



Develop Business/Financial Planning

14 Withdrawal Strategies That Won't Protect, Extend, or Defend Retirement Income

By Jim Otar, CMT, CFP
Aug. 14, 2006

In the quest for lifelong retirement income, many advisors and their clients follow strategies that have yet to be proven. Will a buy-and-hold portfolio hold up for 30 years? (Only if you're lucky.) Will a low-risk portfolio have a longer life? (There's a 60% chance of depletion.) How about buying a term annuity and investing the rest? (Then you face a 56% chance of depletion.) We identify the strategies and their probability of success.

Academics, advisors, and investors are continuously searching for strategies that increase the chance of receiving lifelong income from a retirement portfolio. Every so often, I come across a new article or a book that describes a novel strategy: "Only if you do this and that," the author claims, "then your portfolio should last a lifetime." Some use market data covering time periods that are too short to prove that their strategy works. Others use faulty assumptions. Some are too complicated to apply to client portfolios under current regulatory rules.

Such distribution strategies generally fall into one of two categories:

1. Asset management strategies that employ asset allocation methods or rebalancing techniques.
2. Cash-flow strategies, which usually require cutting back or limiting withdrawals when certain adverse conditions occur.

Below you will find analyses of 14 popular myths concerning withdrawing income that I've come across over the years. All scenarios use variations of the basic inputs below:

Retiree: Bob, 65, single

Portfolio: \$1 million earned through a buy-and-hold approach

Investments: 40% equity and 60% fixed income (unless stated otherwise)

Expected growth rate: 6% average over the long-term

Desired retirement income: \$50,000 annually from his portfolio indexed to inflation

Timespan: 30 years—the money needs to last until he is 95

We test each strategy with a retirement model that is based on actual market history going back to 1900. The proxy for the equity performance is the S&P 500 index.

For each scenario, there are two charts.

The top chart shows asset value over time. Each thin line displays the portfolio value if Bob were to start his retirement in any one of the years since 1900. Each line is plotted on the same chart to provide a bird's-eye view of all historic outcomes. The green line represents the top decile (top 10%) of all outcomes—the lucky outcome. The blue line represents the bottom decile (lowest 10%) of all outcomes—the unlucky outcome. The red line represents the median, where half of the outcomes are above it and half below.

The second or lower chart is equally important. It shows the probability of receiving *all* of the required income during retirement for each age.

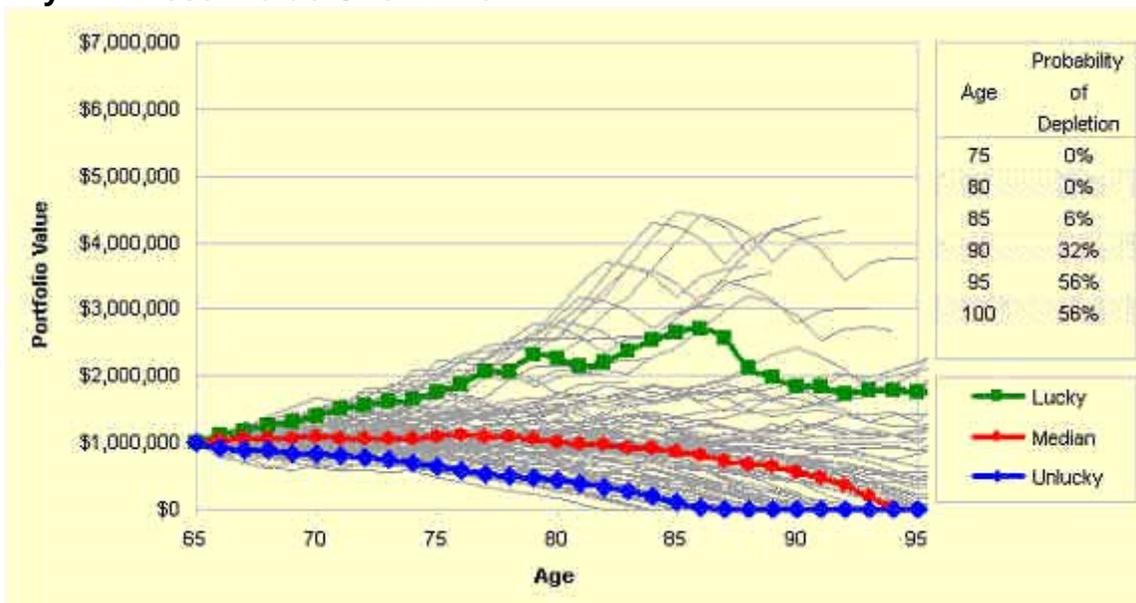
So if you are advocating any of these 14 strategies, review the charts. You may want to rethink your approach.

Myth 1: The flaw of the average growth rate

The average long-term portfolio growth rate is 6%. Therefore, Bob should be able to withdraw \$50,000 annually from his portfolio, indexed to inflation, for the rest of his life. Right?

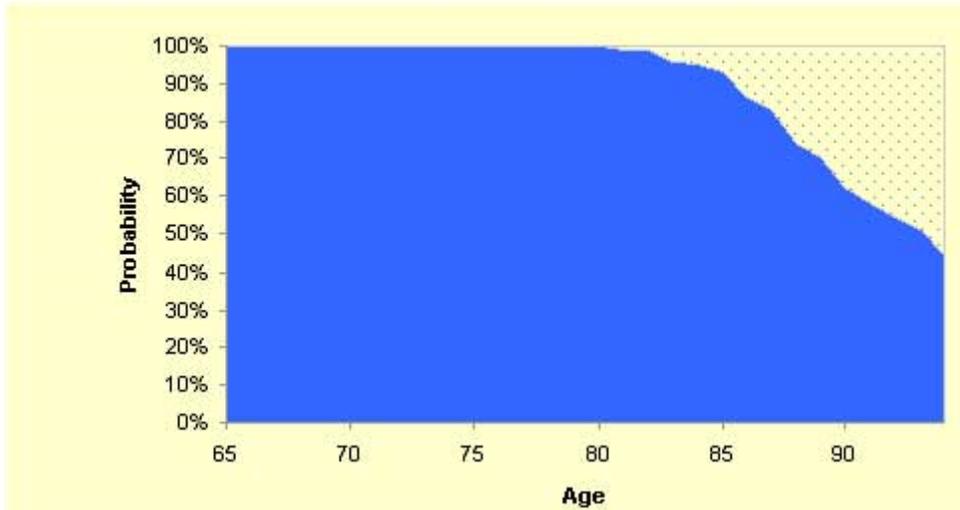
Wrong. An average is a number derived from a population of numbers. It is wrong to take this average and apply it back to the individual. If I were to walk into a room full of basketball players, I cannot be expected to suddenly grow taller to conform to the "average" height. Don't use averages for individuals—it won't work. The probability of depletion by age 95 is 56%—very high. For prudent retirement planning, do not let the probability of depletion exceed 10%.

Myth 1: Asset Value Over Time



Source: Jim Otar, CFP

Myth 1: Probability of Receiving All Required Income During Retirement



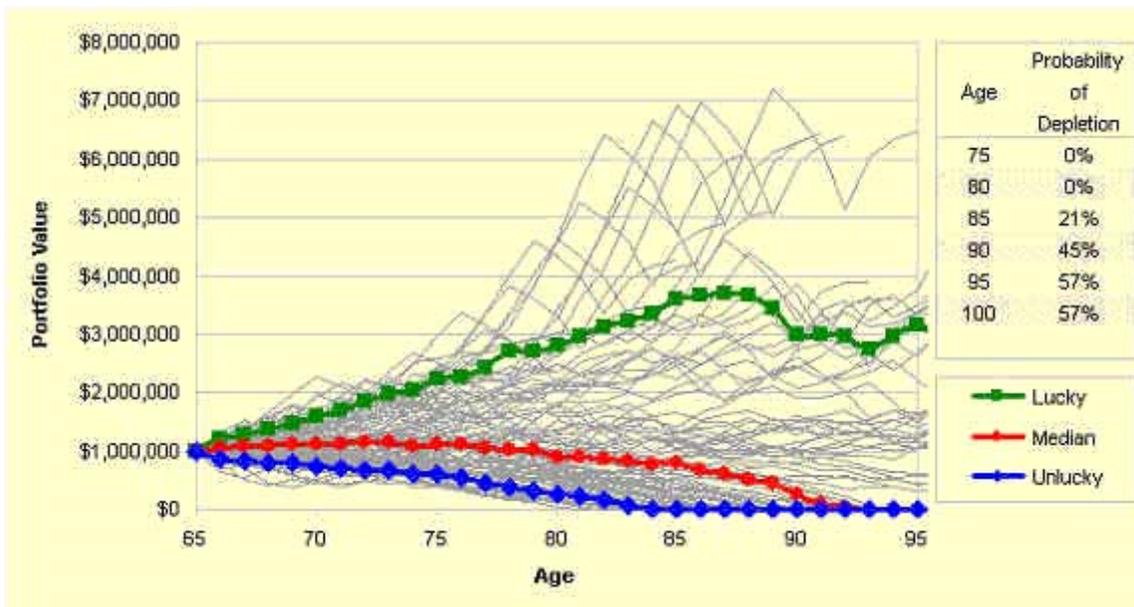
Source: Jim Otar, CFP

Myth 2: Higher risk means higher returns

Bob decides to take higher risks to improve the outcome. He increases his equity holdings to 70% and decreases his fixed income to 30%. This should work, right?

