How Delaying Social Security Can Trump Long-Term Portfolio Returns or a Lifetime Annuity

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Much has been written about the inherent benefits of delaying Social Security benefits until age 70, but a fundamental challenge in the real world is that the decision cannot be viewed in the abstract. The decision isn’t just about the value of delaying, it’s also about how to sustain spending in the meantime, which entails liquidating something else instead. In effect, then, the delay-or-not decision is about whether to spend from Social Security and let the portfolio grow, or to spend from the portfolio and let Social Security grow. Or, alternatively, to take a distribution from the portfolio to buy a commercially available lifetime immediate annuity to fill the Social Security gap.

And upon deeper investigation—when viewed from the investment trade-off perspective—the decision to delay Social Security actually represents an astonishingly valuable investment return, based on the internal rate of return of the cash flows that it provides over time. It is unlike traditional investments in that its return isn’t based on interest rates or market performance; the return is based on the longevity of one’s life. Yet still, for those who live a long time, the decision to delay Social Security can produce real (i.e., inflation-adjusted) returns of 4 percent, 5 percent, or even 6 percent for those who live into their 90s and beyond.

Viewed in this manner, the reality is that, for those whose greatest retirement risk is living far past life expectancy, the decision to delay Social Security can be a very beneficial investment. The real return dominates available annuities, and even generates a real return comparable to equities (but without any market risk). Of course, there is still an aspect of mortality risk inherent in the decision to delay, but for those who are most concerned about living a long time and funding a long retirement, the decision to delay Social Security—even if it means partially spending down a portfolio in the meantime—may be the best means to securing a successful retirement. This is achieved by converting the uncertainty of market returns into the certainty of higher Social Security payments.

Adjusting Benefits Based on Social Security Timing before/after Full Retirement Age

The rules for Social Security allow for a certain benefit at full retirement age, which is then adjusted up or down by beginning early (as early as age 62) or delaying until later (as late as age 70). For every year benefits begin early, they are reduced by 6.66 percent per year (up to three years, and then reduced by only 5 percent for additional early years). For every year that benefits begin late, they are increased by 8 percent per year until reaching the maximum at age 70.

Because the exact “full retirement age” itself varies between age 65 and 67 depending on year of birth, the magnitude of the adjustment will vary from person to person. For those born between 1943 and 1954, the full retirement age is 66, which means that starting benefits at age 62 will reduce benefits by the maximum 25 percent (3 years × 6.66% = 20% plus 5% for the 4th year = 25% reduction), and delaying until age 70 will increase benefits by the maximum 32 percent (4 years × 8% = 32% increase).

In dollar terms, this means that an individual who was otherwise eligible for, say, a $1,000/month retirement benefit at full retirement age would have benefits reduced by 6.66 percent to $933/month by starting one year early, or increased by 8 percent to $1,080/month by delaying one year. At the extreme, that individual would get only $750/month by starting as early as possible (at age 62), or would get as much as $1,320/month by waiting as long as possible (until age 70). Note that these benefits also would be adjusted annually for cost-of-living adjustments, so these figures represent real inflation-adjusted benefit amounts at various ages.) On a relative basis, this means the decision to delay benefits by the full eight years from age 62 to age 70 increases the inflation-adjusted benefit by $570 ($1,320 – $750) or 76 percent.

Often the decision to delay benefits until age 70 is explained as the equivalent of an 8-percent annual return or a 76-percent cumulative return over eight years. But deciding to delay also has a non-trivial cost in the form of benefits that aren’t received (and thus can’t be invested or consumed) today. This cost doesn’t eliminate the value of delaying Social Security benefits, but it does make the trade-off in reality more complex—and something more nuanced than just an 8-percent per year return or a 76-percent return over eight years.

Calculating the Benefit of Delaying Social Security

To value the trade-off of delaying Social Security—no benefits paid now, in exchange for incrementally higher benefits in the future—we must calculate the economic value of the exchange. Figure 1 shows the
impact over time of not receiving $750/month (which also would have increased with annual increases for inflation) from age 62 to 70. Note that over time, the negative impact becomes offset by the higher inflation-adjusted payment stream that begins at age 70. Benefits not paid from age 62 to 70 represent a foregone investment opportunity—either the money could have been invested if it wasn’t needed or it could have been consumed and allowed other assets to remain invested. So we must account for the difference between the age-62 benefit and the age-70 benefit ($570/month in our example). We also must account for inflation, assumed to be 3 percent, and the time value of money, projected at 6 percent, similar to a balanced-portfolio rate of return that could have been earned on the money invested or not consumed.

