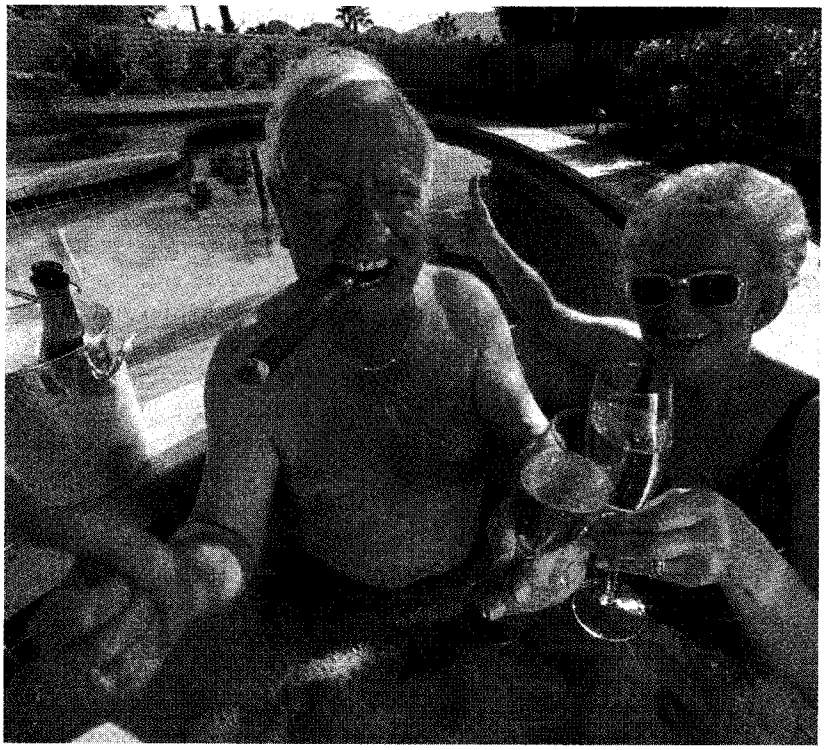
Live Long and Prosper!

To ensure that your clients enjoy retirement, you need a winning strategy for reducing risk and increasing portfolio longevity. Here it is.

BY JIM OTAR

THIRD IN A THREE-PART SERIES



When it comes to retirement planning, there are four models from which to choose: The straight-line model assumes a constant growth rate. This is the one used in most retirement plans. It handles inflation well, but it does not handle market cycles, reverse dollar-cost averaging and random fluctuations.

The straight-line model with random volatility, also known as the Monte Carlo Simulation, is becoming popular. It handles inflation and random fluctuations reasonably well, but also does not handle market cycles and reverse dollar-cost averaging. To compensate for its inability to handle market cycles, often a volatility band that is wider than the random fluctuations of the market is applied. This "curve-fitting" diminishes its value as a predictive tool.

The market-cycle model that I cited in the first part of this series is the only model that responds well to inflation, market cycles and reverse dollar-cost averaging, but it does not handle random fluctuations.

The fourth model is the same market cycle model, but with random volatility superimposed. Now, we have a model that handles all: inflation, market cycles, reverse dollar-cost averaging and random fluctuations. I call this the True Market Model, and it may be downloaded for free at www.cotar.org. (These models are shown in Figure 1.)

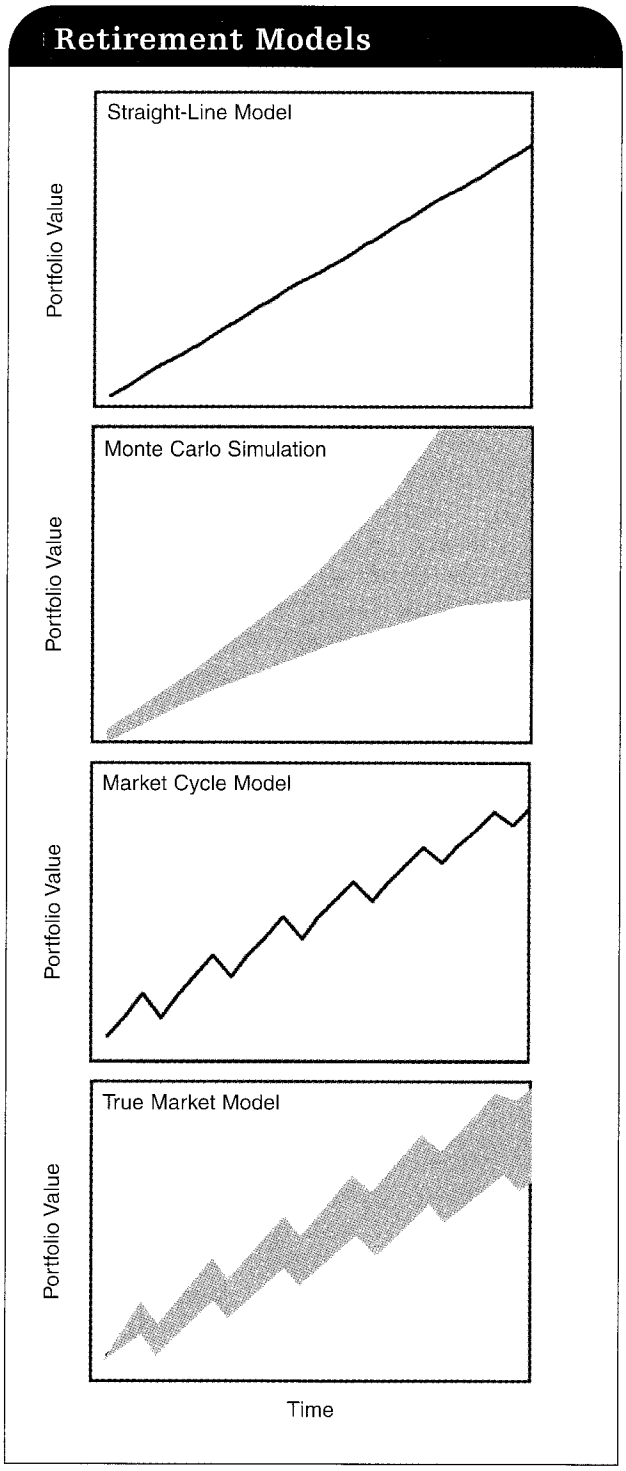
Now, let's see how these models work in real life. A client walks in with a whole pile of money to invest for his retirement. You do all your homework, interview your client and perform a risk assessment. You're ready to implement an investment plan. The only thing you are not sure of is the direction of the market.

