

The Value of Delayed Social Security Claiming for Higher-Earning Women

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Abstract

This study estimates the expected benefit from delayed Social Security claiming for higher earning, healthier women who can expect to receive more future income payments than other Americans. The expected net present value of Social Security payments from delayed claiming for healthy women is \$179,999, or more than twice the value of delayed claiming for a male of average health. The benefit from delayed claiming ranges from a low of \$16,548 per year to \$29,395 per year for healthy women. Even average health women gain at least \$132,202 in Social Security wealth by waiting until age 70 to claim Social Security income benefits. Significant gains to women who delay claiming are robust to a 2% increase in real discount rates and to a 21% reduction in income that could occur if the Social Security trust fund depletes in 2026. The added benefits from reduced longevity and inflation risk suggest that the failure to delay claiming results in a significant loss in both retirement wealth and expected welfare.

Introduction

Although women live longer than men, women are more likely to claim Social Security benefits at age 62 and are also less likely to wait until full retirement age (Fichtner, Akabas, Koenig and Gladstone, 2020). Claiming early is particularly harmful for higher-earning women who have made significant gains in longevity in recent decades.

Nearly 30% of women earn more than men in opposite-sex married households (BLS, 2019).

Women born after 1961 are more likely to have a 4-year college degree than men (Johnson et al., 2017). Women are far more likely to earn more than men during their lifetimes today than in prior generations, and higher-earning women live longer than men or lower-earning women.

Since men and women receive the same percentage increase in lifetime income from delaying Social Security, higher-earning women receive a comparatively larger expected benefit.

Many planners may not be aware of the impact that unisex claiming benefits have on the expected net present value of delayed claiming by women. The benefit of delayed claiming is magnified in a market where the market places a high price on inflation-protected lifetime income. Accurately estimating the value of later-life payments is particularly important to advisors who use less precise measures to value delayed claiming such as the breakeven age at which discounted future payments exceed foregone earnings from earlier claiming.

Our study draws from mortality weighted present value methodology established in the prior literature to estimate the value from delayed claiming using current discount rates on Treasury Inflation Protected Securities (TIPS). TIPS rates at the time of writing are negative, which indicates that the market places a premium on inflation protection and expects low future yields

on bond investments. A low discount rate increases the value of income payments later in life. We also estimate the value of spousal benefits for males who earn significantly less than their female spouses.

Using a current annuity mortality table appropriate for healthy women with \$100,000 average lifetime earnings, we find that the present value of Social Security income at age 70 is \$797,011, about \$60,000 higher than the present value for healthy men. The marginal gain from deferral is higher among healthy women than for healthy men at every age, but the gain is inconsistent ranging from a high of \$29,395 by deferring from age 64 to 65 to \$16,548 when deferring from age 69 to age 70. A healthy, higher-earning woman claiming at age 62 reduces her Social Security wealth by \$179,799, and by \$214,633 if she has a lower-earning male spouse. In the unlikely event that the Social Security trust fund is depleted in 2026 and subsequent benefits cut by 21%, the net gain from deferral until age 70 remains a positive \$120,381.

Even women of average health benefit from deferred claiming to age 70 at today's low rates. The only scenario in which there is a cost to women from deferral is if real bond returns are 2% higher than today and the woman is in average health without a lower-earning spouse. Since annuitization reduces income risk in retirement, the welfare loss from early claiming is significantly larger than our dollar estimates.

Literature Review

Determining the Optimal Claiming Strategy

The formula used to estimate the increase in lifetime income from delaying Social Security income benefits was designed to be roughly actuarially fair, meaning that a person with an average life expectancy should expect to receive about the same expected present value (EPV) of

benefits no matter what age the individual begins claiming benefits. Claiming at an earlier age will result in a reduced annual benefit received over a longer remaining life expectancy and claiming at a later age will result in a higher benefit over a shorter remaining life expectancy.

