age 65 for people born in 1875 was 13.8 years. For those born in 1953, life expectancy at age 74 is 13.9 years.
- <sup>6</sup> We use the procedure outlined by Bell, Bye, and Morris (2019).
- <sup>7</sup> Spousal and survivor benefits affect our results only slightly—partly because our measure of lifetime earnings combines earnings from spouses—so we do not discuss them further.
- <sup>8</sup> We classify individuals by lifetime earnings based on the annual average earnings they received over their lifetimes by the time of disability or death. Including zero-earning years in the calculation would have shown an even greater concentration of disability and early death in the lowest earning quintiles.
- <sup>9</sup> See also Biggs, “Revisiting the GAO Retirement Age Debate.”
- <sup>10</sup> Biggs, “Revisiting the GAO Retirement Age Debate.”
- <sup>11</sup> At the same time, an increase in the FRA raises the share of benefits paid from the DI fund and reduces the share paid from the OASI trust fund.

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