Develop Business/Financial Planning

Answering the 'Do We Have Enough to Retire?' Question

By Jim Otar, CMT, CFP
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Determining your clients' retirement readiness can be complicated, given their longevity risk and how the markets and inflation will perform in the future. Here's a simple calculator and flowchart that can help you and your clients decide when the timing is right.

Editor's note: From more than 500 articles published this year, Horsesmouth members rated this as one of the Top 10 of 2012. Winners this year emphasized getting and keeping new clients, addressing retirement funding fears, and maintaining personal fortitude even as the economy wears on everyone's stamina.

p>When clients ask, "Do we have enough to retire?," there are two components to this question that you will need to explore. The first concerns cash flow, as in, "How much income is enough each year?" The second component concerns the assets required: "How much retirement savings do you need at the beginning of retirement to finance your retirement?"

The income question is simple: Add up all your clients' expected annual expenses after they retire. Then figure out how much income they can expect from various sources like Social Security, company pensions, rental income, royalties, and so on. Find the difference. If their income is larger than their expenses, you can confidently tell them that they don't have to worry. They have enough to retire. They are in the green zone, so to speak.

However, if their estimated expenses exceed estimated income, you have a shortfall to manage. To cover this income gap, they will need more retirement savings. This brings us back to the question "Do we have enough to retire?" To answer this, we need to establish some ground rules.

Retirement risks

There are three basic risks for retirement financing: longevity risk, market risk, and inflation risk. Longevity risk is the risk of outliving the money. When designing a retirement plan, use an age of death beyond which the survival rate is below 10%. Therefore, unless both the client and spouse have a very short life expectancy, use age 95 as a minimum age of death to cover the longevity risk properly.