Social Security does not alter the formula to account for possible gender differences in expected longevity. If an individual has a longer than average life expectancy, delayed claiming will result in a greater present value benefit compared to earlier claiming. The optimal claiming strategy is determined by identifying the claiming age at which the maximum expected present value (EPV) is received (Meyer and Reichenstein (2010), Sanzenbacher and Ramos (2016), Munnell and Soto (2007), and Alleva (2016)). The EPV is the discounted sum of the individual's annual Social Security benefits using an appropriate interest rate, multiplied by the probability of death at that age.

The Social Security delayed claiming formula ignores both gender and income. Increasing lifespans among women and more educated, higher-income Americans favors delayed claiming because a retiree will receive more expected future income benefits. Chetty (2016), Bosworth (2015), Waldron (2007), and Shonen and Slavov (2012) find that a variety of socio-economic factors, such as gender, income, education, wealth, and occupation impact longevity. According to the Social Security Actuarial Longevity Tables, once an individual reaches the earliest claiming age of 62, the average life expectancy for women is 89.6 years compared to 87.3 years for men.

In addition to gender, income levels correlate to increased longevity. Bosworth (2015), Waldron (2007), Chetty (2016), and Duggan (2007) found lower mortality rates associated with higher lifetime earnings. Chetty (2016) found that the difference in longevity between the richest 1% and poorest 1% of individuals is 14.6 years for men and 10.1 years for women. Duggan, Gillingham and Greenlees (2007) found that longevity in the top decile of income is at least 2 years greater for

white females compared to the bottom decile of income. The difference in longevity is almost 4 years for black females.

In addition, Bosworth (2015) and Chetty (2016) found that life expectancies for women at higher income levels are increasing in part due to rising educational attainment and labor force participation by women. Chetty (2016) found that, between 2001 and 2014, longevity increased by 2.34 years for men and 2.91 years for women in the top 5% of income but only increased by 0.32 years for men and 0.04 years for women in the bottom 5% of income.

According to Bosworth (2015), “since 1979 women have experienced employment gains at every age past 47” and, for women age 60 and above, the labor force participation rate rose from 15 percent to 25 percent between 1995 and 2014. In a 2013 Social Security Bulletin, Wu et al. report that 71 percent of women aged 20 to 64 worked in 2011 compared to 37 percent in 1950, and the percentage of women holding higher-paying professional or managerial jobs increased by 22% from 1975 to 2010. Goldin and Katz (2016) found that college-educated women are 5 percent more likely to remain in the labor force compared to non college-educated women.

Johnson et al. (2017) found that the percentage of women between ages 26 and 30 with a four-year college degree has increased from 11% to 40% from 1936 to 1986, and women born after 1961 are also more likely to hold a college degree than men. Life expectancy among women with a college education increased between 2 to 3 years compared to lower educational levels (Bosworth (2015)).

The studies above show that gender and higher earnings (fueled by rising labor force participation and educational attainment) contribute significantly to increased longevity for women. Further, higher-earning and more educated women have greater longevity compared to lower-earning and

non-college educated women. These factors make the strategy for claiming Social Security critical, particularly for higher earning and highly educated women, as the longevity risk is increased.¹

Evaluating the Wealth Value of Delayed Claiming

Social Security income payments are free of investment risk, and unlike corporate bonds are free of credit and inflation risk. More advanced estimates of Social Security deferral recognize that the inflation-adjustment in Social Security, the CPI-W which measures price changes for urban wage earners, almost perfectly matches the CPI-U index of all urban consumers used to adjust future returns on Treasury Inflation Protected Securities (TIPS). For example, Aldersen and Betker (2017), Meyer and Reichenstein (2010, 2012), and Shoven and Slavov (2012), among others, use TIPS rates when calculating the NPV of expected future Social Security benefits.

