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It is Time to Update the Adjustment Factors for Age in Social Security Retirement Benefits

Mark Warshawsky¹

August 16, 2021

Executive Summary

There are adjustment factors for early and late claiming of retirement benefits in Social Security which depend on the age when benefits are claimed. These adjustment factors are seriously out of date, as both interest and mortality rates have declined since the rules were designed and put into place. Moreover, the rules are inconsistent among categories of beneficiaries – workers, spouses and widow(er)s – in terms of age ranges and fair adjustment factors. This paper calculates that, under current interest and mortality rates, the early retirement factors for workers should be about 16 percent higher than current factors; this change, reducing the early retirement penalty, would generally favor the poorer and minorities, who generally claim earlier and have higher than average mortality. Delayed retirement credits should be about six percent lower, disfavoring high income and educated workers, who generally claim late. The appropriate dynamic system for changing the adjustment factors annually is simulated here, using estimates of real interest rates from the historical record of 1919 to 2021. The results support a five- or ten-year moving average for continuous changes to the adjustment factors, to remove unusual volatility. Moreover, policy logic supports consistency in the factors across the beneficiary categories, as well as across age ranges – ages 62 to 72 is now an appropriate uniform age range, given current higher life expectancies and longer working lives.

Current Law

There are adjustment factors for early and late claiming of retirement benefits in Social Security which depend on the age when benefits are claimed. That is, benefit levels, set dependent on past earnings, are adjusted lower for younger claimants, within the age range of 62 to 70 for worker benefits, 62 to 67 for spousal benefits and 60 to 67 for widow(er)'s benefits, for the cohort born in 1960 and later.² The logic, in general, for the adjustment factors is straightforward – fairness, as actuarially determined. The earlier benefits are claimed, the longer the payout period, and this fact should reduce benefits, for equal earnings history, compared to claiming at later ages; the notional force of interest and survivorship should also be recognized. Otherwise, those who claim early would reap an advantage, continued work would be disadvantaged, and the finances of the system would be harmed. In actuarial terminology, for a single individual, the value of a life annuity deferred for n years from age x equals the discount (by interest and survivorship) times the value of an immediate life annuity at age x plus n .³

¹ My appreciation is extended to Kieran Allsop for excellent research assistance, and to Sita Slavov and Stephen Goss for helpful conversations. .Opinions expressed here are my own. I am a Senior Fellow at the American Enterprise Institute and from July 16, 2017 until January 20, 2021 was Deputy Commissioner for Retirement and Disability Policy at the Social Security Administration.

² 1962 for widow(er)s

³ See Jordan (1967), p. 41.

Note that Social Security pays benefits as an inflation-indexed (either single or joint-and-survivor) life annuity, so real interest rates must be used.

More specifically, under current law, for those born in 1960 and later, when the full retirement age (FRA) is 67, for early retirement, the individual's benefit is reduced 5/9 of one percent for each month, up to 36 months. If the number of months of early retirement exceeds 36, the benefit is further reduced 5/12 of one percent per month, up to 60 months. Going in the opposite direction, delayed retirement credits (DRCs) are given for retirement after the FRA. For those born in 1943 and later, the annual credit is eight percent up to age 70. The schedule is shown in the column marked 'Single' in Table 1.

For couples the factors are more complicated for various combinations of ages, cohorts, marital status, presence of dependent children, and relative earnings. For simplicity, however, consider a married couple the same age, born in 1960 or later, with no dependents; one, the primary worker, has a lifetime history of earnings and the other, the spouse, has no earnings.⁴ The spouse is entitled to 50 percent of the primary worker's benefit. The primary worker's adjustment factors are the same as for the single worker. For the spouse, the percentage reduction for early retirement is 25/36 of one percent for the first 36 months before the FRA and 5/12 of one percent for each additional month up to 60 in total. The spouse's benefit, however, does not grow with delayed retirement credits after FRA, as does the primary worker's. Moreover, under current law, the spouse cannot claim a spousal benefit until the primary worker claims his or her benefit.⁵ Putting all this together, the adjustment factors for this couple example are shown in the next column, labeled 'Couple', in Table 1.

