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## HAVE WE FINALLY ACHIEVED ACTUARIAL FAIRNESS OF SOCIAL SECURITY RETIREMENT BENEFITS AND WILL IT LAST?

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## Introduction

The U.S. Social Security system is one of the largest and most comprehensive social insurance programs worldwide. In 2010, 90% of individuals age 60-64 were fully insured and \$577.4 billion were paid in old-age retirement and survivor's benefits (SSA-S, 2010, Table 4.C5). Social Security reduces, by a constant percentage, the monthly benefits of workers who start collecting checks before the Full Retirement Age (FRA), as early as age 62, the Early Retirement Age (ERA). Likewise, it increases benefits for those who delay take-up past FRA in accordance with the Delayed Retirement Credit (DRC).

Since the introduction of the early retirement option in 1956 for women and 1961 for men, the structure of the actuarial adjustments (henceforth: "the adjustment schedule") has been modified several times. The DRCs have been raised from 3% to 8% per year, which has increased the slope of the schedule after FRA. Following the 1983 Social Security Amendments, the FRA has increased from age 65 to 66, resulting in a wider early take-up age range (ERA–FRA) relative to delayed take-up (FRA–70), and a lower penalty rate three years prior to FRA was introduced. The FRA is scheduled to rise to 67 for beneficiaries reaching ERA by 2022. Current policy proposals, such as the recommendations made by President Obama's 2010 Fiscal Commission, call for increases in the ERA and the FRA to age 64 and 69, respectively. Such reforms, if implemented, would lead to important changes in the adjustment schedule that may fundamentally alter the incentives for benefit take-up faced by future generations of beneficiaries.

These adjustments are a key feature of the program, affecting the monthly checks of millions of current and

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Demographic trends present an important backdrop to understanding changes in the adjustment policies. The 1983 Social Security Amendments, which led to the increase in the FRA to age 66 today, were motivated in part by the rapid increases in old-age longevity. Average remaining life expectancy at age 62 (ERA) increased from 16.5 years to 19.6 years for men and from 21.3 years to 22.7 years for women born in 1918 compared to 1937. As average retirement lifespans lengthen, adjustment schedules that were actuarially fair for average beneficiaries from past generations may not be fair for current retirees. On the other hand, an adjustment policy that was far from actuarially fair may be more congruous now.

## Aim

This motivates the questions that we seek to address in this paper: Under what conditions are the adjustments to benefits for early and delayed take-up actuarially fair? To what degree have past policy changes improved the actuarial fairness of the adjustment schedule for average mortality men and women? How will the planned adjustment schedules perform for future beneficiaries under different scenarios, and are there superior adjustment policies that should be considered?

Previous research has focused on selected adjustment policies and generations. The present study has a more comprehensive scope as it examines the implications of the changes in the adjustment policy across beneficiaries born between 1917 and 1960, drawing careful distinctions between the contribution of the early take-up penalty structure, the DRC, and the FRA, as well as (average) cohort mortality. We provide a detailed analysis of the conditions under which adjustments are actuarially fair and develop measures to quantify the extent and nature of the deviation from the fair form. The tools and procedures developed here can be applied to any adjustment schedule and demographic.

## **Findings**

We show that fair adjustment schedules rise at an increasing rate in the take-up age and should be flatter when mortality is lower. We demonstrate that the fit of the adjustments to worker benefits has improved notably. We predict that the designated increase in the FRA from age 66 to age 67 will not significantly alter the actuarial fit, even if life expectancy continues to increase. We investigate the impact of further increases in retirement ages, as recommended by the President's 2010 Fiscal Commission, and evaluate alternative schedules that better adhere to the curvature required by actuarial fairness. We also briefly discuss results from the analysis of spousal and widow(er) benefits.

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