

Retirement Math 101

5/3/2011

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"If you don't know where you're going, any road will take you there" – Lewis Carroll

Participants in defined benefit plans often have trouble calculating the monthly benefit earned under the plan. Unfortunately, it is also the case that almost no 401(k) participant can calculate the monthly retirement benefit equivalent of his or her account balance.

More fundamentally, very few participants have even thought about what their account balance and the monthly retirement benefit equivalent should be, not to mention how much they have to save each year along the way in order to reach that goal. Rather, participants, quite naturally, think in terms of the amount they are able to save each year in their 401(k) plan, probably assuming that they will have to make do with whatever the total is when they get there.

It may be helpful for participants to do the basic math to determine their needs and their progress in accumulating funds for retirement. A prudent fiduciary can help participants avoid outliving their assets or having to significantly cut back their lifestyle in retirement.

A good starting point is to assume that you need to accumulate a pot of gold equal to 20 times your expected annual expenditure in retirement. And, experts often assume that the annual expenditure in retirement will be roughly 80 percent of your pre-retirement income.

So, let's look at our friend, Joe, who earns \$110,000 a year and is about to retire.

The 80 percent guideline suggests that Joe will need an annual expenditure of \$88,000 in retirement, or \$7,333 per month. Social Security will address some of Joe's needs but perhaps not as much as Joe might think. The current maximum Social Security benefit is \$2,366 per month and that assumes that Joe has earned the maximum Social Security taxable amount for every year he has worked from age 21 forward. Just like for most people, that probably isn't true for Joe. In any event, we will assume that Joe will receive \$2,366 per month in Social Security benefits, which will leave a gap of around \$5,000 per month, or \$60,000 per year.

Twenty times that annual need of \$60,000 per year is \$1.2 million. Accumulating 20 times his annual need allows Joe to withdraw 3 percent (on the conservative side) to 5 percent (on the aggressive side) of his account per year and still have a reasonable chance of sustaining a 30-year retirement. But with "only" \$1.2 million in the bank, Joe would have to withdraw an aggressive 5 percent per year in order to have \$60,000 in retirement income to supplement his Social Security benefit.

Another approach, which often produces a similar result, is to aim for an accumulation equal to 12 times your income in assets by age 65, once again in order to replace 80 percent of your pre-retirement income. Twelve times Joe's annual income of \$110,000 per year prior to retirement suggests that Joe should accumulate a bit more – \$1.32 million.

Joe should bear in mind as well that an inflation rate of 3 percent per year over 10 years erodes purchasing power by 25 percent. Over 20 years, that 3 percent inflation rate erodes purchasing power by 50 percent.

Joe should also be concerned about spending on health care in retirement. The nonpartisan Employee Benefit Research Institute just released a study indicating that men retiring in 2010 at age 65 will need anywhere from \$65,000 to \$109,000 in savings to cover health insurance premiums and out-of-pocket expenses in retirement, just to have a 50/50 chance of success in that regard. To have a 90 percent chance of covering those expenditures in retirement, the amount increases to between \$124,000 and \$211,000.

Women retiring in 2010 at age 65 will need between \$88,000 and \$146,000 for a 50 percent chance of having enough money to cover health insurance premiums and out-of-pocket expenses, and \$143,000 to \$242,000 to have a 90 percent chance. This study assumes eligibility for Medicare, so anyone retiring earlier than age 65 would need even more.

In addition, Joe needs to consider that defined contribution plans do not spread the risk of living longer than anticipated over a wide population of people. Rather, the risk rests with the individual. In that regard, of 10 people who reach age 65 and retire, one will have to pay for just four years of retirement while another will have to pay for 34 years. The other eight will have to pay for a period of retirement between four and 34 years. So even if a participant saves enough for his or her life expectancy, 50 percent of participants will outlive that life expectancy.

Perhaps Joe, armed with this information, will wish that he had increased his elective deferrals to the plan. On average, participants contribute 6 percent of pay (5.2 percent for non-highly compensated employees and 6.7 percent for highly compensated). Let's assume Joe has been contributing 6.7 percent of his pay. For the year prior to retirement, this would be \$7,370 (6.7 percent times \$110,000). At that contribution rate, it is doubtful that Joe will have accumulated anywhere near his target of \$1.2 million to \$1.3 million by age 65.

In fact, Vanguard recently released a recommended contribution level of 12-15 percent of current pay, assuming contributions are made on a regular basis over one's entire working career. It may be too late for Joe

Congress is beginning to catch on. It's too early to tell for sure, but we may see Congress mandating communication with participants about these issues and perhaps an eventual requirement that annual benefit statements for 401(k) plans translate the account balance each year into projected monthly income for the participant.

That is a potentially helpful development, but it may be prudent to begin addressing this retirement math sooner rather than later. The sooner participants realize the road they have to be on in order to retire successfully, the more likely they are to reach that destination.