The earliest a widow or widower can start receiving Social Security benefits based on age is 60 – benefits can start any time between age 60 and FRA as a survivor. For those born in 1962 and later, if benefits start at an early age, benefits are reduced by 0.339 percent per month, up to 84 months. There is no delayed retirement credit for survivors. There is a widow(er)'s limit, so that the benefit is limited to the amount the deceased spouse would be receiving if he or she was still alive. Hence, if the primary worker retired early, the surviving spouse gets the smaller of survivor adjusted benefit or the actual benefit of the primary worker.⁶ Survivors can also inherit the delayed retirement credit if the worker claimed benefits after reaching the FRA. The last column of Table 1, labeled 'Widow(er)', illustrates these rules, assuming the primary worker claimed benefits at the FRA and then died.

⁴ According to Alleva (2017), a couple with a nonearning spouse entitled to only the spousal benefit can face almost 6,000 possible month-of-age claiming combinations, depending on their respective birth years. For couples with a lower-earning spouse who is entitled to an own-record benefit only or who is dually entitled to both an own-record benefit and a spousal benefit, possible claiming-age combinations number over 9,000.

⁵ Since the passage of legislation in 2015, certain claiming strategies for couples are no longer available, that is, "deemed filing" and "file and suspend." In particular, couples are no longer able to have the spouse receive spousal benefits at full retirement age, while letting the retirement benefits based on his/her earnings record grow by delaying to file for benefits. Nor can the primary worker at full retirement age or older apply for retirement benefits and then voluntarily suspend payment of his/her retirement benefits, so that the worker's voluntary suspension permitted a spousal benefit to be paid to his/her spouse while the worker was not collecting retirement benefits, and then the worker would restart his/her retirement benefits later, for example at age 70, with an increase for every month retirement benefits were suspended. .

⁶ See Weaver (2002) for a full explanation of the widow's limit, its history and rationale, and possible policy alternatives.

Table 1
Current Law –Age Adjustment Factors for Social Security Benefits, by Beneficiary Category (Percent)

Age	Single	Couple*	Widow(er)*
60	N/A	N/A	71.5
61	N/A	N/A	75.9
62	70.0	68.33	79.67
63	75.0	73.33	83.33
64	80.0	78.33	87.8
65	86.67	85.6	91.9
66	93.33	92.8	95.9
67	100.0	100.0	100.0
68	108.0	105.3	100.0
69	116.0	110.7	100.0
70	124.0	116.0	100.0
71	124.0	116.0	100.0
72	124.0	116.0	100.0

**With demographic and earnings situation, as specified in paper.*

The Need for Updating and Consistent Change

As shown by many researchers since 2000, including Shoven and Slavov (2014) and Biggs, Chen and Munnell (2021), these adjustment factors are seriously out of date, as both interest and mortality rates have declined since the rules were designed and put into place. Moreover, the rules are inconsistent among categories of beneficiaries, in terms of age ranges and fair adjustment factors. The current upper age for adjustment, 70, actually used to be 72 when the delayed retirement credit was first introduced.⁷ It no longer matches the minimum age for required distributions from retirement accounts, which was recently increased from 70 and a half to 72, and is proposed to increase further to 75 in bipartisan legislation affecting retirement plans and accounts. The earliest age for widow(er)'s benefits, 60, also reflects a society where women often did not work or earned less than their husbands, were younger than their husbands, and male mortality was particularly high. Hence, wives were highly dependent on their husband's earnings, retirement and survivor's benefits. Also, the mortality for longer-lived women underlay the widow(er)'s adjustment factors. Nowadays, women are much more likely to work and to earn their own worker retirement benefits, and age and gender are more variable among spouses than in past decades. The particularly young age, 60, inappropriately discourages work and adds complexity to the program while the factors may also impair the finances of the program.