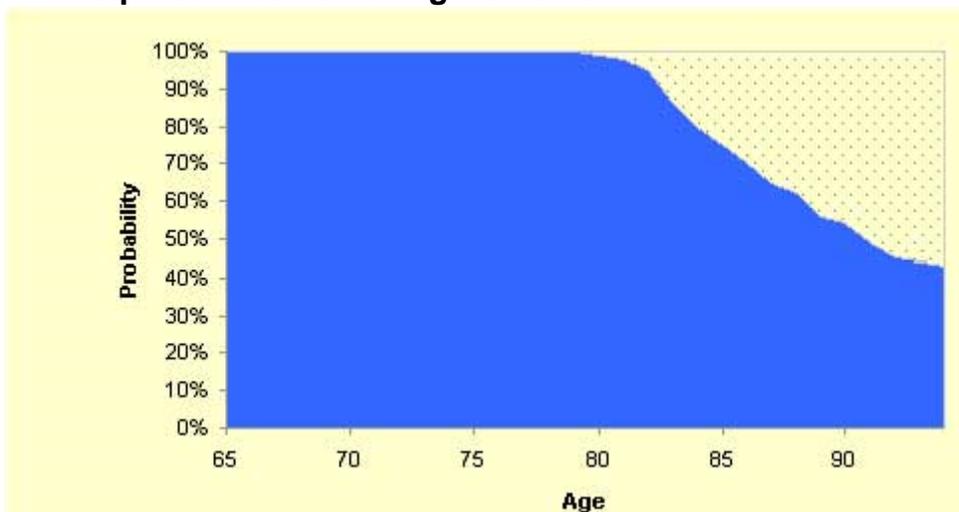
Wrong. Higher risk means higher volatility. Higher volatility means larger [time value of fluctuations](#). That, in turn, means a shorter portfolio life. Bob will make more money if he is lucky, but a retirement plan must not be based on luck. The probability of depletion by age 95 is 57%—very high.

Myth 2: Asset Value Over Time



Source: Jim Otar, CFP

Myth 2: Probability of Receiving All Required Income During Retirement



Source: Jim Otar, CFP

Myth 3: Lower risk means longer portfolio life

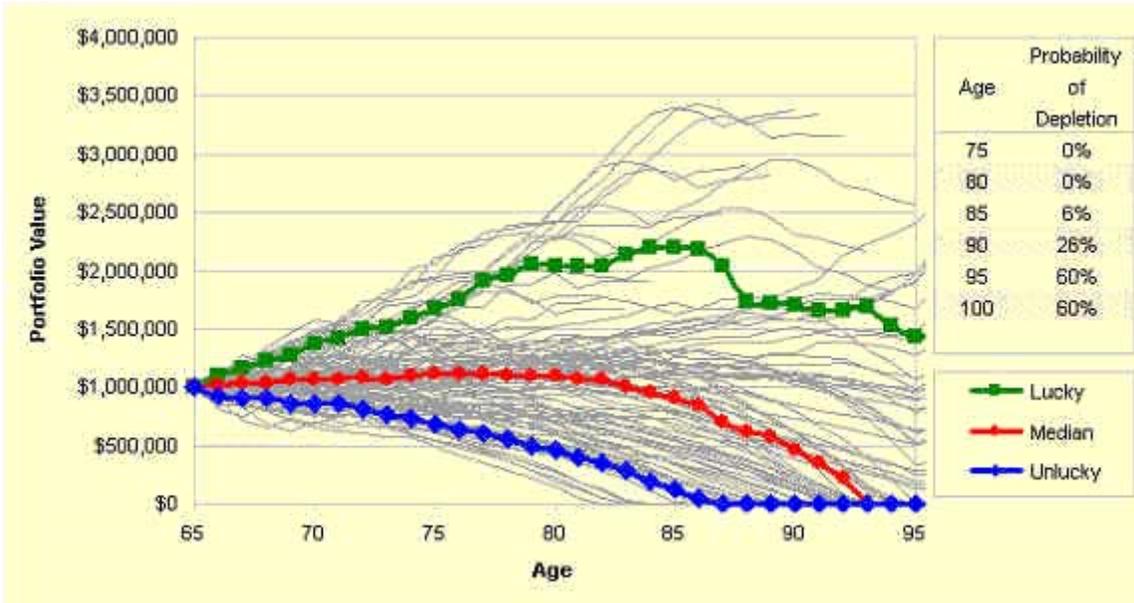
Bob wants to reduce his risk exposure as he gets older. He allocates 100 minus his age, as a percentage, to equities in his portfolio. This should work, right?

Wrong. This strategy is called age-based asset allocation. It may give you a false sense of risk reduction. Far too many of us in this business equate risk to standard deviation. In real life, dealing with real clients, I've come to the conclusion that real risk has three components: the risk of running out of money, the risk of having less money than expected,

and, last but not least, the volatility.

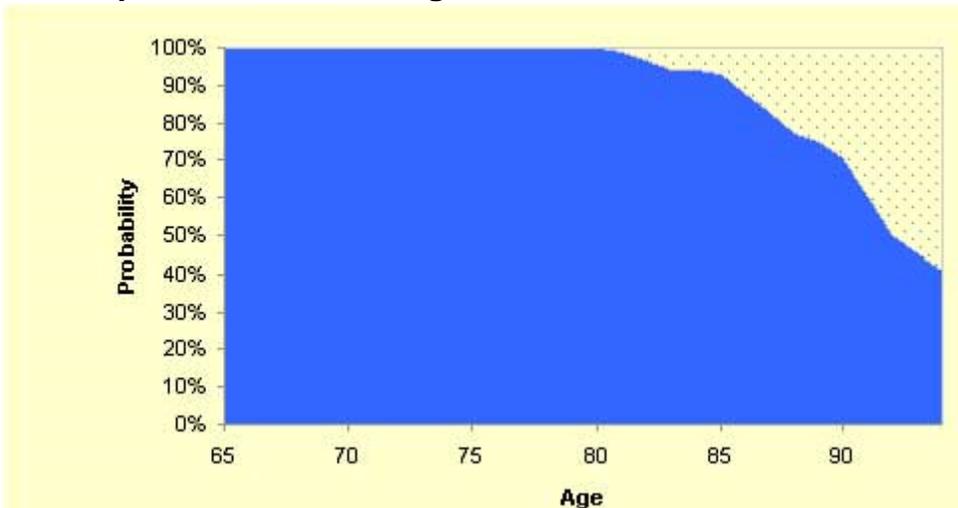
With this strategy, as time goes on, the portfolio becomes more and more conservative. This diminishes Bob's chances of taking full advantage of any secular bullish trend that might develop along the way. Unless you have abundant savings, this strategy is not going to help. The probability of depletion by age 95 is 60%—very high.

