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

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Introduction

The option to claim Social Security benefits earlier than the program's Full Retirement Age, in exchange for receiving an actuarially reduced benefit, is a key feature of the nation's Social Security program. This principle remained in place when Congress increased the Full Retirement Age from 65 to 67.[1] Most workers choose to claim early and retire on the reduced benefits.

The option to claim early was enacted over 50 years ago, when Congress set 62 as the program's Earliest Age of Eligibility. To make up for the extra three years of benefit payments, those claiming at 62 received 20 percent less in monthly benefits than if they had claimed at 65. Despite a significant increase in life expectancy in the intervening years, benefits claimed at 62 today are still about 20 percent less than benefits claimed at 65. This *brief* asks whether this actuarial reduction is still correct.

The discussion proceeds in three steps. The first section describes the creation of the option to retire early on actuarially reduced benefits. The second section explores the implications of changing life expectancy and interest rates on the actuarial equivalence of the benefits. The third section concludes that while benefits claimed at 62 are now less than actuarially equivalent to benefits claimed at 65, the difference is small. Thus, the reduction factor has proven remarkably durable.

Early Retirement on Actuarially Reduced Benefits

The original legislation creating the Social Security program did not allow workers to claim benefits before the program's eligibility age of 65. In 1956, however, Congress gave women the option to retire as early as age 62 on a reduced monthly benefit. Its reason was to allow married women, who were typically the younger member of the couple, to retire and claim benefits at the same time as their husbands. Congress made the option available to all women, so as not to discriminate against unmarried women. Congress extended this option to men in 1961, during a recession that made early retirement an attractive

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policy response. The reduction in monthly benefits was designed to "closely approximate an 'actuarial-equivalent' basis, so that no additional cost to the system arises on account of early retirement."[2] For a person with average life expectancy, Congress intended the cost of lifetime benefits to be much the same whether benefits were claimed at 62 or 65.

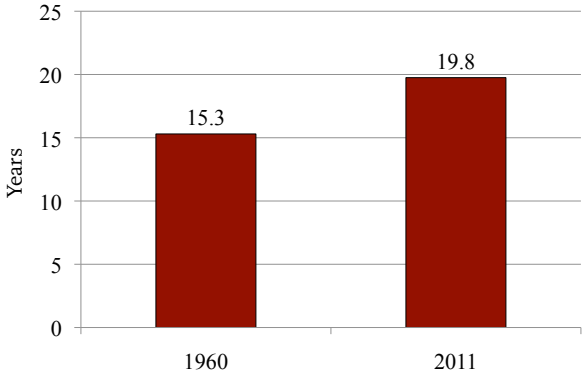
The intuition for the size of the reduction can be seen from the fact that the average life expectancy at age 65 in 1960 was about 15 years.[3] A worker who claimed at 62 collected benefits for three additional years or about 20 percent longer (3 years/15 years). If an individual were to receive benefits for 20 percent longer, the only way to keep the cost to the system constant would be to pay 20 percent less each year.

Congress set the benefit reduction for early retirement at 5/9ths of 1 percent for each month a participant claimed before the program's Full Retirement Age of 65. Benefits claimed at age 62, the program's new Earliest Age of Eligibility, were thus reduced 20 percent (5/9ths percent per month x 36 months). Participants who would get $1,000 a month if they claimed at 65 would get $800 a month if they claimed at 62.[4]

Is the Reduction for Early Retirement Still Correct?