The current Social Security rules were essentially designed in the 1960s, 1970s, and through 1983, when real interest rates and mortality rates were substantially higher compared to today's rates. For example, in 1972, the Trustees assumed that the long-term real interest rate would be 3.25 percent, whereas, as of July 21, 2021, the yield on the ten-year Treasury inflation-protected security was actually -1.09 percent. The life expectancy for a 65 year old man in 1970 was 13.1 more years; in 2018 it was

⁷ According to Knoll and Olsen (2014), the age up to which DRCs could be earned was lowered from 72 to 70 starting in 1984 to correspond with the age at which the retirement earnings test no longer applied. The 2000 Amendments, however, eliminated the test for beneficiaries once they reached their FRA, so the policy logic for age is 70 is now totally absent.

18.1.⁸ Table 2, first row, shows the actuarially fair adjustment factors for January 2, 2021, using the current FRA, age 67, as a base, from ages 62 to 72, for workers, based on estimates of current real interest and mortality rates, as explained in the technical Appendix. The same factors should apply for widow(er)s. Spousal benefit factors, which involve two or more lives, should also be accordingly changed in an actuarially fair manner.

Table 2
Actuarial Fair Annual Adjustments for New Beneficiaries, 2021 (Percent)

Year	Age				
	<u>62</u>	<u>65</u>	<u>67</u>	<u>70</u>	<u>72</u>
2021	80.3	91.1	100	116.7	131.0
2017-2021	78.3	90.2	100	118.5	134.4
2012-2021	78.3	90.2	100	118.6	134.4

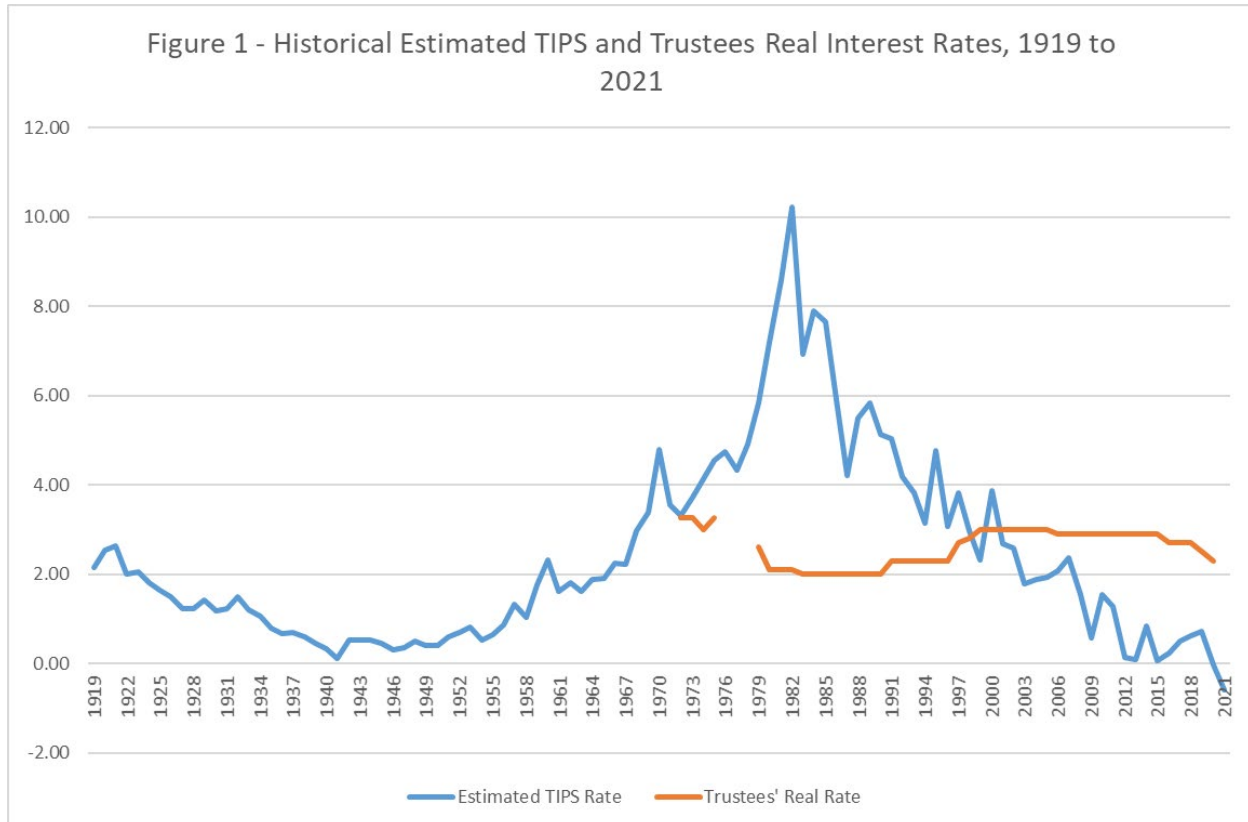
The results show that instead of the current law 70 percent adjustment factor for singles or 79.667 percent for widow(er)s age 62, the adjustment factor should be increased to 80.3 percent in 2021. In other words, there should not be such a large reduction in benefits claimed by workers at age 62, as occurs under current rules. Similarly, for 65 year olds, instead of adjustment factors of 86.667 and 91.9 percent, respectively, the adjustment factor should uniformly be 91.1 percent. For delayed retirement credits at age 70, instead of 124 and 100 percent, the adjustment factor should uniformly be 116.7 percent. That is, the DRC should be reduced for workers to reflect lower market interest rates, not giving such an advantage to those who claim late. But it should be increased for older widow(er)s; there is no clear policy logic to not give them actuarial adjustments for delaying their claims. Also, as argued above, the DRC should be extended to age 72, at 131.0 percent, given current interest and mortality rate conditions, considering greater population longevity and longer working lives.