Market risk is the risk of adverse market conditions throughout the retirement period. Time value of fluctuations, sequence of returns, inflation, and reverse dollar-cost averaging can all have devastating effects on portfolio longevity. Make sure that the probability of running out of money at the age of death remains below 10%.
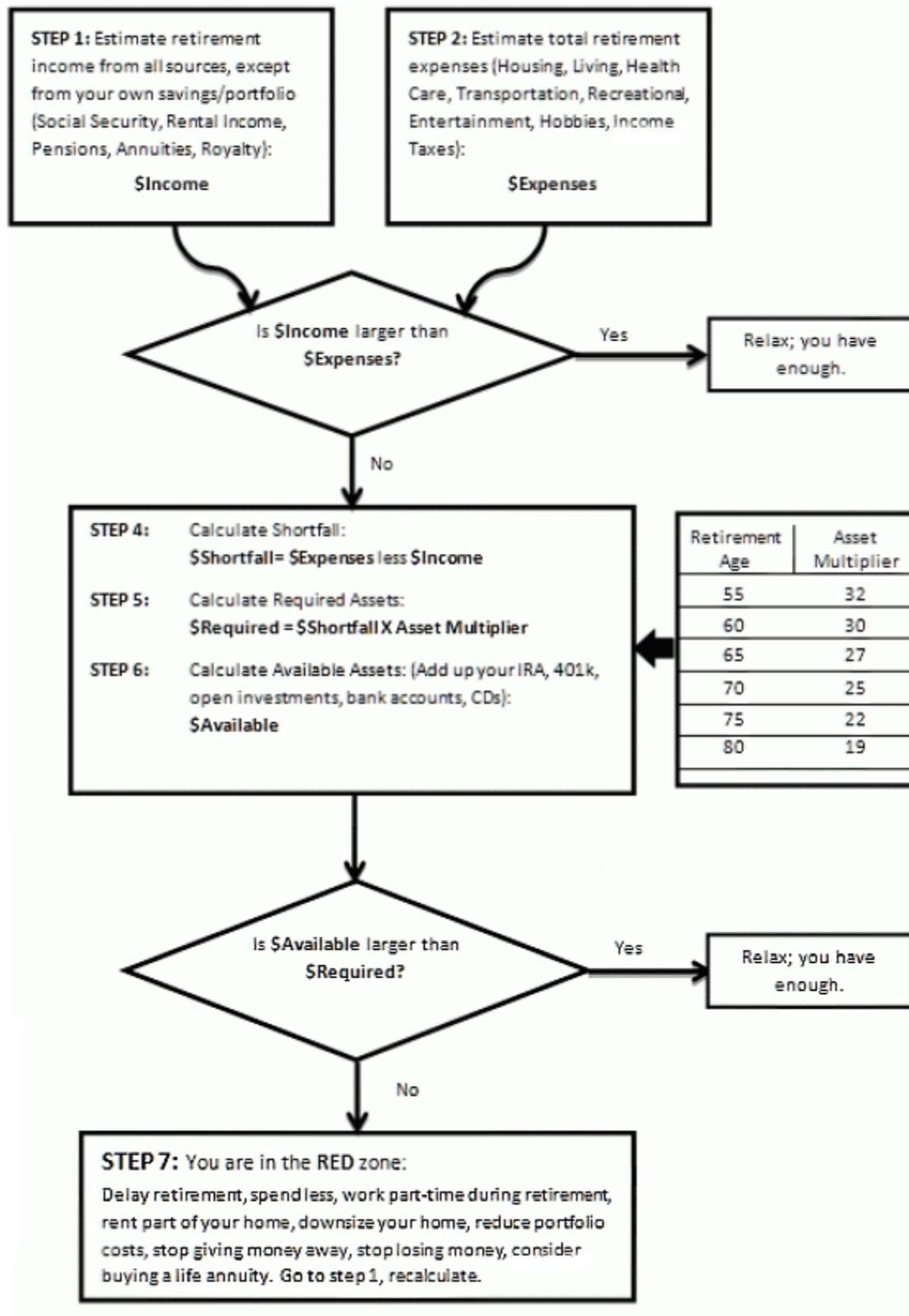
Inflation risk is the risk of maintaining purchasing power throughout retirement. Make sure that the purchasing power does not decline by more than 10% throughout the retirement period in your plan. The final step is to figure out how much savings is necessary. For that, find your asset multiplier in the table (see Figure 1, below). The asset multiplier already incorporates these three risk factors. Multiply this by the shortfall (i.e., the income gap) you calculated above.

The result is the required savings at the start of your clients' retirement based on actual market history—no assumptions, no forecasts, and no simulations. If your clients' actual savings are larger than the asset multiplier calculation, your clients are in the green zone. They have enough to retire.

If your clients have saved less, they are in the red zone. They will need to do one or more of the following to migrate to the green zone: delay retirement, spend less, work part-time during retirement, rent part of their home, downsize their home, reduce portfolio costs, stop giving money away, stop losing money (use products that guarantee the principal), and/or consider buying a life annuity.

Figure 1: A Seven-Step Flowchart

STEP 1: Estimate retirement income from all sources, except from your own savings/portfolio (Social Security, Rental Income, Pensions, Annuities, Royalty):

$Income

STEP 2: Estimate total retirement expenses (Housing, Living, Health Care, Transportation, Recreational, Entertainment, Hobbies, Income Taxes):

$Expenses

Is $Income larger than $Expenses?

Yes → Relax; you have enough.

No ↓

STEP 4: Calculate Shortfall:
$Shortfall = $Expenses less $Income

STEP 5: Calculate Required Assets:
$Required = $Shortfall X Asset Multiplier

STEP 6: Calculate Available Assets: (Add up your IRA, 401k, open investments, bank accounts, CDs):
$Available

Retirement Age	Asset Multiplier
55	32
60	30
65	27
70	25
75	22
80	19

Is $Available larger than $Required?

Yes → Relax; you have enough.

No ↓

STEP 7: You are in the RED zone:
Delay retirement, spend less, work part-time during retirement, rent part of your home, downsize your home, reduce portfolio costs, stop giving money away, stop losing money, consider buying a life annuity. Go to step 1, recalculate.

