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Understanding Our App: Setting the Discount Rate/COLA

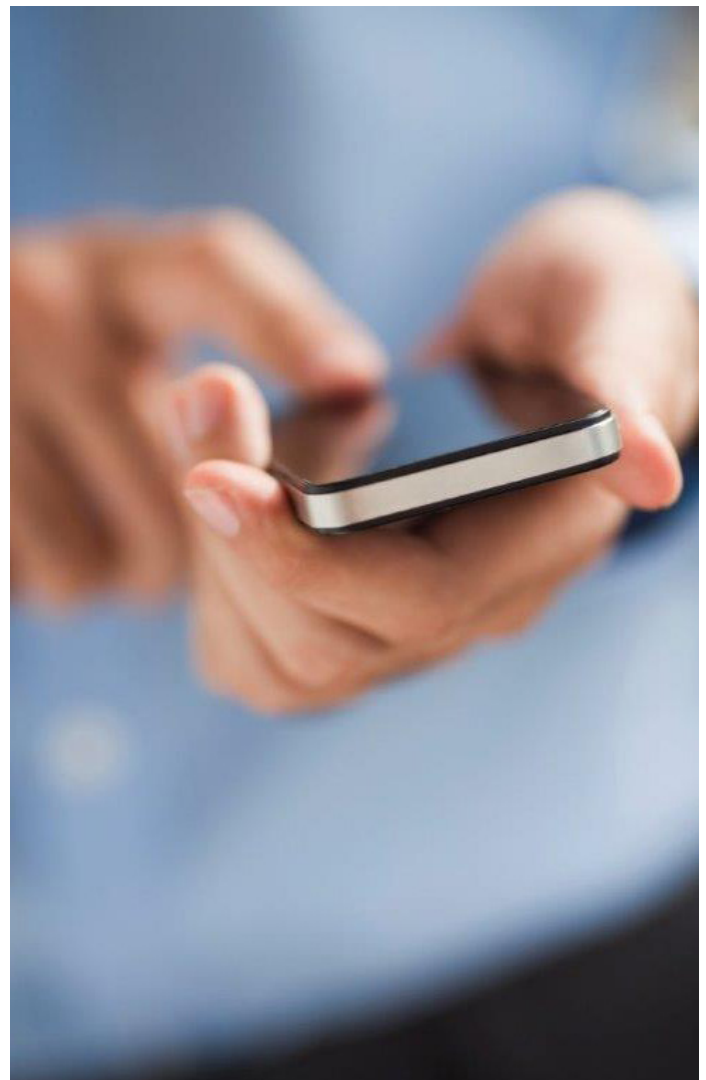
By **William Meyer**

In order to provide a better understanding of the assumptions in our software, we offer the following explanation of the default options we included for the discount rate and cost of living adjustments (COLA).

For the purposes of clarity, the discount rate is the rate that should be used to discount nominal amounts when calculating present values. The COLA is the assumed inflation rate that will be used to increase nominal Social Security benefit amounts each year.

Let's begin with the key financial principle: *The appropriate discount rate is the rate of return that can be earned on similar-risk securities.* Scholars unanimously agree that the similar-risk security to Social Security benefits is Treasury Inflation Protection Securities (TIPS) bonds. Social Security benefits and payments on Treasury bonds are both promises of the United States government. Furthermore, Social Security benefits and all cash flows on TIPS bonds are adjusted for inflation as measured by a Consumer Price Index. Therefore, there is unanimous agreement that a TIPS bond is the similar-risk security.

Let's distinguish between nominal interest rates and real interest rates. To use a particular point in time, as of October 9, 2014 the 10-year nominal yield on Treasuries is 2.33%, while the 10-year TIPS real (i.e., inflation-adjusted) interest rate is 0.41%. So, an investor can lock in a 2.33% nominal return on the 10-year regular Treasury bond or a return of 0.41% plus whatever inflation turns out to be on the 10-year TIPS bond. Based on these two investment alternatives, the 10-year annual expected inflation



rate is assumed to be 1.91%, $[(1.0233)/1.0041] - 1$. This is often approximated as 1.92, that is, 2.33% - 0.41%.¹ Thus the first set of defaults for the Discount Rate and COLA are 2.3% and 1.9%, which are today's 10-year Treasury nominal rate and expected inflation rate as measured using 10-year nominal and TIPS Treasury bonds, with the rates rounded to one decimal place.²

Since late 2008, the real rate of return on 10-year TIPS bonds has been approximately 0%. As long as this real rate remains near 0%, it is possible to use default options of 0% for both the Discount Rate and COLA and then to present the results in terms of Social Security benefits in today's dollars.

