SOCIAL SECURITY START DATE; SHOULD ONE START AT FULL-RETIREMENT OR WAIT UNTIL AGE-70?

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ABSTRACT

Americans have many choices as to when to start Social Security benefits: age-62 with reduced benefits, age 66 (or the full-retirement age that depends on birth year), plus or minus, for full benefits, and age-70 for expanded benefits, or any time in between. The expanded benefit is eight percent for each year beyond full-retirement. For one born between 1943 and 1954, the time between full-retirement and age-70 is four years and the benefit increase is 32 percent. This paper is a first attempt to quantify the gain or loss from waiting considering the time value of money.

INTRODUCTION

Social Security annuitants are entitled benefits that are a function of their covered earnings over their best 35-years of earnings. The earnings are adjusted annually for price level changes. The maximum covered earnings in all 35 years ($117,000 for 2014) are considered.

Although a retiree can start benefits at any time between age-62 and age-70, full-benefits are available at full-retirement age; i.e., age-66 for those born between 1943 and 1954. For those waiting beyond full-retirement, an enhancement of eight percent per annum, plus price-level increases, is added. For individuals who had the maximum earnings in 35 years and retiring in 2014, the annual benefit is $27,420 at full-retirement and $37,632 if the annuitant waits until age-70 to start benefits. The option of starting benefits earlier is not considered here since the benefit can be reduced if the annuitant continues to work.

On the face, it seems like a no brainer, but it is not quite so simple. For every year that one waits, the annuitant loses that year's benefit. Four years of $27,420 annually in benefits is no small loss.

The decision is made based on one's life expectancy. Knowing ones actual mortality would make the determination easy, but that information is not known. So life expectancy is used. The longer one expects to live, the better the decision to delay benefits is.

The decision is optimally made while considering the time value of money. Since benefits are adjusted for inflation, only the real cost of capital, excluding an allowance for inflation, should be applied. So, the key element in selecting a discount rate is risk.

In this paper, one thing we are going to estimate is the break-even point; the age at which the annuitant would be indifferent as to whether he or she started benefits at full retirement versus age-70.

Using a relatively low discount rate, the annuitant would need to live until 82 or 83 to recover the opportunity cost of not collecting the four years' lower benefits. This decision is modeled [See Exhibit A] and sensitivity tables that quantify the effects of this important decision are presented below.

AGE TO BREAK-EVEN WITH VARYING DISCOUNT RATES (RISK PREFERENCES)

Different people have different risk tolerances. Will the Social Security System survive? Will the law change? Will inflation adjustments keep up? These are all factors in the decision. The first sensitivity table considers the effects of changing discounts rates; from 0% to 5%. Assuming one totally trusts the system, there is no perceived risk, and 0% is appropriate. Others who have doubts might want to use a higher rate. Table 1 reveals the results of changing discount rates on the break-even age.

Table 1

Longevity Required To Indifference Point [Break-even]

Discount Rate	Age to Break-even
0.0%	79.7
0.5%	80.2
1.0%	80.6
1.5%	81.1
2.0%	81.6
2.5%	82.3
3.0%	83.0
3.5%	83.7
4.0%	84.5
4.5%	85.5
5.0%	86.7

As indicated, this table reveals the age at which an annuitant would be indifferent based on various discount rates. One using a discount rate of zero sees no risk and their expectation is that inflation adjustments will continue to be realistic. One who uses a 5 percent discount rate has serious concerns and would prefer to have smaller benefits sooner. This is reflected in the 86.7 year-old break-even as compared to 79.7 for those who perceive less risk. Obviously it does matter.

FINANCIAL GAIN OR LOSS DEPENDING ON ACTUAL MORTALITY (ANNUITANT LIVES BEYOND BREAK-EVEN USING 1.5% DISCOUNT RATE.

For this discussion, we will use a 1.5% discount rate. If a person dies before the break-even point, they lose value; if they die after, they gain. The amounts can be significant, making the decision more difficult. Table 2 quantifies the amount of this gain or loss based on the annuitant's actual life span. The loss is calculated for one individual who lives only until age-70 and the gain is calculated for one who lives to age-99, and the gain or loss is calculated for each year in between.

TABLE 2

Discount Rate	Age to Break-even
81	-$740
82	$7,189
83	$15,000
84	$22,696
85	$30,278
86	$37,748
87	$45,108
88	$52,359
89	$59,502
90	$66,540
91	$73,475
92	$80,306
93	$87,037
94	$93,668
95	$100,202
96	$106,638
97	$112,980
98	$119,228
99	$125,383
100	$131,448

The stakes are not insignificant; one can out live the mortality tables. Using a conservative 1.5 percent discount rate, Table 2 demonstrates, starting for people who live to 80, how much they gain, in present value terms if they live even longer.

PLANNING OPPORTUNITIES

Planning when to die? Planning for uncertainty! One has little choice. Some have no other retirement options; others, ample additional resources. The former might run out of money; the latter, should be fine. One simply needs to consider their own life expectancy and what makes them most comfortable. If one has modest other retirement resources and a long life expectancy, they might consider spending their other resources early in order to comfortably survive until age-70, and then start benefits.

Spouses of annuitants can claim one half of the annuitant's benefit when the spouse reaches full-retirement age. Or, if they outlive the annuitant, they can claim the decedent's full benefit. These benefits, however, do not affect decisions posed here since the spouse does not qualify for the expanded benefit by waiting.

Many other options exist in certain situations. Knowledge is key. Annuitants should take responsibility for their own education and seek advice when warranted. The Social Security Administration website is very good and quite complete. The number of rules, however, is overwhelming, so planning is challenging.

CONCLUSION

The obvious questions is "how long will the annuitant live? That being unknown, the question becomes "how long does the annuitant expect to live?" How long will the eligible spouse(s) live? This paper starts to quantify how risk preferences and actual longevity affect the decision. It only models this one decision, and other factors must be considered. This first step opens the door for continued research.

REFERENCES

[1] SSA.gov.

THE MODEL

This model can be demonstrated upon presentation.

The upper left cell allows the discount rate to be adjusted.

The third row calculates PV if retirement is at full retirement.

The fourth row calculates PV if retirement is delayed until 70.

The fifth row is the difference.

1.000 %	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
$27,420																
$403,564	$27,149	$26,880	$26,614	$26,350	$26,089	$25,831	$25,575	$25,322	$25,071	$24,823	$24,577	$24,334	$24,093	$23,854	$23,618	$23,384
$37,632																
$407,024					$35,806	$35,451	$35,100	$34,753	$34,408	$34,068	$33,730	$33,396	$33,066	$32,738	$32,414	$32,093
-$3,460																