Source: Retirementoptimizer.com Inc.

A real-life example

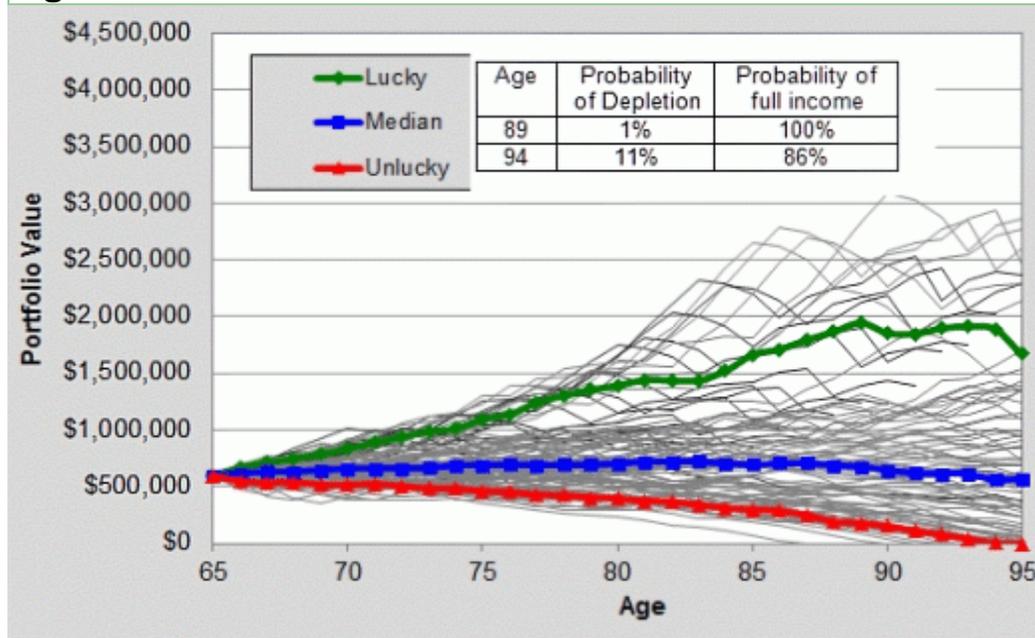My new clients, Bob and Jane, are both 65 and just retired. They estimate their total

annual pretax retirement expenses to be $65,000. Their combined government benefits are $32,000. They rent their basement for $800 monthly ($9,600 annually). Bob has $315,000 and Jane has $260,000 in their accounts. They also have CDs at their bank worth $20,000. They want their money to last until age 95. Do they have enough?

Their annual retirement income is $41,600 per year from government benefits plus the rental income. Therefore, their shortfall of income is $23,400 per year, calculated as $65,000 less $41,600. They require $631,800 in retirement assets, calculated as $23,400 multiplied by 27, the asset multiplier for age 65. Their total assets available for retirement are $595,000, calculated as $315,000 plus $260,000 plus $20,000. Since their total available assets are less than the required assets, they are currently in the red zone.

Figure 2 is an aftcast chart I've drawn to show the portfolio value over the retirement time horizon. Aftcasting—as opposed to forecasting—is a method I've developed for analyzing investment outcomes. Aftcasting reflects the sequence of returns—as well as the volatility of returns—exactly as it happened in history.