For example, if today's Social Security monthly nominal benefit is \$1,000 and inflation is 1.9% per year then next year's nominal benefit will be \$1,019. But this \$1,019 in nominal benefits will buy the same amount of goods and services as \$1,000 today. By inserting 0% in both Discount Rate and COLA, the results present future benefits in terms of today's purchasing power. Suppose you are helping this client decide between beginning benefits at \$1,000 today or to delay benefits for two years and begin benefits at \$1,160 in real terms. Simple math shows the breakeven period is age 80.5.³ We find many clients prefer this method of presenting alternative Social Security claiming strategies than one that depends on the difficult concept of present values. However, since today's real rate is about 0% the analyses are essentially the same whether the adviser compares cumulative lifetime benefits or present values of alternative claiming strategies.

Finally, in presentations we frequently hear financial advisors say that they want to use a higher nominal discount rate to reflect the returns that are likely on higher-risk securities, especially stocks. They may say they want clients to begin Social Security benefits earlier, which will allow their stock investments to remain in the portfolio longer. Thus, they feel, the appropriate discount rate should be the expected return on stocks. *This thinking is wrong!*

To repeat, the appropriate discount rate is the expected return investors can expect on similar-risk securities. When an

advisor recommends that a client begin Social Security benefits now so the client can maintain a heavier stock exposure, the advisor is, in essence, recommending that the client sell Treasuries and invest the proceeds in stocks. This advisor is ignoring the additional risk they are recommending for their client. As all advisors understand, clients do indeed care about risk.

These advisors argument that they "can look at only the impact of the Social Security claiming decision on expected returns but ignore the impact on risk" is akin to saying that their clients should invest 100% of their financial portfolio in stocks because their clients like higher expected returns and stocks have higher expected returns than bonds. Since clients care about returns and risk, advice on the Social Security claiming decision and advice on the asset allocation decision must therefore consider their impacts on both returns and risk. ■

About William Meyer

Bill Meyer is founder and managing principal of Social Security Solutions, a leading Social Security software firm with patented technology that is dedicated to educating and assisting financial advisors and their clients in optimizing their Social Security claiming strategies. More information is available at www.SSAnalyzer.com.

About Social Security Solutions

Headquartered in Leawood, KS, Social Security Solutions, Inc. (www.SocialSecuritySolutions.com) delivers advice and education about Social Security retirement benefit claiming strategies to consumers and practitioners. Social Security Solutions, Inc. leverages its expertise, research and technology to help clients determine the best strategy for collecting benefits in line with their overall retirement goals. To sign up for a free trial, [click here](#).

¹ We selected the 10-year TIPS bond because its duration is similar to the duration of lifetime Social Security benefits for a new mid-60s retiree with average life expectancy. The life expectancy of a mid-60s retiree is about 20 years. The duration of say \$1,000 per month in real Social Security benefits to be received for 20 years is about 10 years when the real yield is zero, which it has been since 2008. Similarly, the duration of a 10-year TIPS bond when the real yield is zero is about 10 years.

² We round to one decimal place since the second decimal place changes hourly. We will strive to adjust these rates regularly. Alternatively, current rates are available at www.onlinewsj.com. Click on "Market Rates" and then "Rates" and then go to "Treasury Inflation Protection Securities (TIPS)" or "Treasury Quotes."

³ Let x denote the breakeven year. If he begins benefits today, he receives $\$1,000(\text{per month}) * 12(\text{months}) * x(\text{years})$ in real terms. If he delays benefits for two years, he receives $\$1,160(\text{per month}) * 12(\text{months}) * (x-2)(\text{years})$. Solving reveals the breakeven age of 80.5 years.