The question is whether the actuarial reduction, set over 50 years ago, is still correct. The most obvious change since 1960 has been increased longevity. Average life expectancy at 65 is now nearly 20 years – roughly five years longer than in 1960 (see Figure 1).[5]

Figure 1. Cohort Life Expectancy at Age 65 in 1960 and 2011

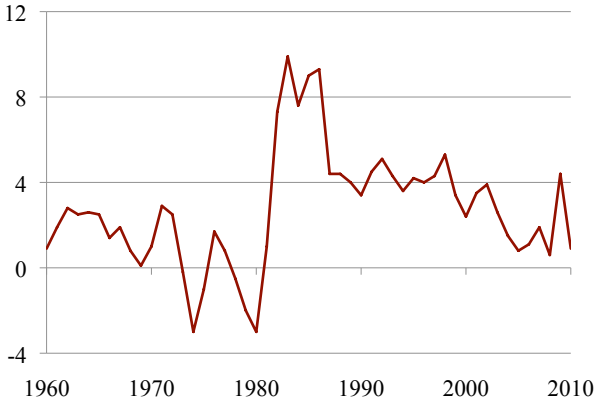


Source: U.S. Social Security Administration (2011).

Following the same intuition described above, the participant who claimed at age 62 instead of age 65 would receive benefits for 15 percent longer (3 years/20 years), which suggests that the monthly benefit should be reduced by only 15 percent – rather than 20 percent – to keep costs constant.

The exercise is slightly more complicated, however, because the "actuarial" cost of lifetime benefits depends on interest rates as well as life expectancy. The actuarial cost is the present value of expected lifetime benefits, the amount the government would need to put aside today to meet that future obligation. As a 2004 Center *brief* observed, real interest rates generally rose between 1960 and 2004 (see Figure 2), which essentially offset the impact of the rise in life expectancy on the adjustment required for early claiming.[6] The interest rate effect occurs because a higher rate shrinks the cost of a benefit stream claimed at age 65 more than a benefit stream claimed at age 62. In short, the combined effect of higher life expectancy and higher interest rates over the period roughly maintained the actuarial equivalence of the reduction for early claiming.

Figure 2. Real Interest Rate, 1960-2010



Note: The real interest rate is derived from the rates on the special public-debt obligations issuable to the Social Security trust funds.
Source: U.S. Social Security Administration (2011).

Since 2004, real interest rates have dropped sharply. Therefore, it is worth re-estimating the ratio of the cost of lifetime benefits for the age 62 claimant compared to that for the age 65 claimant. This calculation uses the following two expressions in which r is the interest rate and L is life expectancy at age 62.[7]

The cost at age 62 of lifetime Social Security benefits for a person who claims at age 65 – expressed in present discounted value terms – is:

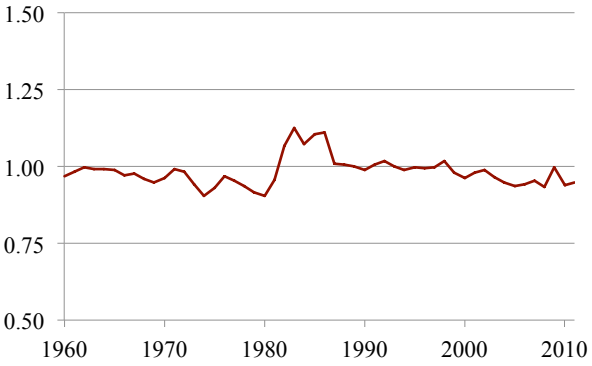
$$\sum_{i=65}^{L} \frac{SSB_{65}}{(1+r)^{i-62}}$$

If a person claims at age 62, the cost to Social Security of the reduced benefits[8] is equal to:

$$\sum_{i=62}^{L} \frac{SSB_{62}}{(1+r)^{i-62}}$$

The ratio of benefits claimed at age 62 to those claimed at age 65 is shown in Figure 3. A ratio of 1.0 means that the costs of benefits claimed at either age are the same. While the ratio of costs was close to 1.0 in 2004, in 2010 it had dropped to 0.94. This means that the cost of benefits for the early claimant is only 94 percent of the cost of benefits for the individual who claims at 65. But this difference is hardly dramatic. Interest rates are also likely well below their long-term level, given the current weak economy and stimulative monetary policy.

Figure 3. Ratio of Cost of Lifetime Benefits Claimed at 62 to Cost of Benefits Claimed at 65



Source: Authors' calculations using data from the U.S. Social Security Administration (2011) and (2002).