Myth 3: Asset Value Over Time



Source: Jim Otar, CFP

Myth 3: Probability of Receiving All Required Income During Retirement



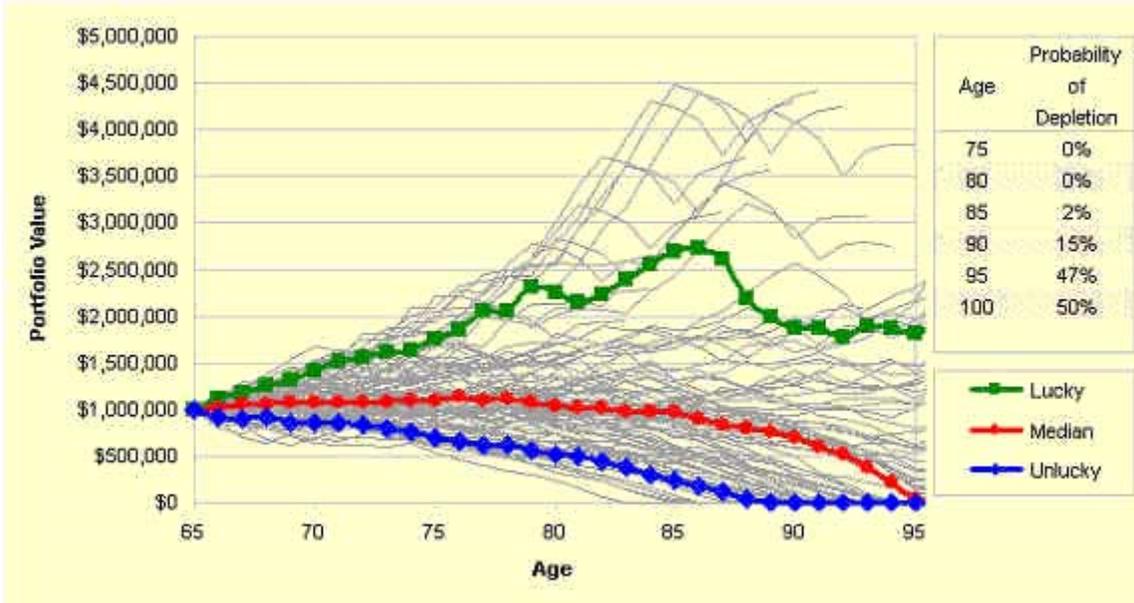
Source: Jim Otar, CFP

Myth 4: Reducing withdrawals in bad years means longer portfolio life

Bob reduces his withdrawals by 20% during the years when his portfolio growth is negative. This should help, right?

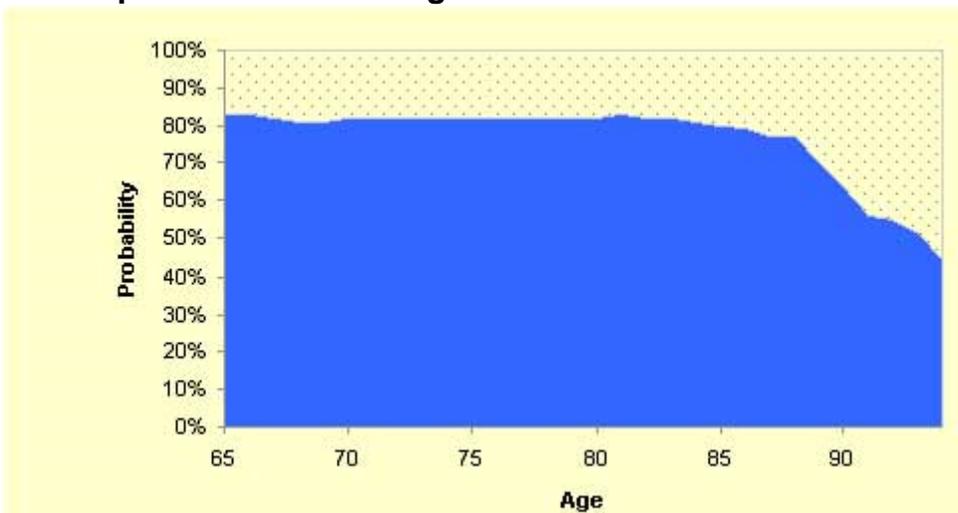
Wrong. As long as periodic withdrawals are higher than the sustainable withdrawal rate, reducing withdrawals during adverse time periods does not solve the problem. The probability of depletion by age 95 is 47%—very high.

Myth 4: Asset Value Over Time



Source: Jim Otar, CFP

Myth 4: Probability of Receiving All Required Income During Retirement



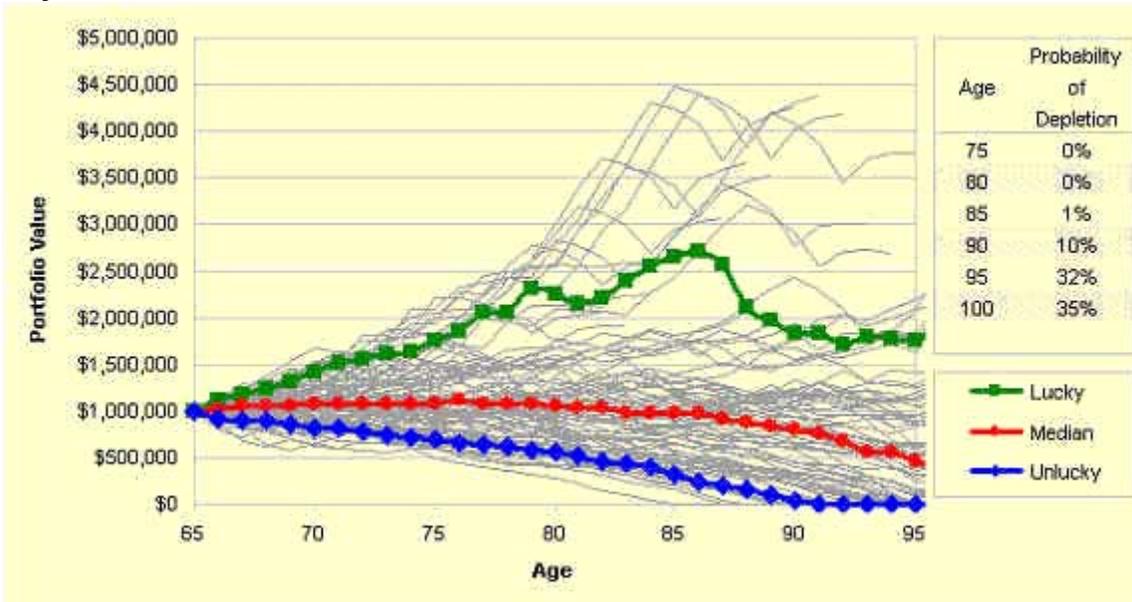
Source: Jim Otar, CFP

Myth 5: Reduce withdrawals when they become excessive

As soon as Bob's annual withdrawals exceed 10% of the portfolio value, he reduces his withdrawals by 20% for the rest of his life. This should work. Right?

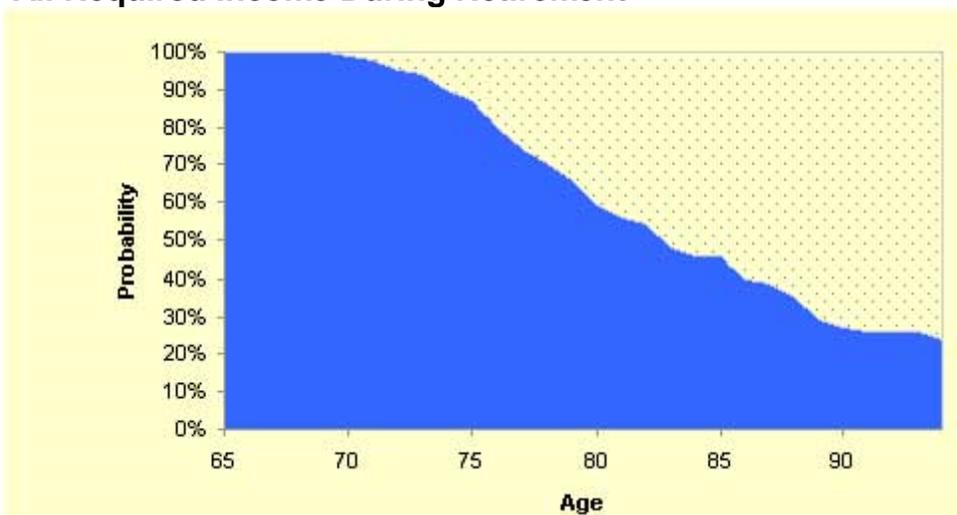
Wrong. It helps a little, but it does not solve the problem. The probability of depletion by age 95 is 32%, still too high. It comes with a large probability of reduction of income, as seen in the lower chart.