As figure 1 shows, it can take a long time to recover from not receiving $750/month and having the opportunity to invest it (or the cost of not being able to keep an equivalent amount invested). In this example, the time required to reach breakeven is just over 22 years. This means that the individual who chooses to delay taking Social Security until age 70 needs to receive benefits beyond age 84 just to recover the economic cost of having waited. After that, however, the benefits accrue exponentially due to the compounding time value of money as well as the fact that the higher delayed benefit is also reaping ongoing cost-of-living adjustments.

Of course, the time to breakeven is sensitive to the return assumptions used. At a greater rate of return, breakeven takes longer; with more-conservative return assumptions, breakeven is reached more quickly because there’s less impact to delaying Social Security if the foregone dollars are assumed to have been unable to earn much anyway. Another way to look at the situation is to determine the break-even rate of return necessary at various points along the time horizon to achieve a comparable result. This is simply an analysis of the internal rate of return (IRR) on the decision to delay (and foregone payments) compared to the dollars ultimately received.

The IRR results show that delaying Social Security is a risky proposition because passing away shortly after the delay results in a total loss of foregone payments (see figure 2). Once benefits begin after year eight, it still takes another eight years for the larger payments to make up for the years that early benefits weren’t received (i.e., IRR crosses 0 percent), and then another six years until IRR equals a 6-percent growth rate (8 years + 8 years + 6 years = the 22-year breakeven shown earlier at a 6-percent growth rate).

Beyond that point, IRR continues to increase on what, in the end, is a guaranteed rate of return backed by the federal government. In fact, the implicit return of delaying Social Security is a nominal return as well as a real return, because benefits are adjusted annually for inflation. Figure 3 shows the real inflation-adjusted IRR trend starting in year 17 (when it turns positive) until year 38 (when the individual would be reaching age 100).
By definition these real returns are available only to those who live to or beyond life expectancy, but the results are quite significant. Those who reach age 90, or the 28th year after delaying, would have generated the equivalent of a 5-percent real rate of return in what is essentially a government-backed bond, and the real return passes 6 percent by age 100.

Comparing Social Security Delay to Alternatives

Delving Social Security versus Bonds

Figures 1, 2, and 3 show the implicit return generated by delaying Social Security, so we can compare that value to other investment alternatives. Figure 4 shows the real IRR on delaying Social Security versus a comparable TIPS yield along the current yield curve.

Figure 4 shows that it takes until nearly year 20 before the real return of delaying Social Security is superior to the results from a TIPS yield. However, beyond that point, the economic value of delaying Social Security continues to rise dramatically, producing a real return that is multiples of a comparable-risk government bond. Notably, the available return from TIPS ends beyond the 30-year market (there are no longer-dated government TIPS available today), but the value of delaying Social Security continues to compound for those fortunate to live long enough.

Delving Social Security versus Immediate Annuities

Another way to weigh the value of delaying Social Security—which is ultimately a lifetime stream of payments—is to compare it to other commercially available annuities.

We can compare the higher payments received by delaying Social Security benefits until age 70 to the payments that would be received by accumulating those early payments and buying a commercially available immediate annuity at age 70. We assume that the inflation-adjusting Social Security payments from age 62 to age 70 accumulate in a conservative government bond fund (because the time horizon is fairly short) with a 2-percent growth rate. Using the payment from the example—$750/month—the cumulative value of the benefits would be $86,587 by age 70.

Table 1 shows what can be purchased from a commercially available annuity for males and females at age 70 with $86,587, either on a nominal or Consumer Price Index (CPI)-adjusted basis. By comparison, the decision to delay Social Security until age 70 produces an excess payment of $722/month at age 70 ($1,320 with delayed retirement credits, plus eight years of...
assumed 3-percent cost-of-living adjustments to total $1,672/month, reduced by the $950/month inflation-adjusted payment that would have been available by starting benefits at age 62).