It includes the actual historical equity performance, inflation and interest rates, as well as the actual historical sequencing of these data sets. It displays the outcome of all historical asset values of all portfolios since 1900 on the same chart, as if a person started his plan in each of the years between 1900 and 2000. It gives a bird's-eye view of all outcomes for his specific time horizon. It also provides the success and failure statistics with exact historical accuracy, as opposed to man-made simulation models.
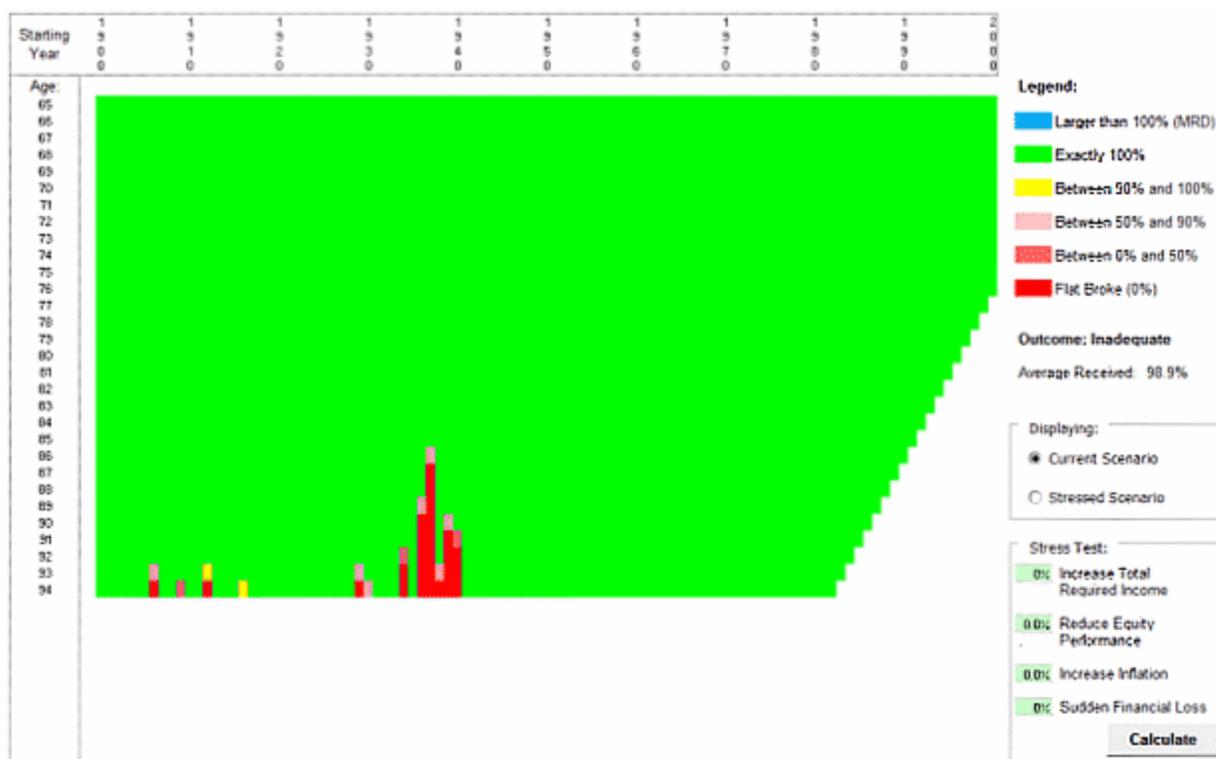

Figure 2: Current Aftcast Scenario for Bob and Jane

Age	Probability of Depletion	Probability of full income
89	1%	100%
94	11%	86%

Source: Retirementoptimizer.com Inc.

The aftcast shows that the market risk (probability of depletion) at the age of death is

11%, which exceeds our criteria of maximum 10%. The probability of full income is 86%, which also does not meet our criteria of "no more than 10% loss of purchasing power."

We can also observe Bob and Jane's income carpet in Figure 3. It shows, age-by-age for all years since 1900, income received as a percentage of income required in real dollars. Red, pink, and yellow areas indicate where available income is less than required.

Figure 3: Current Income Carpet for Bob and Jane

Source: Retirementoptimizer.com Inc.

How can Bob and Jane improve their plan? Since they are already retired, their options are limited. They can cut their expenses, work part time, or consider buying a life annuity.