Myth 5: Asset Value Over Time



Source: Jim Otar, CFP

Myth 5: Probability of Receiving All Required Income During Retirement



Source: Jim Otar, CFP

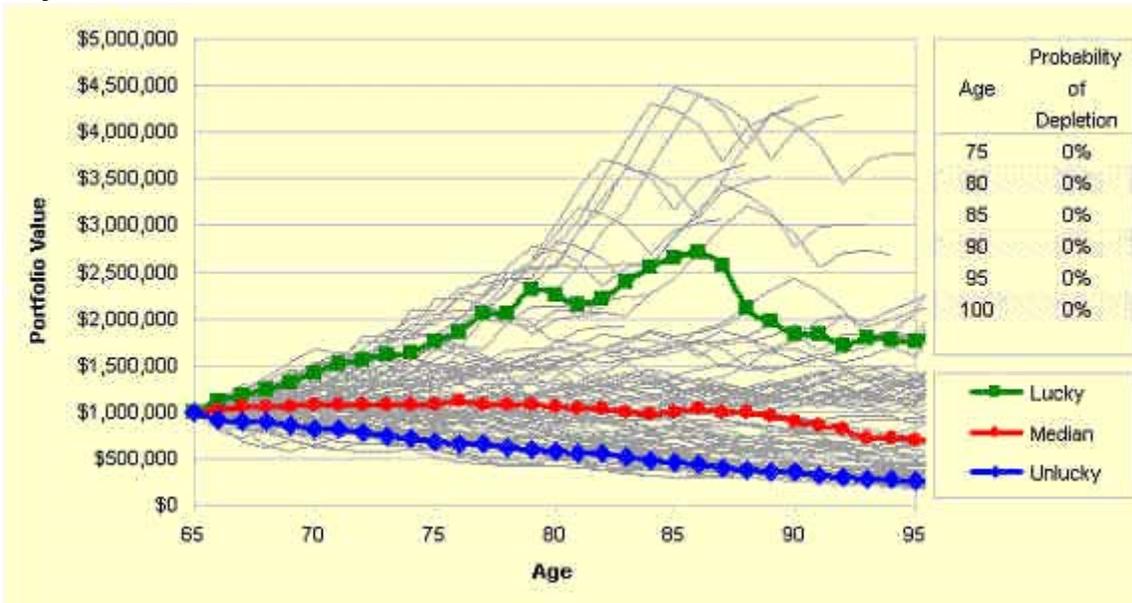
Myth 6: Limit withdrawals not to exceed 10% of the portfolio value

Bob makes sure that his annual withdrawals never exceed 10% of the previous year's portfolio value. This should work. Right?

Wrong. It is true that limiting withdrawals to a percentage of portfolio value will ensure an infinite portfolio life. However, annual income is drastically reduced throughout retirement. Not practical.

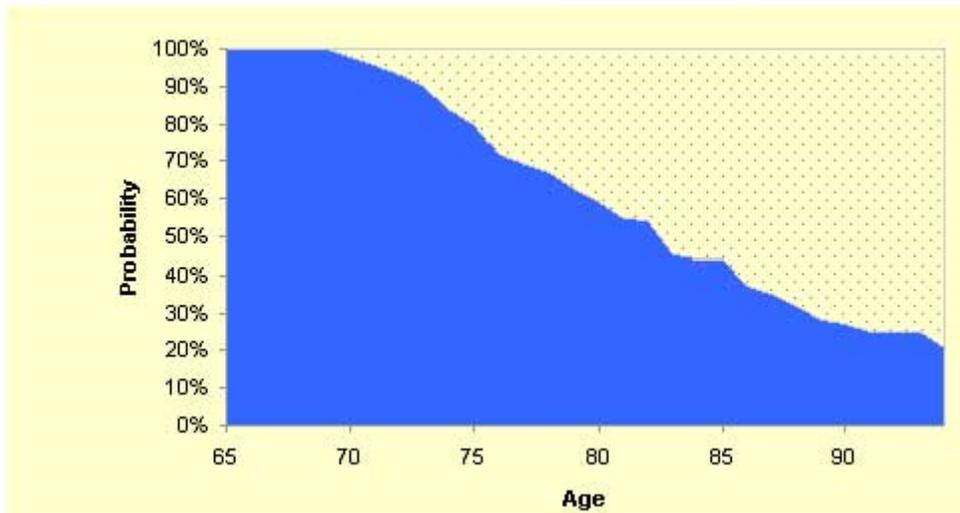
How about limiting annual withdrawals to only 5% of previous years' portfolio value? It is worse.

Myth 6: Asset Value Over Time



Source: Jim Otar, CFP

Myth 6: Probability of Receiving All Required Income During Retirement



Source: Jim Otar, CFP

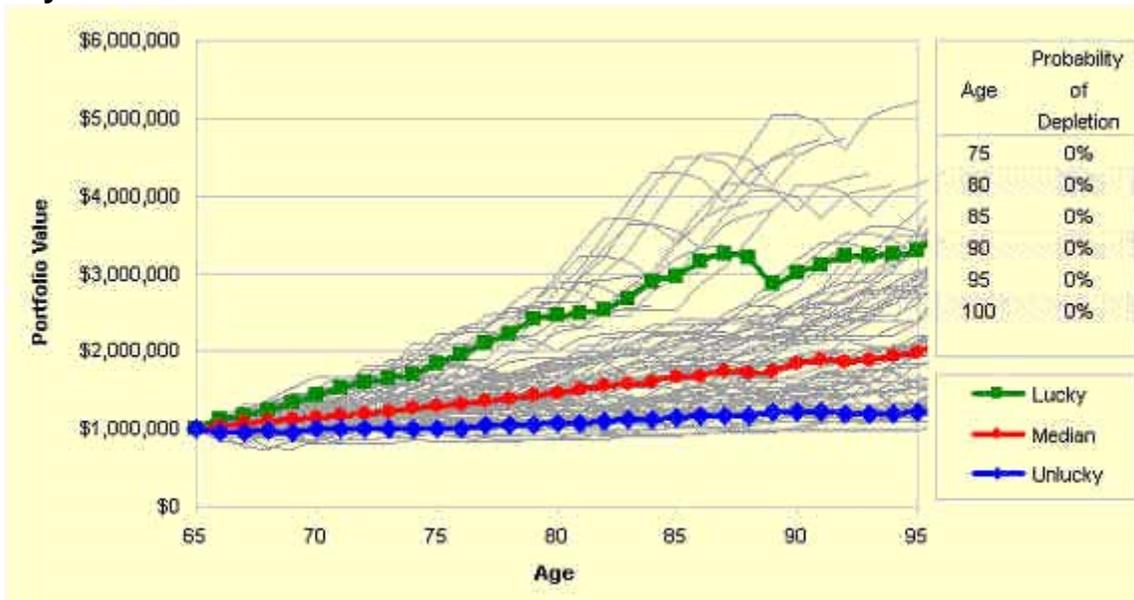
Myth 7: Limit withdrawals not to exceed portfolio growth

Bob makes sure that his annual withdrawals never exceed the previous year's portfolio growth. This should work. Right?

Wrong. Limiting withdrawals to a percentage of portfolio growth will also ensure that the portfolio lasts forever. However, income is greatly reduced throughout retirement. Not practical.

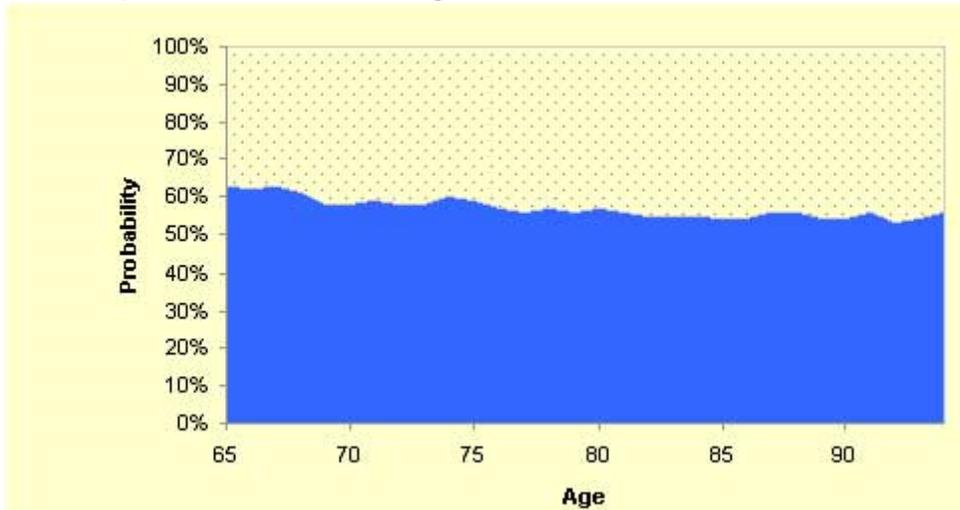
How about limiting annual withdrawals to only 50% of previous years' portfolio growth? The income picture becomes much worse.

