V9/12/99

PUT YOUR RETIREMENT PLANNING ON AUTOPILOT!

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There are a number of ways to determine how much a retiree should be able to withdraw each year while trying to both stretch the funds to last a lifetime as well as to compensate for inflation. It is prudent to be conservative about the assumptions no matter what method is used.

For example, those who choose to withdraw a fixed percentage of their assets each year can opt to choose a lower percentage to increase the likelihood that the money will last longer. Those who choose to use the computer program's conventional financial payment equations based on real returns and life expectancy can use lower returns and/or greater life expectancies. Those who normally spend all their earnings can save some for a rainy day. Those who are spending all of their minimum IRA required distributions can use a longer life expectancy for this budget calculation and reinvest the difference between the minimum required and the calculation with the longer life expectancy.

In the parlance of an engineer, you then can go "open loop" by just increasing your withdrawals by whatever happened to be last year's inflation, or you can go "closed loop" by making a new calculation every year. It's not hard to show that the closed loop method is much more likely to satisfy your goals than the open loop method. The reason for this is that the closed loop method uses "feedback". This means that whatever actually happened to your investments and inflation during the last year is considered in your calculation of new results. Hence, we say that last year's economic results were "fed back" into the analysis.

During part of my career at The Boeing Company, I was responsible for some very sophisticated electronic systems for missiles and airplanes including autopilots which were designed to help guide a missile to its target or to keep an airplane on an intended path even with gusts and changing wind conditions. The missile or the airplane does not know in advance what these conditions will be, so the designer has to anticipate that certain things may occur and develop a system that can adjust the controls accordingly. These autopilots rely heavily on the principle of feedback.

There is a lot of similarity between a retiree operating in an uncertain economic world and an airplane operating in an uncertain atmosphere. Both the retiree and the airplane want to eliminate harsh bumps and neither wants to run out of fuel (money) before the end of the mission (life).

During the development of autopilots we would try different kinds of feedback and experiment with different amounts of feedback by changing the "gain". During this past year I have been applying these same kind of concepts to retirement planning and testing the kind of feedback and amount of gain by using annual historical returns and inflation. In effect, I would pretend that I retired in different years with a certain set of investments. Then I would try different planning concepts with different feedback ideas and gains to see what looked the best.

It's easier for me to describe what was the best result in terms of equations than it is in words, but, if you follow the steps below, you'll get the same answers as you would with the equations. The actual equations "adapt" to the situation, so the optimum method uses what is known as adaptive feedback. Anyway, here are the steps instead of the equations.

Step 1. Calculate the amount of money you can spend this year using some conservatism in your assumptions. I found I got the best results using conventional financial payment equations with IRS 590 life expectancies and only one-half of the forecasted real, long-term, return. Suppose that calculates to $24,000.

Step 2. Increase last year's final calculation by the amount of inflation. For example, if inflation was 5.0%, multiply last year's final calculation by 1.000 plus 5.0% which equals 1.050. (Alternatively, if you are taking social security, you could get this same factor by dividing this year's social security by last year's, because social security increases with inflation each year.) For example, $19,048 x 1.05 = $20,000.

Step 3. Add ¾ of Step 2 to ¼ of Step 1. In the example that would be ¾ x $20,000 plus ¼ x $24,000 = $15,000 + $6,000 = $21,000.

Step 4. Use the smaller of Step 2 or Step 3. In the example, $20,000 from Step 2 is smaller.

Whereas the four steps above really help to accomplish our autopilot's objective of eliminating the economic bumps and stretching the funds to last a lifetime, it is possible to add one other adaptive feedback step that make's some practical sense. I believe that every retiree should have some reasonable reserve of funds that are for emergencies or unforeseen events. In times when the market has grown very quickly, you might increase the size of these reserves.

There are times when you may want to take the method out of the autopilot mode and take over the steering yourself. For example, the autopilot won't be aware of the death of your spouse, an inheritance, or other exogenous event that may change your goals appreciably. And, it's possible that future economics will be so different than historical results, that you'll want to do something different. Right now, I'm personally on full autopilot.