Finding the solution

How much is the sustainable withdrawal from their assets? They can take out a maximum of $22,037 a year from their savings, calculated as $595,000 (the value of their assets) divided by 27 (their asset multiplier at age 65). Adding this to their income from other sources ($41,600), they can spend $63,637, a little bit less than the $65,000 they estimate they need. This should be a small sacrifice for a retiree.
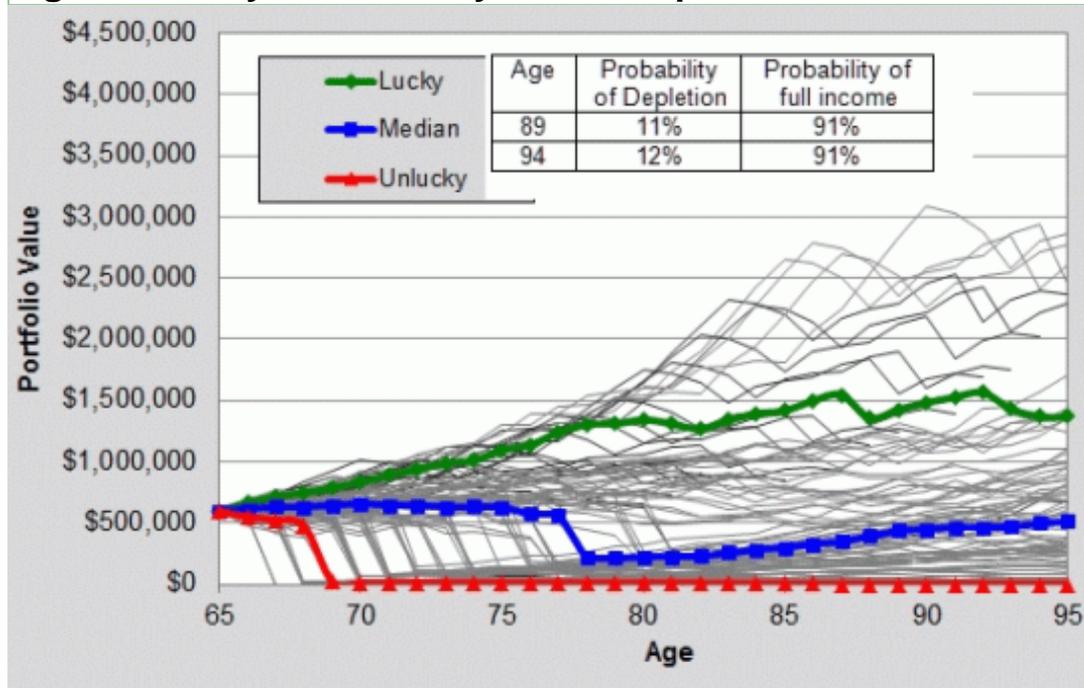
However, Bob and Jane tell me that they have already cut corners in their budget and they cannot cut their expenses, even by one dollar. They also don't want to work at all, even part time. Nor do they want to buy a life annuity, given the current low interest

rates. As their advisor, it seems I am stuck.

So my next suggestion is, "I understand that you can't cut back on your expenses, you don't want to go back to work, and you are not interested in life annuities right now. How about if you promise me that you will consent to buying some life annuity sometime in the future if, and only if, your withdrawal rate exceeds 5% of your portfolio's value?"