Myth 7: Asset Value Over Time



Source: Jim Otar, CFP

Myth 7: Probability of Receiving All Required Income During Retirement



Source: Jim Otar, CFP

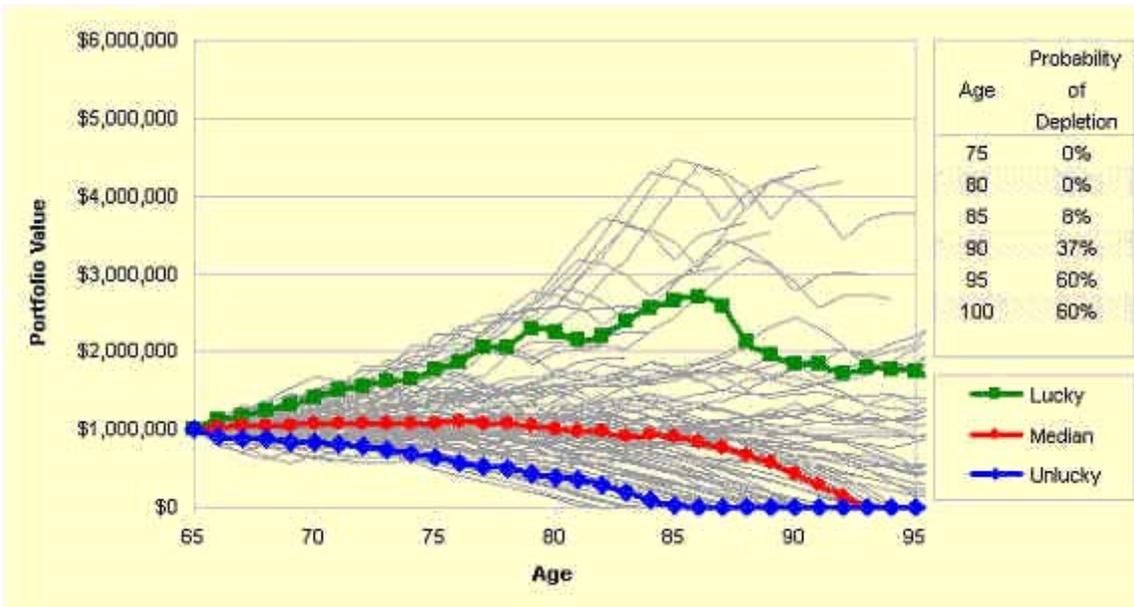
Myth 8: Move all assets to cash once withdrawals become excessive

Once his annual withdrawals exceed 15% of portfolio value, Bob sells all his equities and puts this money in fixed income and cash. This will help. Right?

Wrong. Don't change horses in midstream. If the withdrawal rate is this high, it is already too late. The probability of depletion by age 95 is 60%—too high. Start reading *Europe on \$10 a Day*.

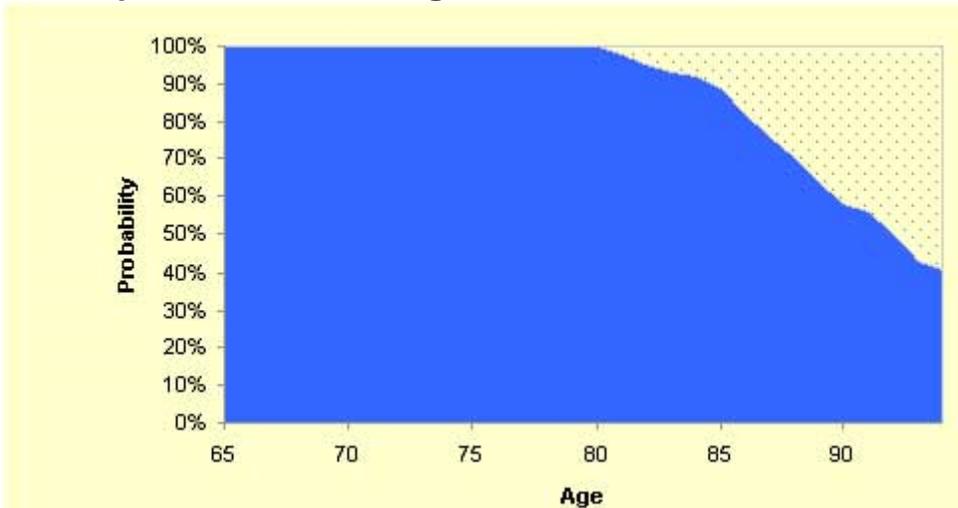
How about applying this strategy when withdrawals exceed only 10% of the portfolio value instead of 15%? Sorry, no good either.

Myth 8: Asset Value Over Time



Source: Jim Otar, CFP

Myth 8: Probability of Receiving All Required Income During Retirement



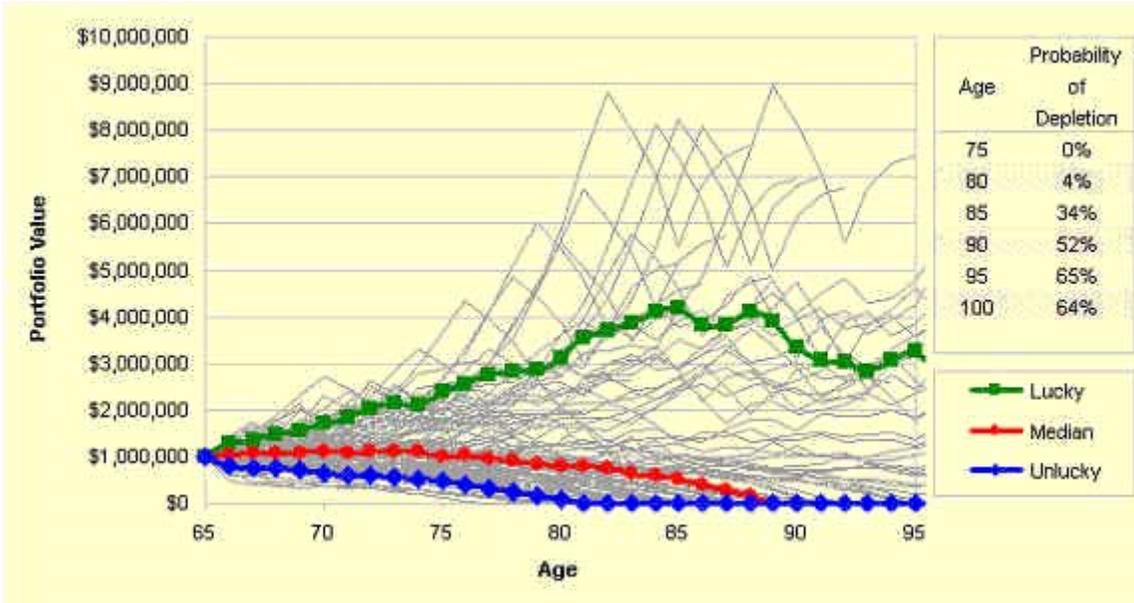
Source: Jim Otar, CFP

Myth 9: Set aside enough money to last four years and invest the rest aggressively

Bob sets aside four years of income (in cash), and he invests the rest of his money in equities. At any time during his retirement, if there is less than four years of income in cash, money is transferred from equities to cash. This will solve his problem. Right?

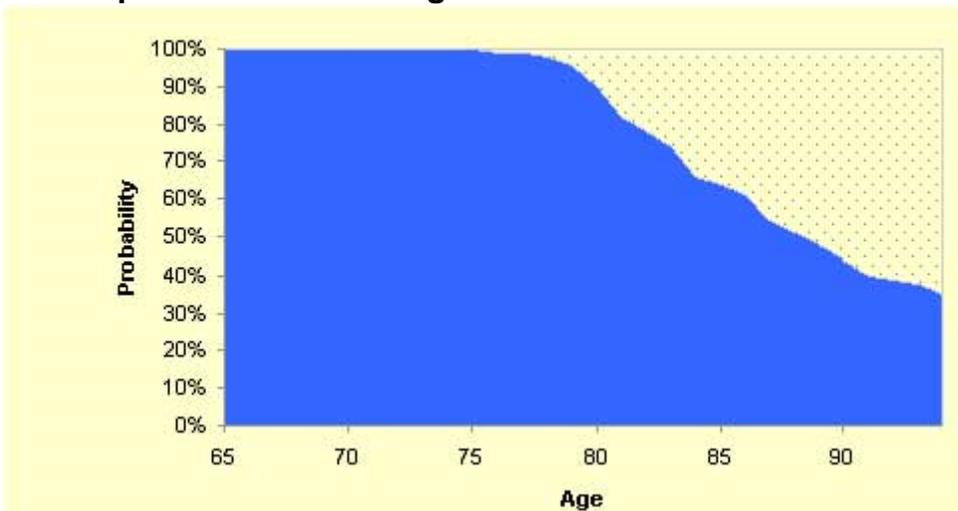
Wrong. He can make tons of money if he is lucky. But again, one should not count on luck when designing a retirement plan. The probability of running out of money by age 95 is high, 65%.