Other studies use alternative discount rates. For example, Spitzer and Manakyan, Ervin, and Claggett (2014) evaluated claiming strategies using stochastic simulations of a hypothetical portfolio of stocks and bonds to estimate the value of delayed claiming. The TIPS discount rate reflects the market price of future guaranteed inflation-protected income. Advisors who use delayed claiming increase the expected value of future Social Security payments, and this value should be considered a component of the client's aggregate portfolio. Increasing the safe investment allocation with a retirement portfolio allows a retiree to simply increase the investment risk on the remaining portfolio to align with risk preferences. In other words, delayed claiming increases bond allocation, and the portfolio containing financial assets should be adjusted by increasing stock allocation in order to preserve the desired amount of investment risk (Blanchett and Finke, 2018).

A roadblock to delayed claiming is that the individual must generate retirement income from other sources between the retirement age and when they begin claiming. Individuals may be hesitant to draw down substantially from their asset portfolio in the early retirement years. However, in a 2012 study on portfolio longevity and Social Security claiming, Meyer and Reichenstein found that the portfolio's longevity will actually increase with delayed claiming in a low interest rate environment. There are two primary causes for this effect: the delayed benefit from Social Security will require less draw down from the portfolio in later years, and the taxation period for the social benefits is shorter compared to a longer period for earlier claiming. Meyer and Reichenstein (2012) further found that delayed claiming can add an additional 10 years to the longevity of a \$700,000 portfolio, assuming 4% annual consumption over a 30-year period.

Aldersen and Betker (2017) also studied the impact of delayed claiming on an individual's tax-deferred portfolio, assuming real annual consumption rates. While the early withdrawals for delayed claiming increase the longevity risk at higher interest rates, Aldersen and Betker (2017) found that at low rates the portfolio was bolstered by the Social Security benefits later in life.

Delaying Claiming and Women

Currently, the majority of women claim benefits at age 62. Two-thirds of women in the 1931 and 1937 birth cohorts claimed benefits by age 62. By age 65, Bosworth (2015) found that 95 percent of women in that birth cohort had started claiming benefits.

However, several studies have found that delaying the claiming age maximizes EPV for women, particularly in a low interest rate environment (Coile et al. (2002), Shoven and Slavov (2012),

Alleva (2016), and Meyer and Reichenstein (2010)). Meyer and Reichenstein (2010) found that EPV is maximized by claiming at age 68, assuming a real discount rate of 0.2 percent per month. In addition, they found that longevity risk is minimized by delaying claiming to age 70 or beyond.

For higher-earning women and women with higher educational attainment, the benefit of delaying claiming age is even more pronounced. Sanzenbacher and Ramos-Mercado (2016) found that for white female college graduates, the maximum EPV occurs at age 70 and is 16 percent higher than the EPV at age 62, assuming an interest rate of 1 percent. Higher education is associated with claiming at a later age, although it is unclear whether this is simply because more educated workers retire later. Shoven and Slavov (2012) found that individuals with some college education are 29.5 percent more likely to delay claiming than those who did not attend college. Sass, Sun, and Webb (2008) also find a positive relationship between college education and delayed claiming.

In addition to their own Social Security benefit, spouses may also claim spousal benefits (equal to 50 percent of the spouse's primary insurance amount), or a surviving spouse benefit that is equal to the spouse's benefit. Both of these marital benefits may only be claimed if the spouse's benefit is greater than the woman's own benefit and if the woman was married for at least 10 years and did not remarry. Therefore, a couple's claiming strategy must consider the joint longevity of the couple to determine when the maximum present value is achieved. For opposite sex couples, the difference in longevity for women greatly impacts this evaluation.

Munnell and Soto (2007), Meyer and Reichenstein (2010), and Shonen and Slavov (2012) all found that in most cases, the greatest benefit to the couple is achieved if the higher earning spouse delays claiming while the lower-earning spouse claims spousal and survivor benefits as

early as possible. Meyer and Reichenstein (2010) found that in most cases, the lower earner should claim spousal benefits early, usually at 62, while the higher earner should delay until age 70. If the female spouse earned less than the male spouse, Meyer and Reichenstein (2010) found that the husband's delay to claim until age 70 or death minimizes longevity risk. The positive effect of delay is even greater when the wife is much younger than the male spouse. Aldersen and Betker (2017) similarly found that for wealth levels of at least \$200,000, the lower-earning wife should claim at age 66 and the husband should claim at age 70 to achieve the maximum benefit.