Alternative Adjustment Approaches

Now that we see clearly that the current adjustment factors are seriously out of date and need to change, we are faced with the practical question of which interest rates to use and the frequency of change (mortality should obviously be based on SSA's population current experience and Trustees' projections, as we modeled it; such estimates of mortality change slowly). For simplicity and ease of administration, public understanding, and individual planning, it is clear that once benefits are adjusted for age for the individual at claiming, the real benefit level should stay fixed and not change with further variation in interest and mortality rates. A strong argument can be made to use market interest rates for the initial adjustment setting, because these are the rates facing the public in their overall benefit and financial decision-making, and moreover reflect the borrowing and financing costs of the federal government at the time of decision. The duration of Social Security retirement benefits at typical claiming ages for an individual is 15 to 20 years, so yields on TIPS bonds of that maturity seem an appropriate match. (We modeled using estimated yields on 10-year bonds because longer maturities

⁸ In a September 5, 1985 memo from Steve Goss to Daphne Butler of the Cowles Foundation for Research in Economics at Yale University, adjustment factors calculated using 1980 mortality rates and 2.0 percent real interest rates were quite close to the factors in use according to law, except at the upper ages where current law factors were not large enough.

were not always available historically.) An alternative long-term real interest rate, the Trustees' projection, changes too slowly and within too narrow a range to solve the problem – from 1972 to 2020, that rate has only moved between two and 3.25 percent.⁹ See Figure 1, comparing the estimated TIPS yield and the Trustees' projected real interest rate.



If the factors changed annually with that year's market rates, then there would no longer be a concern about actuarial unfairness and inappropriate losses or gains in individual and system resources. But that may be too volatile given the ups and downs of the bond market, and of the ability of the public to understand the choices available to them. Therefore, we also model both five- and ten-year moving averages of adjustment factors to get a feel for their variability and levels, changing annually, based on the historical record. The second row of Table 2 shows the results for new adjustment factors calculated as an average over the last five years, and the third row shows the result for the average of the last ten years. As seen, the levels are slightly higher than the 2021 actuarial fair factors, but are not much different and not at all different among the two moving averages.