Myth 9: Asset Value Over Time



Source: Jim Otar, CFP

Myth 9: Probability of Receiving All Required Income During Retirement



Source: Jim Otar, CFP

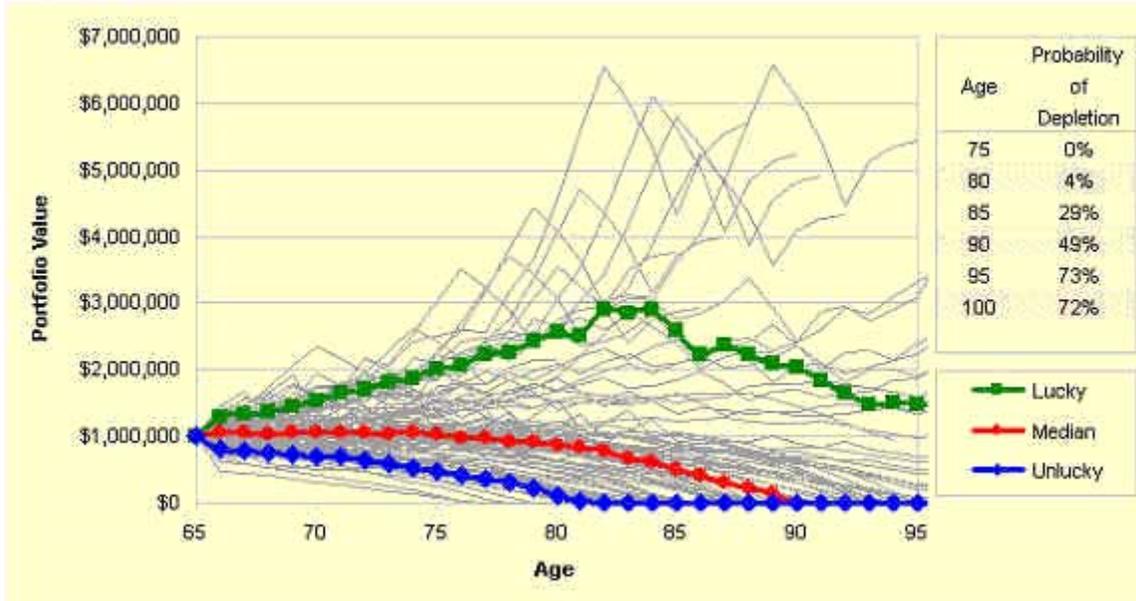
Myth 10: Set aside enough money to last 10 years and invest the rest

aggressively

Same as #9, but Bob sets aside 10 years of income. This should help. Right?

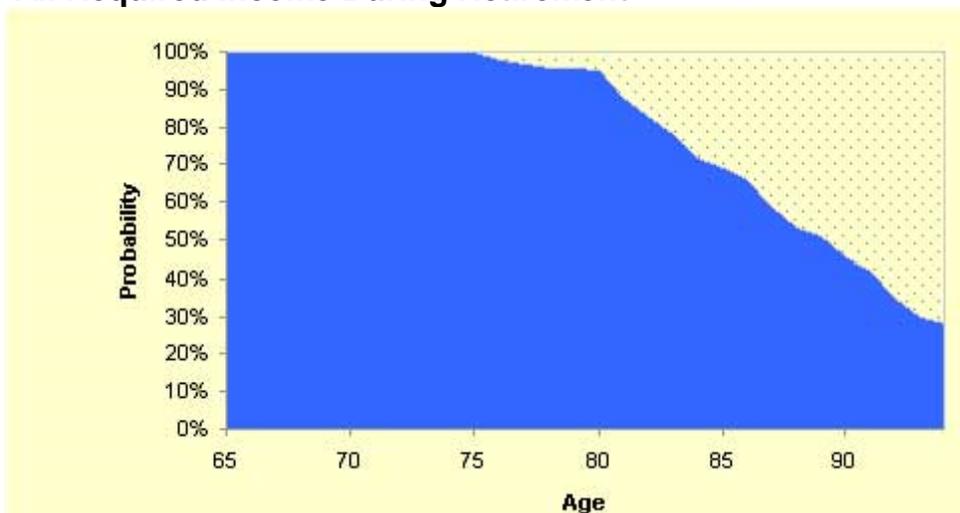
Wrong. Sorry, no good. The probability of depletion by age 95 is 73%—too high.

Myth 10: Asset Value Over Time



Source: Jim Otar, CFP

Myth 10: Probability of Receiving All Required Income During Retirement



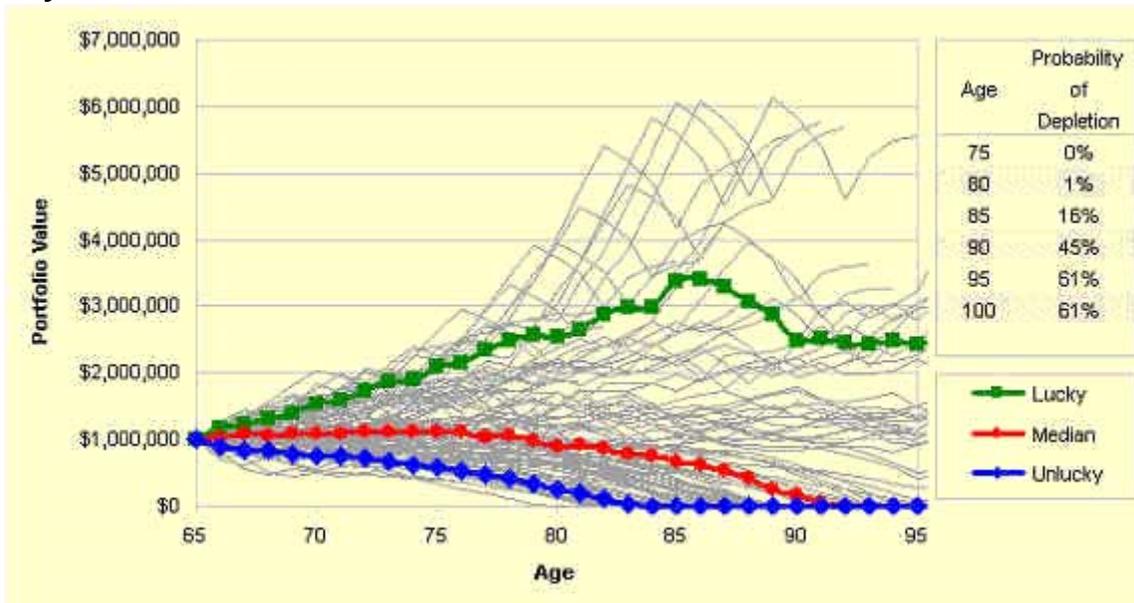
Source: Jim Otar, CFP

Myth 11: Set aside enough money to last for six years and invest the rest moderately

Same as #9, but he sets aside six years of income and invests the rest of his money in a balanced portfolio of 60% equities and 40% fixed income. This should help. Right?

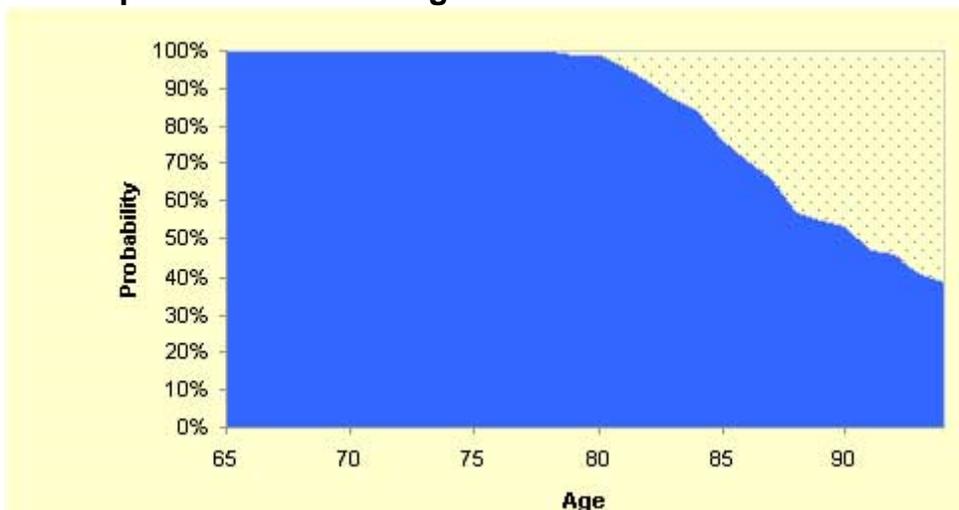
Wrong. Sorry, no miracles here, either. The probability of depletion by age 95 is 61%—still too high.