We build on these prior studies by focusing on the value of delayed Social Security claiming for higher-earning women whose longevity exceeds men and lower-earning women. We use the EPV method outlined in prior studies that discounts expected future cash flows by the TIPS yield curve, but add to this methodology by evaluating EPV among men and women of average and higher expected longevity, and provide marginal estimates of the value of delayed claiming for each group. We also add to the literature by estimating the impact of possible future cuts in income benefits arising from a depletion of the trust fund and measure the robustness of our findings if real interest rates rise.

Methods and Results

The analysis uses mortality rates from either the 2012 Society of Actuaries (SOA) Individual Annuity Mortality Table or the Social Security Administration 2017 (SSA) Period Life Table. Improvement to correct for gradually increasing longevity is incorporated into both calculations. Improvement for the SOA table is based on the values provided within the table itself, while improvement for the SSA table is assumed to be a constant 1% for all ages.

Yields are based on real Treasury (TIPS) yields as of 5/10/21¹. The expected present value of future benefit payments is equal to the summed present value of each payment multiplied by the likelihood of being alive during that year.

Table 1 shows the expected value today of future payments discounted at TIPS rates for average men (using Social Security Administration mortality tables), healthy men (using SOA annuity mortality tables), average women and healthy women.

Our estimates use a hypothetical higher-earning woman or man with lifetime average earnings used to estimate Social Security benefits of \$100,000 per year. This would provide an annual income of almost exactly \$20,000 if she retired in June 2021 and was born in 1959.

Table 1 shows the expected discounted present value of Social Security income at claiming ages from 62 to 70. The results show clearly that the value of Social Security to a higher-earning woman is higher than it is for a man, whether the individual is of average or high expected longevity. A healthy woman who claims at age 62 adds an asset with an expected present value of \$617,212 to her balance sheet. In other words, this is the value the market would place on expected future inflation-protected cash flows. The value is \$34,634 higher than the value of Social Security to a 62-year old healthy male and \$66,397 higher than for a female in average health.

¹ Obtained from <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=realyield>

Table 1: Mortality Weighted Expected Present Value of Social Security Income

Age	Healthy Male	Healthy Female	Average Male	Average Female
62	\$582,578	\$617,212	\$486,005	\$550,815
63	\$602,762	\$639,870	\$499,291	\$568,730
64	\$619,762	\$659,306	\$509,552	\$583,500
65	\$645,946	\$688,701	\$526,904	\$606,745
66	\$667,847	\$713,753	\$540,232	\$625,769
67	\$685,400	\$734,383	\$549,522	\$640,516
68	\$707,465	\$760,093	\$561,901	\$659,276
69	\$724,294	\$780,463	\$569,531	\$672,934
70	\$737,399	\$797,011	\$573,931	\$683,017

A healthy woman who delays claiming Social Security to age 70 receives an asset with a current market value of \$797,011. Where an actuarially fair formula would provide an equal present value at each age, since a foregone year of income would equal the expected present value of a slightly higher income payments in the future, the advantages of unisex pricing, historically low real rates of return, and the absence of underwriting combine to create a \$179,999 gain in household wealth for a healthy woman who delays claiming from age 62 to 70.

Table 2 shows the dollar gain from delayed claiming by age. The relative gain from delayed claiming is larger for women at every age than for men, and is highest for both healthy men and women. Among healthy women, the value of waiting to claim for an additional year varies by age from \$16,548 by delaying claiming from age 69 to 70, to as high as \$29,395 when delaying from age 64 to 65. Even women with average expected longevity gain at least \$10,000 from delayed claiming at every age, and the total benefit of delayed claiming from age 62 to age 70 is \$132,202. For all age categories, the value of delayed claiming is lowest from age 69 to age 70.