Table 3 gives some sense, for the example of the age 62 worker, of the 1919 – 2021 historical performance if the three rules for annual change of the age adjustment factors – one-year, five-year and ten-year moving averages – had been in place, using historical estimated data, as explained in the technical appendix. As seen, the means and medians are not much different across the three rules, but are higher than the current factor, which was designed when interest and mortality rates were high.

⁹ According to a May 15, 2020 unpublished document from the Office of the Chief Actuary at SSA, using 1965 cohort mortality and a 2.3 real interest rate, consistent with the 2020 Trustees' Reports, the adjustment factor should be increased slightly at younger ages, e.g. to 73.4 percent at age 62 but would hardly change at older ages.

Similarly the highest factors in the historical record are not much different among the moving averages and are clearly drawn from the most recent experience. The lows, however, are quite different among methods, with longer averaging smoothing out somewhat the effect of the very high real interest rates estimated for the late 1970s and early 1980s. Again, there is not much difference for the 25th and 75th percentiles, nor for the standard deviation, a common measure of volatility. Given a sensible desire to avoid deep lows in the adjustment factors, possible if the Federal Reserve were to lose control of monetary policy, as occurred in the late 1970s, either the five- or ten-year moving average seems like an appropriate approach for a new rule for annual changes of the age adjustment factors.

Table 3
Statistics for Age 62 Actuarial Fair Annual Adjustment, Historical Data (Percent)

	Mean	Median	High	Low	25th Per.	75th Per.	Std. dev.
One-Year	73.2	74.6	80.3	54.6	70.5	77.3	5.2
Five-Year	73.1	74.7	78.3	59.0	69.9	77.2	5.0
Ten-Year	72.9	75.0	78.3	62.0	69.8	76.9	4.9

Yet another possibility is to change the factors every few years, but then there would be cliffs and people might complain about missed opportunities or perceived penalties. The cost of living adjustment is applied to Social Security retirement and disability benefits annually based on current measures of price inflation; this annual adjustment process for benefits seems to be well tolerated and understood.

Concerns for Equity and Work

Some have expressed concern about the differential impact of the benefit adjustment factors on different race, ethnic identity, education, gender, income, and health status groups, because of their differential mortality experience, compared to a single adjustment factor based on combined, average, mortality statistics. For example, if Whites live longer than Blacks, then adjustment factors should be smaller along the age spectrum for Whites than for Blacks. Moreover, if the poor, with higher mortality, are more likely to claim retirement benefits early than the wealthy, current adjustment factors are more likely to disfavor the poor, as their benefits are reduced too much. Furthermore, some have the additional concern that disparities in mortality have widened over time, in particular, with the poor falling behind the high income in terms of life expectancy, adding a dynamic aspect to equity concerns.

Putting aside whether it is permissible, constitutionally or legally, to make some of these distinctions in the parameters of the Social Security program, it would clearly be administratively difficult to do so because SSA does not, and realistically cannot, collect accurate racial, ethnic, education, or health data, on a voluntary basis, for inclusion on the individual's earnings record. Also, studies show that the premises for some of the equity concerns may be mistaken. According to a careful study by SSA actuaries (Bosley, Morris and Glenn (2018)), the trends from 1995 to 2015 show the spread in death rates among income levels remained fairly steady; the spread does not significantly increase in general, and even slightly decreases for some age groups in the more recent years. Biggs, Chen, and Munnell (2021) calculate that earnings-related claiming actually slightly decreases the cost of lifetime benefits (roughly 0.6 percent) based on current adjustment factors because a substantial portion of high earners claim early and receive a larger actuarial adjustment than their life expectancy

would warrant. Finally, as stated by Biggs, Chen, and Munnell, the cost and distributional effects of earnings-related life expectancy and claiming cannot be addressed through the actuarial adjustments for early and late claiming. The effects reflect the fact that high earners get their large benefits for a long time and low earners get their more modest benefits for a shorter time. Other parameters, other than the adjustment factors, in the program do and should address these equity concerns.

