

## HOW CAN THE ACTUARIAL REDUCTION FOR SOCIAL SECURITY EARLY RETIREMENT BE RIGHT?

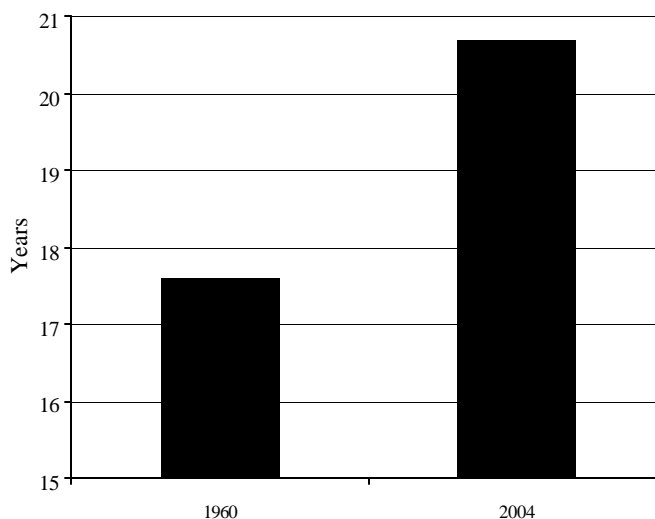
BY NATALIA A. JIVAN

Traditionally Social Security's Normal Retirement Age (NRA) has been 65, but for the last 45 years both men and women have had the option to claim benefits at the Early Eligibility Age (EEA) of 62. In exchange for claiming early, individuals receive a smaller monthly benefit. The legislation that established the EEA reduced benefits by 5/9 of 1 percent for each month before age 65, so that a person claiming at age 62 would face a 20 percent  $[(5/9)*36]$  reduction.

Why 5/9? The reduction was designed to be "age neutral." That is, two people with average life expectancy — one who claimed benefits at 62, the other at 65 — should receive equal lifetime Social Security benefits. Around 1960, when the EEA was adopted, average life expectancy at age 62 was almost 18 years.<sup>1</sup> Thus, for the typical worker claiming benefits at age 62 and living to the average expected age of 80 (62 plus 18), the 20 percent reduction was just enough to compensate for the fact that he would receive benefits for three years longer than someone claiming benefits at age 65.

But things have changed since the EEA was first adopted. As shown in Figure 1, life expectancy has increased dramatically. In 1960, the average life expectancy for the 62-year-old worker was 18 years; today it is 21 years. If life expectancy rises, one would have thought that an actuarial

FIGURE 1. AVERAGE LIFE EXPECTANCY IN 1960 AND 2004 AT AGE 62



Source: Unpublished life expectancy data from the Office of the Actuary of the Social Security Administration (2004).

reduction of less than 20 percent at age 62 would have been necessary to maintain age neutrality in lifetime benefits. The intuition is as follows. Before the increase in life expectancy, the early claimer and the late claimer receive the same in lifetime benefits. Now, let life expectancy increase by one year. The late claimer will receive \$1000;

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<sup>1</sup> Social Security's EEA of 62 was established in 1956 for women, presumably, as a way for married couples to claim benefits at the same time; the introduction of an EEA for men soon followed in 1961.

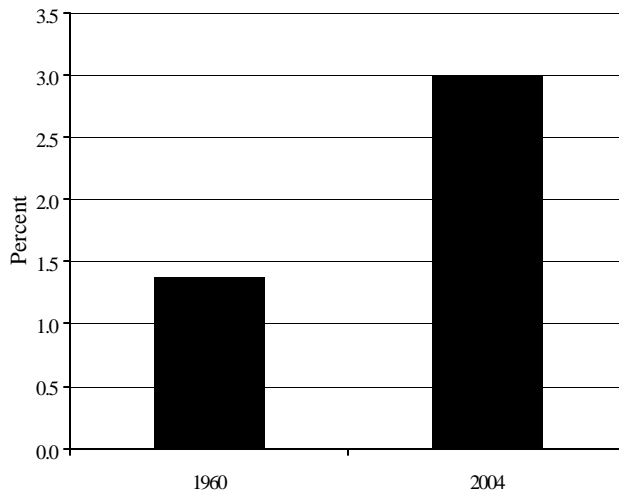
the early claimer will receive \$800 — reflecting the 20 percent reduction. On a lifetime basis, the late claimer now comes out ahead. The only way to restore balance at the new life expectancy is to have a smaller adjustment. But, in fact, the 5/9 reduction factor has remained constant. Why?