Myth 11: Asset Value Over Time



Source: Jim Otar, CFP

Myth 11: Probability of Receiving All Required Income During Retirement



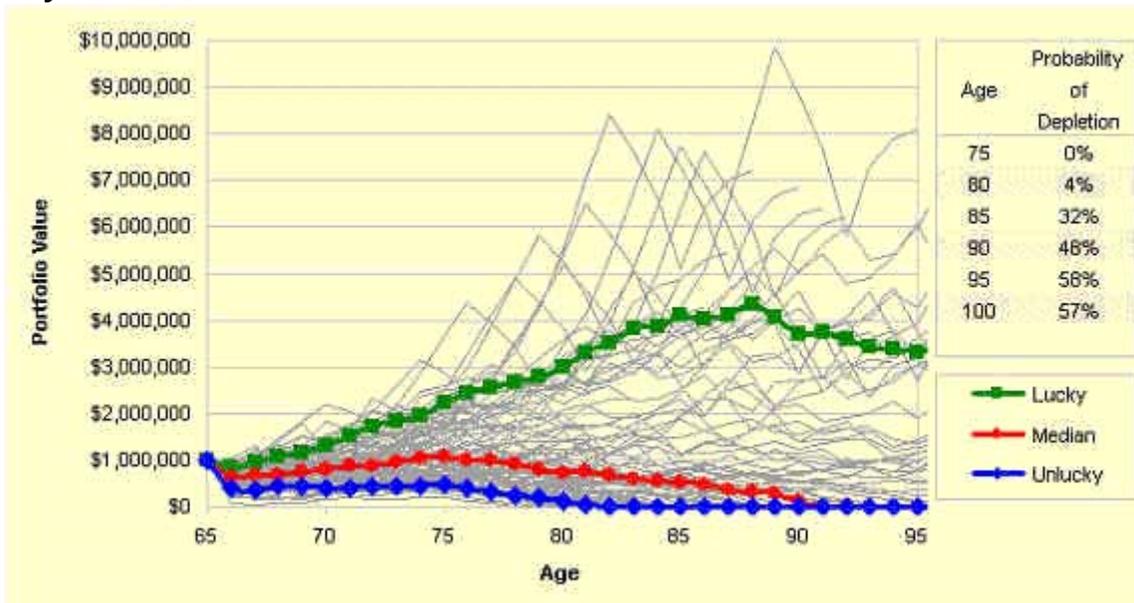
Source: Jim Otar, CFP

Myth 12: Buy a term annuity and invest the rest aggressively

Bob buys a 10-year term annuity to cover his income needs for the next 10 years. The annuity pays \$50,000 per year, indexed 3% annually. Such an annuity costs \$474,000 today. He invests the rest of his money in equities. This strategy will solve his problem, right?

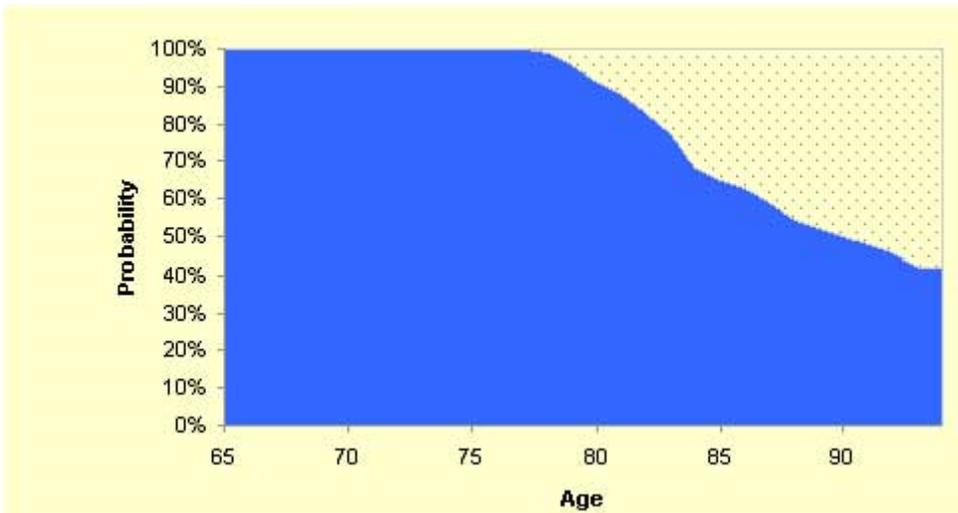
Wrong. Sorry, this strategy only works if the start of Bob's retirement coincides with the start of a secular bull market. Otherwise, it just does not work. Unless the time horizon of the investment side is at least 20 years and interest rates for the annuity are a lot higher than where they are now, don't try this. The probability of depletion by age 95 is 56%—too high.

Myth 12: Asset Value Over Time



Source: Jim Otar, CFP

Myth 12: Probability of Receiving All Required Income During Retirement



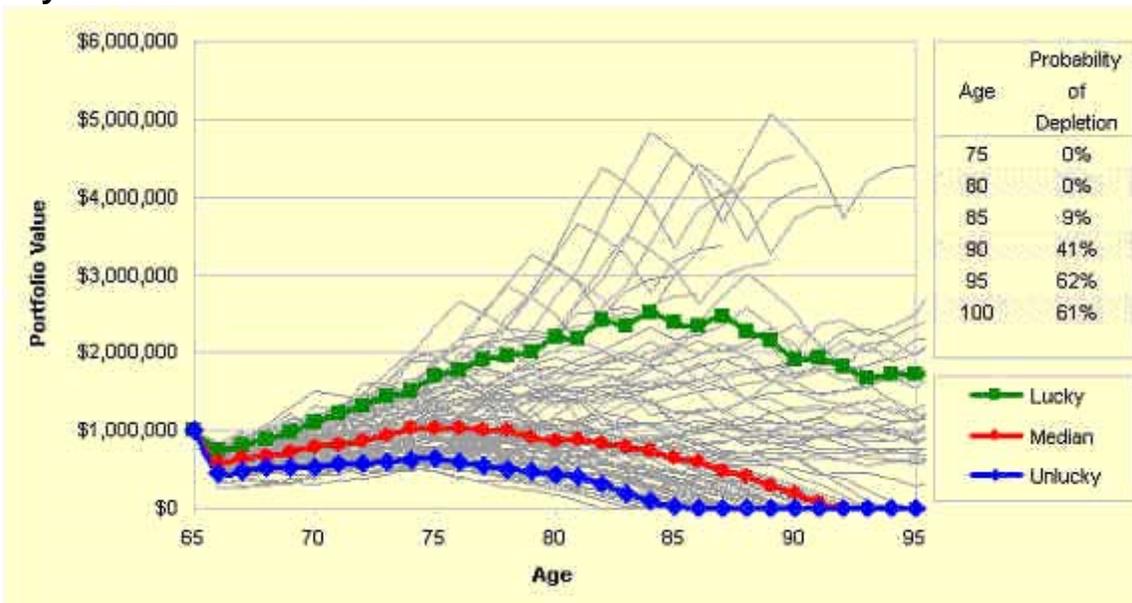
Source: Jim Otar, CFP

Myth 13: Buy a term annuity and invest the rest moderately aggressively

Same as #12, but Bob invests the rest of his money in a balanced portfolio of 60% equities and 40% fixed income. This should help, right?