Table 2: Expected Annual Present Value of Delayed Social Security Claiming by Age

	Healthy Male	Healthy Female	Average Male	Average Female
63	\$20,184	\$22,658	\$13,286	\$17,915
64	\$17,000	\$19,436	\$10,261	\$14,769
65	\$26,184	\$29,395	\$17,352	\$23,246
66	\$21,901	\$25,052	\$13,328	\$19,023
67	\$17,553	\$20,630	\$9,291	\$14,747
68	\$22,065	\$25,710	\$12,379	\$18,760
69	\$16,829	\$20,370	\$7,630	\$13,658
70	\$13,106	\$16,548	\$4,400	\$10,083
Total Benefit	\$154,821	\$179,799	\$87,926	\$132,202

Women in an opposite-sex marriage with a low-earning male spouse receive an additional benefit because the spouse is eligible to receive the full Social Security income benefit if the husband outlives the wife. Table 3 shows the expected present value of the spousal benefit by age for a healthy couple versus an average longevity couple. The value of delayed claiming is again positive and roughly equal between healthy and less healthy couples. A high-earning wife with a low-earning husband will gain an additional \$34,835 on top of her own \$179,799 gain for a combined \$216,434 increase in Social Security wealth.

Table 3: Expected Annual Present Value of Male Spousal Survivor Benefit at 50%

Age	Healthy Male	Average Male
63	\$3,477	\$3,460
64	\$3,427	\$3,373
65	\$4,516	\$4,410
66	\$4,423	\$4,263
67	\$4,305	\$4,083
68	\$5,078	\$4,769
69	\$4,897	\$4,495
70	\$4,712	\$4,219
Total Benefit	\$34,835	\$33,073

In all of our examples, the net present value of delayed claiming for both average and healthy men and women is positive. To evaluate the robustness of our findings to current market conditions, we test two potential external changes that could impact the value of delayed claiming – an increase in real interest rates of 2% for all TIPS maturities and a possible 21% decrease in future benefits when the Social Security trust fund is projected to deplete in 2026.

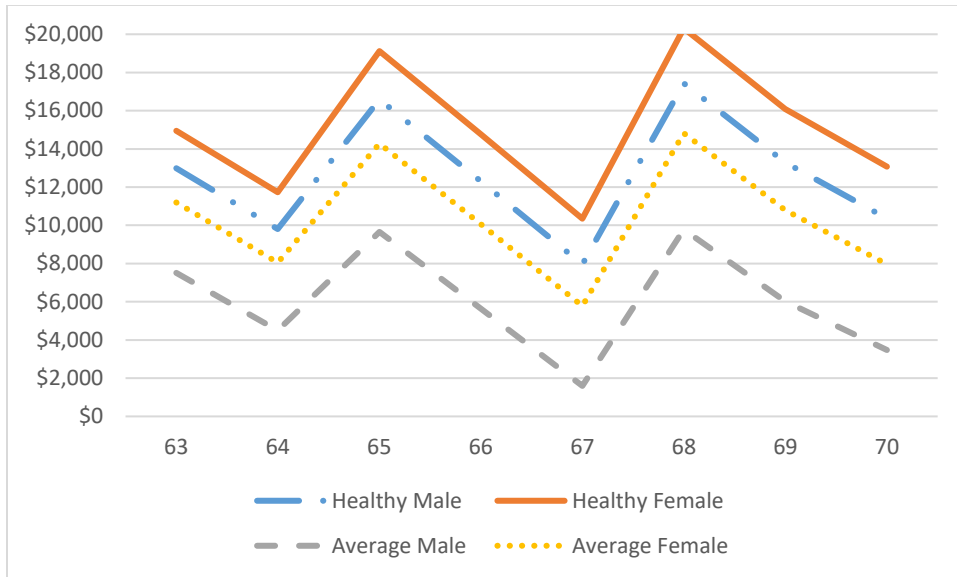
Figure 1 shows the annual increase in expected net present value from delayed Social Security claiming by age assuming TIPS yields are 2% higher than today. For all women, the expected benefit from delayed claiming remains positive. The values of annual gain in Social Security wealth are roughly half what they would be in today’s low-rate TIPS environment, ranging from \$4,951 to \$15,890 for healthy women per year. Only men in average health would avoid waiting to claim to age 70 to maximize Social Security wealth. Adding spousal benefits would increase the net present value for both men and women.

