



# Is the Adjustment of Social Security Benefits Actuarially Fair, and If So, for Whom?

*Irena Dushi, Leora Friedberg, and Anthony Webb\**

Social Security is designed to deliver benefits equal in expectation regardless of whether they are claimed as early as age 62 or as late as age 70. Although most workers claimed at early ages in the early 1990s, disparities in claiming ages have risen since then, and workers with high levels of educational attainment and lifetime earnings have grown increasingly likely to delay claiming. Given the well-documented relationship between socioeconomic status and mortality, it might be expected that later claimants differ in critical ways from early claimants. First, they may be longer-lived, undermining the neutrality built into the actuarial adjustments and exposing the Social Security trust fund to greater costs through adverse selection. Second, they may have higher lifetime earnings, undermining the redistribution built into the Social Security benefits formula.

We consider these factors together — increasing disparities in lifespans, the relationship between lifespan inequality and earnings inequality, and increasing disparities in claiming ages. We analyze their contributions to actuarial fairness, costs faced by the Social Security trust fund, and inequality in expected lifetime benefits. We focus solely

on the retired-worker benefit for men and defer to future research an analysis of the complicated interactions with benefits paid to spouses and deceased workers' survivors. We focus on beneficiaries who have never received disability insurance, and who have not died before claiming.

We obtain our results using administrative data from the U.S. Social Security Administration (SSA). The analysis consists of four steps. First, we quantify changes in claiming ages by birth cohort and by lifetime earnings. Second, we investigate how life expectancy differs by claiming age by estimating a Gompertz survival model. Third, we compute expected lifetime benefits for individuals claiming between ages 62 and 70 under different mortality assumptions, specifically comparing average mortality of all beneficiaries whose initial claim is for retired-worker benefits and average mortality that differs by claiming age. Fourth, we repeat the analysis above distinguishing not only by claiming age but also lifetime earnings quartile, so we can disentangle the relationships between claiming age, mortality, and lifetime earnings.

We begin by quantifying the increasing dispersion in

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\* **Irena Dushi** is an economist at the Social Security Administration, Office of Retirement and Disability Policy, Office of Research, Evaluation and Statistics. **Leora Friedberg** is an associate economics professor at the University of Virginia. **Anthony Webb** is a research director at the New School for Social Research. This research brief is based on working paper MRDRC WP 2021-421, UM20-06.

claiming ages in recent cohorts, which started after the 1931 to 1932 cohort began to claim benefits in 1993. Next, we investigate mortality of early versus late claimants, focusing on the representative ages of 62 and 66 and using estimates from our mortality model. For the 1931 to 1932 cohort and later, life expectancy at age 62 for age-62 claimants has been around one to two years lower than for age-66 claimants, so late claimants are adversely selected. While life expectancy since then has continued to increase, it has done so differently for early and late claimants, and we lack sufficiently long mortality histories for recently retiring cohorts to identify differential trends.

Given our estimates of mortality differences by claiming ages, we calculate the impact on benefit payouts and actuarial fairness resulting from selective claiming. This depends on changes in actuarial adjustments over time in combination with the claiming-age trends and mortality differentials that we identify. For the 1931 to 1932 birth cohort, the return on delaying was -1.88%, if calculated based on all retired-worker claimant mortality. It was -0.32%, and so less disadvantageous, if calculated for those who delayed claiming until age 66. This compares to a return of -2.63%, a worse deal, for those who claimed at 62.

For later cohorts, the return on delaying has become systematically positive for those who actually delay claiming, but not for those who claim early. We further find that selective claiming occurs within all earnings quartiles, but

increases benefits and total payouts more for those with higher lifetime earnings because such claiming is more prevalent and the returns on delaying for high earners who delay exceed actuarially fair amounts by larger margins.

Lastly, we consider aggregate effects, finding that selective claiming has a small effect on total payouts, but a more consequential effect on inequality in lifetime benefit payouts. The effect on the trust fund is modest. We calculate that the increase in payouts as a result of adverse selection in claiming, relative to a base case in which claiming ages were uncorrelated with mortality, was 0.2% for quite a while, possibly increasing to around 0.5% for the most recent retiring cohorts. Yet, they are 1.9% higher for those in the highest quartile of lifetime earnings as a result of claiming-age differences, compared to what payouts would be if those in the highest quartile had the same claiming ages as those in the lowest quartile. This contributes 2.8% to the difference in expected lifetime benefits between the highest and lowest quartiles.

In future research, we plan to extend this analysis. By incorporating the complicated claiming-age incentives that couples face, we can analyze how household-level inequality is influenced by claiming-age, mortality, and earnings patterns. Also, by determining how the COVID-19 pandemic has affected mortality and retirement and claiming ages, we can evaluate the consequences for the trust fund moving forward. ❖

### **Michigan Retirement and Disability Research Center**

Institute for Social Research

426 Thompson Street, Room 3026

Ann Arbor, MI 48104-2321

**Phone:** (734) 615-0422 **Fax:** (734) 615-2180

[mrdrcumich@umich.edu](mailto:mrdrcumich@umich.edu) [www.mrdrc.isr.umich.edu](http://www.mrdrc.isr.umich.edu)

**Sponsor information:** The research reported herein was performed pursuant to grant RDR18000002 from the U.S. Social Security Administration (SSA) through the Michigan Retirement and Disability Research Center

(MRDRC). The findings and conclusions expressed are solely those of the author(s) and do not represent the views of SSA, any agency of the federal government, or the MRDRC.

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