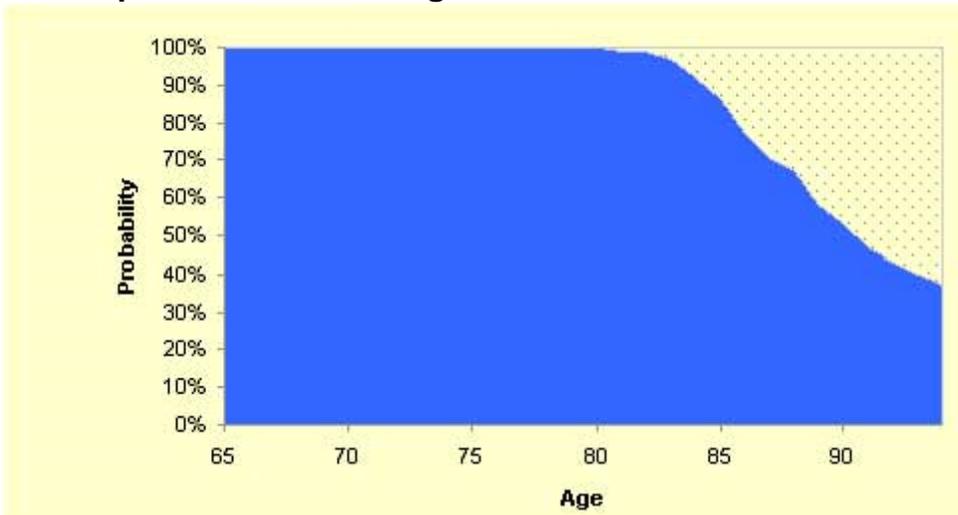
Wrong. No significant difference. The probability of depletion by age 95 is 62%—too high.

Myth 13: Asset Value Over Time



Source: Jim Otar, CFP

Myth 13: Probability of Receiving All Required Income During Retirement



Source: Jim Otar, CFP

And the best one is last:

Myth 14: Asset allocation is the single largest contributor to a portfolio's success

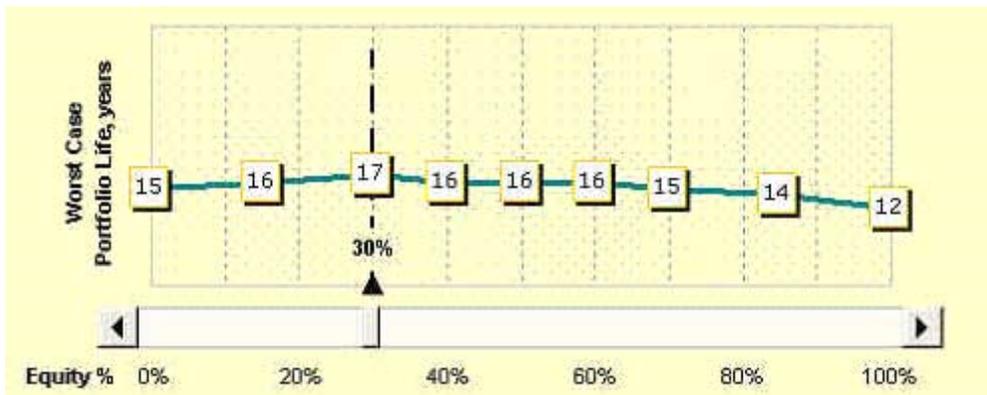
Bob defines his optimum asset mix as "the asset mix that will give him the longest portfolio life under adverse circumstances." Bob is convinced, as one academic study has shown, that asset allocation contributes over 90% of the difference in the investment return. Right?

Wrong. When it comes to distribution portfolios, this mantra about asset allocation is nonsense. Here is the proof:

According to Bob's definition of "optimum," an asset mix of 30% equities and 70% fixed income gives the longest portfolio life—in the worst case. So, the best he can do is allocate 30% to equities and 70% to fixed income.

His worst asset allocation is 100% equities, which yields a 12-year portfolio life in the worst case, based on market history.

Myth 14: Asset Allocation Optimization and Scenario Analysis



Source: Jim Otar, CFP

Effect of asset allocation: At age 85, the median portfolio value for the optimum asset mix is \$906,719. For the worst asset allocation, it is \$578,239. The difference in the investment return due to the asset allocation is \$328,480, which is about 36% of \$906,719.

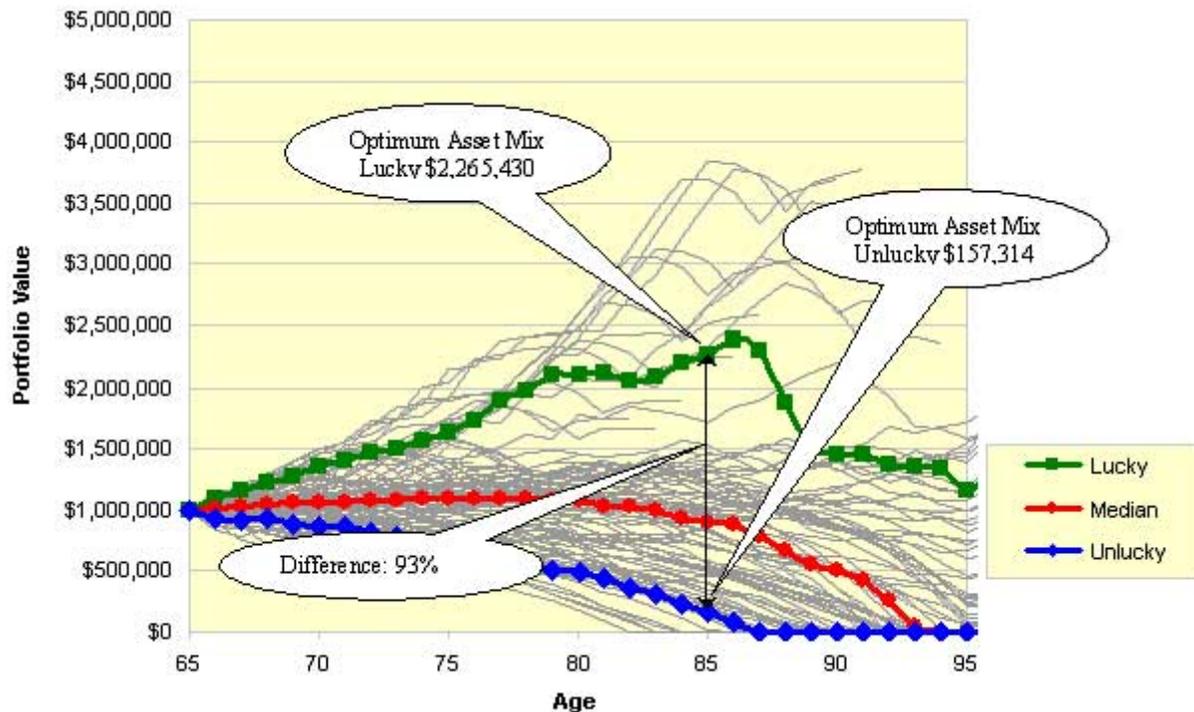
Myth 14: Comparing Median Outcomes



Source: Jim Otar, CFP

Effect of the luck factor: At age 85, for the optimum asset mix, the lucky (top decile) portfolio value is \$2,265,430 and the unlucky (bottom decile) portfolio value is \$157,314. The difference in the investment return due to the luck factor is \$2,108,116, which is about 93% of \$2,265,430.

Myth 14: Luck Factor



Source: Jim Otar, CFP

The difference of investment return due to the luck factor is 93% and due to the asset allocation, 36%. Hence, in this particular case, the contribution of the luck factor is more than 2.5 times of the contribution of asset allocation.

In the vast majority of distribution portfolios, the contribution of the luck factor to a portfolio's success far exceeds the contribution of asset allocation.

The secret to retirement income

What do these charts tell us? As intriguing as some strategies may sound, there is really no miracle solution. The secret to lifelong income for buy-and-hold portfolios is simple:

- Save more before retirement
- Spend less than the sustainable withdrawal rate (SWR) after retirement.

The sustainable withdrawal rate is always less than the average portfolio growth rate because of the [time value of fluctuations](#). For a balanced portfolio of equities and fixed income, here are some SWRs to consider:

The Secret: Sustainable Withdrawal Rates	
Time Horizon	SWR
10 years	8.3%
15 years	5.9%
20 years	4.6%

25 years	4.0%
30 years	3.6%
35 years	3.3%
40 years	3.0%

Source: Jim Otar, CFP

For example: If your client is 65, is just retiring, and wants his \$1 million portfolio to last for 25 years until age 90, then the SWR is 4%. That means the most he can withdraw from his portfolio this year is \$40,000, indexed to actual CPI for the rest of his life. His portfolio should outlast him, based on market history. If he takes out more, chances are that none of the 14 techniques cited above can help in any meaningful way.

Jim Otar 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 lives and works in Thornhill, Canada, and can be reached at (905) 889-7170, or by e-mail at jimotar@rogers.com.

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