Figure 1: Annual Increase in Present Value from Delayed Claiming With 2% Higher TIPS Rates



The Social Security trust fund is currently projected to run out of money in 2026 with a mandatory 21% decrease in subsequent benefits for all retirees, including those who claim benefits before 2026. While there is little possibility that the decrease in benefits will be this extreme, we estimate the decrease in expected future benefits from delayed claiming by year for a 62-year old retiree in 2021 who delays claiming to various ages. As the figure indicates, even with an extreme benefit cut both men and women can expect to receive an increase in Social Security net worth from delayed claiming through age 70. Because early claiming resulted in slightly higher income during through age 66, the marginal gain pattern is slightly different than if no cut occurs. The highest benefit, however, occurs from delaying claiming between age 67 to age 68 when the marginal increase in lifetime income benefit rises from 6.66% to 8%.

Figure 2: Annual Increase in Present Value from Delayed Claiming with 21% Benefits Cut



Conclusion

Women are more likely to be college educated than men and an increasing number of married women have higher lifetime earnings than their husbands. Higher-earning women live significantly longer than average women, and also longer than higher-earning men. This study is the first to evaluate the expected benefit from delayed Social Security claiming for higher earning, healthier women who can expect to receive more future income payments than other Americans. These payments are even more valuable in a market that places a high present value on future inflation-protected income.

We estimate the expected net present value of Social Security payments from delayed claiming for healthy and average health men and women by age discounted at current TIPS rates and find that the failure to delay claiming can reduce retirement wealth by over \$200,000 for married healthy women. The benefit from delayed claiming ranges from a low of \$16,548 per year to \$29,395 per year for healthy women, which is nearly twice the benefit of delayed claiming for

average males. Even average health women gain at least \$132,202 in Social Security wealth by waiting until age 70 to claim Social Security income benefits.

Significant gains to women who delay claiming are robust to a possible 2% increase in real discount rates and to a possible 21% reduction in income that could occur if the Social Security trust fund depletes in 2026. There is no scenario where women do not increase retirement wealth from delayed claiming.

In a low real rate environment with longevity increases among higher-earning Americans, the market value of higher future cash flows from Social Security has never been higher. Delayed claiming is a method advisors can use to increase a client's retirement wealth. In addition to the expected wealth gain, retirees benefit from the reduction in idiosyncratic longevity risk posed by unknown longevity. Mitchell, Poterba and Washarwsky (1999) estimate that the welfare benefit from annuitized income is more than 30% higher than the net present value of the annuitized asset. In other words, even retirees with a modest negative net benefit should delay claiming to maximize expected utility. With a significant positive net benefit, women who do not wait until age 70 to begin taking Social Security suffer a significant loss of both retirement wealth and life satisfaction.

Of course, waiting until age 70 to claim Social Security benefits does not mean that a worker needs to retire at age 70. Workers who retire early can withdraw assets from qualified retirement accounts, often in a lower marginal tax rate environment, to fund lifestyle expenses until age 70. After age 70, significantly higher Social Security income will reduce pressure on the remaining retirement portfolio while also providing more valuable insurance against the risk of outliving assets.

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¹ Johnson et al, found that earnings for women have increased over time, although earnings inequality has increased among women and men. (Bosworth (2015)). The inequality has a less significant impact for women because women typically earn lower wages than men, so their incomes still play a smaller role in determining most families' incomes, and even for families where women's earnings are predominant (eg, for single women). Bosworth (2015) notes that a woman's earnings still increase the family's overall earnings, so overall inequality is

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