Some have also desired to use the adjustment factors to influence decisions about participation in the labor force. The factors, however, are only relevant to the claiming decision, which is independent of the retirement decision; for example, one can avoid claiming Social Security retirement benefits and still retire from work. If there is a policy need to, for example, encourage later retirement, this is best done through other parameters in the Social Security program, for example, the early retirement age, or the length of the average earnings period and so on.

Recommendations and Conclusion

This paper calculates that, under current interest and mortality rates, the early retirement factors, for single workers and widow(er)s, should be about 16 percent higher than current factors. This change would generally favor the poor and minorities who generally claim earlier or have higher than average mortality. By contrast, delayed retirement credits should be about six percent lower, disfavoring high income and educated workers, who generally claim late. Corresponding changes should also be made to the adjustment factors for couples, to be made actuarially fair. An analysis to evaluate the appropriate dynamic system for changing the adjustment factors annually is simulated here, using estimates of real interest rates from the historical record of 1919 to 2021. The results support a five- or ten-year moving average approach, to remove unusual volatility. Moreover, policy logic supports consistency among the factors across the beneficiary categories, as well as in the age ranges – ages 62 to 72 are appropriate for current higher life expectancies. The widow(er)'s limit should be removed, to improve the economic condition of that population, and for actuarial fairness.

Somewhat surprisingly, despite the long consensus record of the professional literature that the factors are out of date, and the extensive scoring of various and numerous solvency proposals, the SSA actuaries apparently have not estimated the savings or costs of such a change in law as we recommend for the adjustment factors. So it is hard to know whether the specific changes recommended here would result in savings or costs for the system. Fairness to individuals is important regardless, and my intuition is that savings would result, as more and more workers delay claiming. Moreover, these changes do not need to await the long-postponed big solvency political bargain for Social Security reform; they can and should be put in place soon to assure fairness and equity and the right incentives. There should be a transition period though because some may have done retirement and financial planning on the basis of the current law, so it would be unfair to disappoint their expectations. For workers younger than age 60 though would be sufficient notice to implement the new rules. If program savings are projected from this new system of adjustment factors, then other small changes that cost system resources can be simultaneously implemented, like simplification of the return-to-work incentive rules for disabled beneficiaries.

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Technical Appendix

Treasury Inflation-Protected Securities (TIPS) bonds and their yields have been available on a consistent basis since the mid-2000s in a fairly active trading market, and therefore can be used as a reliable measure of the long-term real interest rate. Because the analysis here looks at simulations of the impact of various permutations of actuarially fair adjustments, we want a long history of volatility and various levels, so we draw from a long consistent history of nominal interest rates going back to 1919, when the Federal Reserve Board started its work, and derive the real interest rates from the estimated relationship between daily yields on nominal 10-year Treasury and TIPS bonds. (Real interest rates are needed because Social Security benefits pay out as an inflation-indexed life annuity.) A simple regression uses data from January 2, 2003 through May 20, 2021, and we then apply that relationship to estimate what yields on ten-year TIPS bonds would have been from 1919 forward. The estimated equation is:

$$\text{TIPS yield} = -1.45 + 0.8 \times \text{nominal Treasury yield}.$$

A reasonable interpretation of this regression is that expected inflation is 1.45 percent annually for this historical period and that there is somewhat more stability in the TIPS than in the nominal Treasury yield. The coefficients are highly significant and the R-squared is 0.87, all indicating a good fit. The differences between actual and regressed estimates are generally small, except during a few months during the depth of the 2008 financial crisis, when the yields on TIPS were unusually high and/or on nominal Treasuries were unusually low.

The mortality data comes from Social Security and thus is representative of that program's nearly universal national population, as used in the 2020 Trustees' Report. We employ the cohort table for those born in 1959, that is, people now age 62, approaching retirement, whose benefit claiming decisions will be influenced by the adjustment factors presented to them. A cohort table represents the

mortality experience in a series of years, based on an individual's year of birth and the year in which the individual will reach each succeeding age. Because it includes a projection, the cohort table is more relevant here than the more common period table which presents the recent historical experience of those of various ages. The law demands neutrality in terms of gender and therefore we produce a unisex table by combining the mortality tables for men and women, together and equally.