Retirement Researcher

How Time Horizon and Discount Rate Affect Social Security

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One way to view the decision to delay Social Security as an "investment" is by using a *present value* calculation to identify which strategy can provide the most lifetime Social Security benefits and which strategy creates the lowest funding needs for your investment portfolio. This calculation requires deciding on a time horizon and a discount rate.

Longer time horizons will support Social Security delay, as more years can be gained from the increased benefit after 70. Lower discount rates also benefit Social Securitydelay, because with fewer alternatives for investing the assets in the interim, the larger delayed benefits provide more overall impact on the financial plan.

The following chart presents numbers for three discount rates, assuming the retiree lives to 90. At a 0% real interest rate (i.e. investments keep pace with inflation), the present value of benefits claimed at 62, when the primary insurance amount (PIA) is $30,000 per year, is $652,500. These benefits increase in value by another $179,100 with the delay to 70. Meanwhile, the present value of withdrawal needs from the portfolio falls by $95,100.

What this means is that an eight-year delay allows retirement to begin with almost $100,000 less in the investment portfolio, because Social Security benefits will be able to support more of the lifetime retirement expenses.

Present Values (Assumes Live to 90)

Real Discount Rate		**Claim at 62**	**Claim at 70**	**Difference**
0%	Social Security	$652,500	$831,600	$179,100
	Portfolio Needs	$1,087,500	$992,400	($95,100)
2%	Social Security	$491,499	$574,949	$83,450
	Portfolio Needs	$819,164	$793,790	($25,374)
6%	Social Security	$305,791	$292,285	($13,507)
	Portfolio Needs	$509,652	$552,682	$43,030

When the discount rate increases, the benefits from delay decline. When the discount rate gets high enough, taking Social Security at 62 actually becomes a better deal. The discount rate essentially serves as the real return on investment assets, and if these returns are large enough, then allowing more money to remain invested in the portfolio at higher returns makes sense.

The real world caveat to consider, of course, is whether a high portfolio return assumption can be justified, as it would require taking substantial market risk. The probability that you could consistently earn a compounded real return of 6% is rather low, and to have *any* opportunity to achieve this return would require retirement assets to be mostly invested in stocks.