The answer has to do with interest rates. Consider the following equation:

$$\sum_{i=65}^L \frac{SSB}{(1+r)^{i-62}} = \sum_{i=62}^L \frac{(1-\frac{36y}{100})SSB}{(1+r)^{i-62}}$$

The lefthand side gives the present value of lifetime Social Security benefits (SSB) for a person who begins claiming at age 65 and the righthand side expresses the same thing for a person who claims benefits at age 62. In each case benefits were discounted back to age 62 using the interest rate ( $r$ ), and a reduction factor ( $y$ ) of 5/9 per month made the two sides of the equation equal. That 5/9 still applies today because, while life expectancies have risen, so have interest rates (Figure 2).

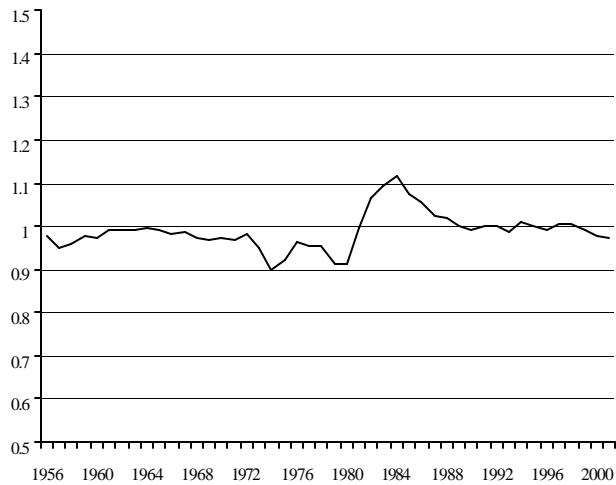
FIGURE 2. REAL INTEREST RATE IN 1960 AND 2004



Source: Unpublished interest rate data from the Office of the Actuary of the Social Security Administration (2004).

<sup>2</sup> All else equal, a rise in the NRA would require an increase in the reduction factor. The intuition is as follows: as the NRA rises from 65 to 67, the early claimant loses two years of reduced benefits and the NRA-claimant loses two years of full benefits.

FIGURE 3. RATIO OF SOCIAL SECURITY WEALTH FOR AGE-62 CLAIMANT VS. AGE-65 CLAIMANT



Source: Author's calculations using unpublished life expectancy and interest rate data from the Office of the Actuary of the Social Security Administration (2004).

The rise in rates has essentially offset the rise in life expectancy. As a result, the ratio of Social Security benefits for an age-62 claimant to benefits for an age-65 claimant continues to hover around one (Figure 3), indicating very close to perfect age neutrality. An amazing story!

The obvious question is what is going to happen going forward. Life expectancy is expected to continue to increase, but will interest rates continue to rise? If not, retaining the 5/9 per month reduction will reduce the Social Security wealth for the age-62 claimant compared to that for the age-65 claimant. The rising NRA will provide some offset in the short run, but in the long run the reduction for early retirement may well become too large in the future.<sup>2</sup>

Assuming lifetime Social Security wealth was equal for the two claimants before the rise in the NRA, the early claimant, who loses less with the extension of the NRA, pulls ahead. The only way to restore balance is to increase the reduction factor for early claiming.

## References

Centers for Disease Control. 2002. *United States Life Tables, 2000*.

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