I call this strategy "Buy Life Annuity at 5% Stop-Loss." Figure 4 depicts the aftcast of their portfolio value. As you can see, in some situations, when the current withdrawal rate hits 5% (either due to higher increase of withdrawals due to higher inflation, or a lower portfolio value due to bad markets), then a sufficient annuity is purchased to sustain income for life. This might happen two years down the road, 16 years down the road, or never.
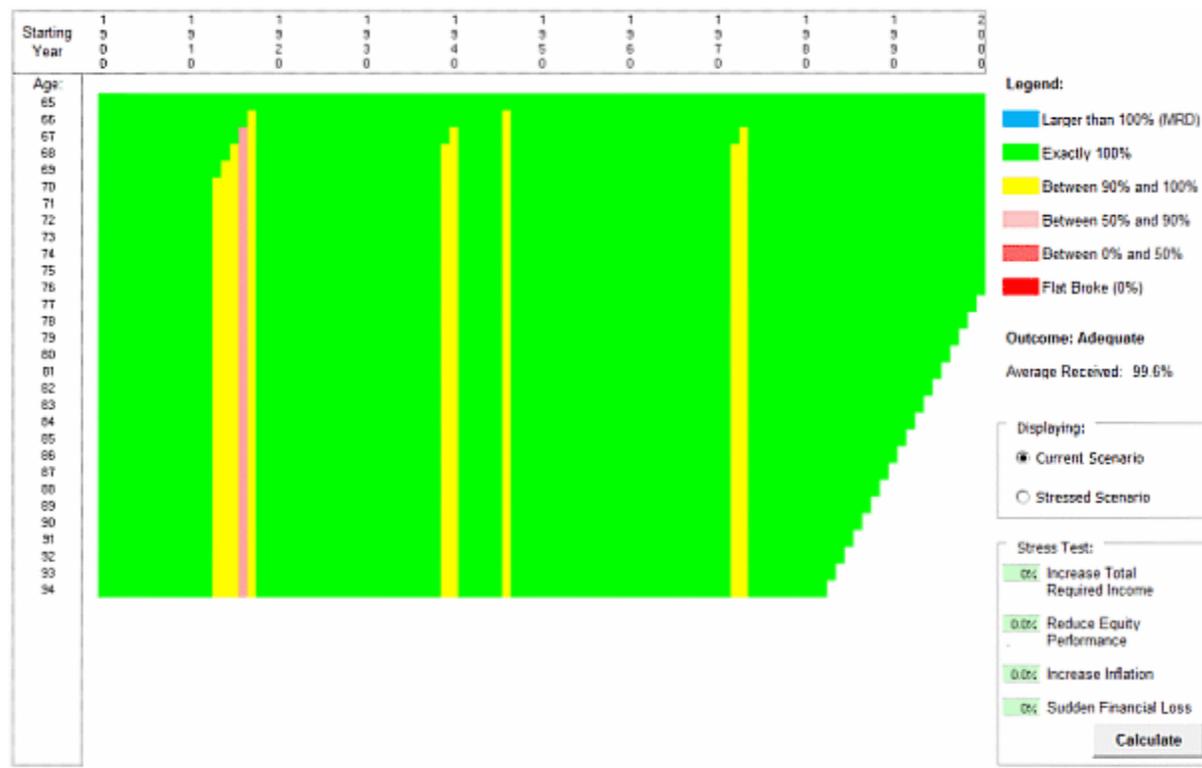

Figure 4: "Buy Life Annuity at 5% Stop-Loss" Scenario

Age	Probability of Depletion	Probability of full income
89	11%	91%
94	12%	91%

Source: Retirementoptimizer.com Inc.

After Bob and Jane discuss my proposal with each other for a few minutes, they consent. Figure 5 depicts the new income carpet resulting from their decision.

Figure 5: Income Carpet With Life Annuity at 5% Stop-Loss

Source: Retirementoptimizer.com Inc.

Notice that converting part of the portfolio assets to an annuity eliminated all red areas (i.e., flat broke) on the income carpet in favor of yellow areas (i.e., income between 90% and 100%). Keep in mind these calculations are based on the current, historically low annuity rates remaining low for the next decade or more. Chances are that Bob and Jane will maintain their purchasing power throughout their retirement. This is our solution.

One cautionary note: be aware that this strategy works only if the client is near the green zone. It will not work if he is deep in the red zone.

Jim Otar, CMT, CFP, is a financial planner, a professional engineer, a market technician, a financial writer, and the founder of retirementoptimizer.com. His past articles on retirement planning won the CFP Board Article Awards in 2001 and 2002. He is the author of Unveiling the Retirement Myth – Advanced Retirement Planning Based on Market History and High Expectation and False Dreams. You can reach him at jim@retirementoptimizer.com.

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