If interest rates rise, the cost difference would narrow, moving the system closer to actuarial equivalence. For example, calculating the cost of lifetime benefits using the 2.9 percent interest rate the Social Security Administration projects over the long-term, the cost of benefits claimed at 62 would be 96 percent of the cost of benefits claimed at 65. On the other hand, by mid-century, rising longevity could further reduce the actuarial equivalence of benefits claimed at 62. The increase in the Full Retirement Age to 67 further complicates the calculation.[9]

Conclusion

The actuarial reduction factor for early retirement, set by Congress over 50 years ago, has proven remarkably durable. Despite rising longevity and changes in interest rates, the cost of lifetime benefits claimed at 62 remains reasonably close to the cost of lifetime benefits claimed at 65. Rising longevity has decreased the actuarial equivalence of early claiming, but this effect has been largely offset by the interest rate changes.

The actuarial equivalence of early claiming inevitably will continue to fluctuate. However, as a key component of the nation's Social Security program, the actuarial reduction factor for early retirement must be reasonably stable over long periods of time. It cannot be adjusted each time interest rates change or life expectancy ticks up.

Whether the current or projected shortfall justifies a change in the actuarial reduction for early claiming is open to debate. But given the other serious issues facing the Social Security program, this issue would not seem to merit a prominent place on the policy agenda.

Endnotes

1 The increase was included in a broad package of reforms enacted in 1983. The change is being phased in gradually; today's Full Retirement Age is 66. For those born in 1960 or later, it will rise to 67.

2 Myers (1993).

3 In 1960, life expectancy at 65 was 13.2 years for men and 17.4 years for women. These figures are for cohort mortality probabilities from the U.S. Social Security Administration (2011).

4 This example uses "real" inflation-adjusted monthly benefit figures. As Congress intended to equalize the cost of benefits for different claiming ages based on the same "primary insurance amount," the example also assumes no increase in the participant's "primary insurance amount" due to additional covered employment between age 62 and 65.

5 The mortality data used in determining Social Security's current actuarial reductions for early claiming excluded individuals who were already receiving Social Security disability benefits (who tend to have lower life expectancy). As a result, life expectancy estimates from these data were somewhat higher than the life expectancy data for the general population cited in this *brief*. See Goss (1985).

6 Jivan (2004).

7 The approach used here follows Jivan (2004).

8 The benefit of a person claiming at age 62, SSB_{62}, is 80 percent of the benefit claimed at 65, SSB_{65}, through 2000; SSB_{62} then rises to 80.4 percent of SSB_{65} by 2008 due to the rise in the Social Security Full Retirement Age from 65 to 66, which reduced SSB_{62} somewhat less than it reduced SSB_{65}.

9 The Social Security Administration expects life expectancy to increase by another two years by about 2040. However, the Full Retirement Age will then be 67, which will raise monthly benefits claimed at 62 to 80.8 percent of monthly benefits claimed at 65. Raising life expectancy two years and increasing the monthly benefit at age 62 to 80.8 percent of the monthly benefit at 65, the cost of lifetime benefits claimed at 62 would still be 96 percent of the cost of benefits claimed at 65.

References

Goss, Steve. 1985. Letter to Daphne Butler on Actuarial Fairness of Benefit Adjustment Factors. Baltimore, MD: U.S. Social Security Administration.

Jivan, Natalia. 2004. "How Can the Actuarial Reduction for Social Security Early Retirement Be Right?" *Just the Facts on Retirement Issues* 11. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Myers, Robert J. 1993. *Social Security*. Fourth Edition. Philadelphia: Pension Research Council, University of Pennsylvania Press.

U.S. Social Security Administration. 2011. *The Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*. Washington, DC: U.S. Government Printing Office.

U.S. Social Security Administration. 2002. Life Table Functions Based on the Alternative 2 Mortality Probabilities in the 2002 Trustees Report (unpublished).

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