These results reveal that the payments produced by Social Security dominate the nominal or real payments available from a comparable commercially available annuity. This appears to be due primarily to the assumptions embedded in Social Security formulas and benefits, many of which were built when lifespans were shorter and interest rates were higher. Compared to annuities available today, which use current longevity and rate assumptions, the Social Security delay decision is far superior.1 This means that if a retiree has any plans to annuitize any assets, the best annuity is to delay Social Security benefits and use personal assets spent between ages 62 and 70 essentially as the purchase price of the annuity.

Note however that Social Security is essentially a straight life annuity—i.e., one that does not have any co-annuitant to continue life expectancy payments—and if death occurs during the eight-year delay time window it results in a total loss. As a result, the delay decision is riskier than many commercial annuities, which may offer a period certain option to ensure payments will continue for a specified number of years. On the other hand, the annuity quotes in table 1 assume no period certain payment either, and the inclusion of such a payment would just make the commercial annuity quotes even lower and the Social Security delay even more appealing. This is a legitimate risk trade-off for retirees to consider, though arguably the cost of getting a floor for those payments is quite significant. In addition, note that for couples, the higher payment for the individual is also a higher survivor payment for the couple. So for couples, delayed Social Security benefits mean higher joint survivorship payments, which make them even more appealing than commercial annuity rates, which would be significantly lower if priced for joint survivorship rather than a single life, male or female.

### Figure 5: Real Internal Rate of Return of Social Security Delay (past nominal breakeven, including benefits cut)

![Figure 5: Real Internal Rate of Return of Social Security Delay](image)


By contrast, the long-term real return on equities has been about 7 percent, which represents a 7-percent equity risk premium over an alternative risk-free rate. This means that for equities to generate a comparable risk premium over the value of delaying Social Security, equity real returns would need to be 8.3 percent after 20 years, 11 percent after 25 years, 12 percent after 30 years, and 13 percent after 34 years. Arguably these are questionable real returns to expect in any environment, and they are even more questionable in the context of today’s above-average valuations.

These results hold even if we do nothing to fix the current Social Security shortfall. The trust fund is projected to run out in roughly 16 years, and then benefits could be paid only from current Social Security taxes. This would not end Social Security payments, but it would result in a 30-percent haircut in benefits.2 Yet as figure 5 shows, even if the shortfall occurs—i.e., we do nothing to fix the system by adjusting benefits or raising taxes at any point in the next several decades—the internal real rate of return over the long run is still compelling. To the extent we make adjustments sooner rather than later, either through more modest changes to benefits or an increase in Social Security taxes, the orange line will move closer to the original blue line.

This means that delaying Social Security benefits provides superior risk-adjusted returns to equities and portfolio investing

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in the long run both now and in the future, regardless of whether the trust shortfall is resolved. Obviously, this is not true in the short run, because it takes more than 15 years to break even in the first place. Yet if the retiree’s time horizon was that short, equities likely wouldn’t be a proper investment anyway. In scenarios with a long time horizon and where the retiree wishes to hedge longevity by owning a portfolio with long-term growth assets, delaying Social Security becomes the superior long-term growth asset for the retiree. In other words, spending portfolio assets to delay Social Security becomes the equivalent of liquidating a low-return asset to buy a higher-return one instead.

Is Delaying Social Security the Best Long-Term Return Money Can Buy? Social Security and the decision to delay benefits represents a unique form of investment that has a return contingent upon survival and longevity rather than interest rates or market performance. Of course, because the value of the Social Security delay decision is contingent on how long someone lives, it is clearly not beneficial for those in poor health or who are otherwise pessimistic about living a long life. Couples, however, must consider joint health and longevity because they can plan for survivor benefits using couples-specific strategies that may further impact timing decisions.3

Nonetheless, the decision to delay Social Security can be evaluated based on the implicit rate of return it creates. Over longer time horizons, the return on the Social Security delay becomes quite compelling because it generally is far superior to any risk-adjusted returns that can be achieved over comparable time periods with any of the available alternatives such as risk-free bonds, growth equities, or commercially available annuities. In addition, because the system is indexed to inflation, real returns will be maintained even if inflation rises and will only improve further if longevity continues to increase. In fact, the decision to delay Social Security delivers best results when there is unexpected inflation, unusually long longevity, or especially bad market returns, which are the exact three scenarios that traditional portfolios are the least effective at managing. This makes the decision to delay Social Security the ultimate anti-fragile triple hedge.4

### Endnotes


The original version of this article first appeared on Nerd’s Eye View. Follow him on Twitter at @MichaelKitces.