

Changing Progressivity as a Means of Risk Protection in Investment-Based Social Security

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Policy Abstract

This paper analyzes changes in the progressivity of the Social Security benefit formula as a means of lessening the risk inherent in investment-based Social Security reform. Focusing on a single cohort of workers who will reach their normal retirement age as the Social Security trust fund is projected to be exhausted, it simulates the distribution of benefits subject to both earnings and financial risk in a reformed system in which solvency has been restored and traditional benefits have been augmented by personal retirement accounts. The simulations show that switching from the current benefit formula to the maximally progressive formula—a flat benefit independent of earnings—allows the bottom 30 percent of the earnings distribution to achieve a higher expected utility even with no PRA investments in equity. An additional 30 percent of earners can lessen their equity investments without loss of welfare. Similarly, by using progressive benefit reductions in which replacement rates for lower earnings are reduced by less than those for higher earnings, about half of the equity risk can be eliminated for the lowest earnings decile. Sensitivity tests show that these patterns are robust to different assumptions about risk aversion, the equity premium, and the size of the personal retirement accounts established by the reform.