If you follow the straight-line model or the random market model (Monte Carlo simulation), then you would invest all of the money as per the agreed asset mix. You hope and pray that the markets move upward, but of course there is no guarantee that the market won't crash the day after you invest all of your client's money.

However, if you believe in the true market model, here are three methods you can use to reduce the initial risk for this new money.

1. Dollar-cost averaging. Invest fully all of the money allocated to fixed-income. As for the equity side, instead

Figure 1



of investing the whole amount at once, invest 25% each year over four years until the final asset mix is achieved. This method reduces the risk of retiring into a bear market during the crucial first four years of retirement. For the study period between 1900 and 1999, it increased the minimum portfolio life by about 8%.

2. Dollar-cost averaging based on the U.S. presidential cycle. Instead of investing 25% of the money allocated to equities each year, why not vary the percentages to synchronize with the U.S. presidential cycle? After crunching numbers for the years between 1900 and 1999, here is the optimum technique: Of the money that is allocated to equities, invest 10% in equities if it happens to be the first, third or fourth year of the presidential term. Invest 70% of the money if it happens to be the second year of the presidential term. This method achieved the longest portfolio life; the minimum portfolio life increased by 12% to 16%.

3. Growth averaging. Both dollar-cost averaging methods are time-based. Growth averaging does not have a specific timetable; money is added to equities only if markets are rising. Here is how it works: First, determine the optimum asset mix. Let's say it is 60% fixed-income and 40% equities. On the fixed-income side, invest fully, but on the equity side, invest only 10%. Put the balance of the equity allocation in a money market. At the anniversary, if the value of the equities has increased by 15% or more, then transfer 10% of the total portfolio value from the money market into equities. If the value of the equities did not go up by at least 15%, then do nothing. Repeat this process at each anniversary until the asset mix has reached its target.

Growth averaging does not significantly increase the portfolio life. However, it does minimize the devastating effect of retiring just at the beginning of a bear market or a mega-bear market. No money is added until the bear market is over; you then have plenty of money to take advantage of the subsequent market recovery.

The difference between the three methods is worth noting. Dollar-cost averaging is a mechanical system; it does not anticipate any market action, it just reduces the risk during the first four years of your retirement. Dollar-cost averaging based on the presidential election cycle leads the market action; it reduces the risk based on the memory of this cycle. Of the three methods, it adds the most number of years to the minimum portfolio life. (Keep in mind that if this cycle manifests itself differently in the future, the results may not be as favorable.)

Growth averaging lags the market action. The market has to move upward before triggering the next installment of investment into equities. Because it does not count on the memory of cycles, it may be more reliable than the other two methods. It prevents someone from investing heavily in equities in long bear markets by ignoring the market history and the cycle theory. A word of caution: Not too many clients are patient enough to follow through the growth averaging method due to its time span.

Figure 2 shows the difference in the portfolio volatility during the first four years of retirement between 1900

and 1999. The left chart shows the portfolio value if all the money is invested at once. The right chart shows the portfolio value with dollar-cost averaging. The difference in volatility is remarkable. With no dollar-cost averaging, in the worst case, you would have lost half of the assets after only four years.

Figure 3 shows the portfolio value over 30 years. Notice that with dollar-cost averaging, there were more occurrences of higher portfolio value in the later years because assets were protected well during the crucial first four years of retirement.

In light of these findings, what is the most appropriate way of securing income during retirement? We have already seen that even if our equity holdings outperform the index by 2% annually and we want to generate income for 30 years, the most we can withdraw is about 4% of our original asset base of the first year of retirement (withdrawals adjusted for inflation in subsequent years). So, instead of investing in a portfolio, why not buy an annuity? Annuities have a lifetime guarantee, some are indexed and some come with a minimum pay period. What is the best strategy?

Figure 4 shows the minimum portfolio life at various withdrawal rates as well as the probability of depletion. It is based on the optimum asset mix and rebalancing frequency that we looked at last month. Here, I will assume that the equity portion of the portfolio outperforms the index by 2% each year. (You can perhaps do better by taking heroic action, but this can also backfire.)

The percentage numbers on the curved lines indicate the probability of depletion. The 0% depletion line shows the minimum portfolio life.

To find the best mix of an investment portfolio and a life annuity, let's look at an example: Say my client has $1 million in investment assets. He needs to withdraw $50,000 in his first year of retirement, subsequently adjusted for inflation. He also wants his portfolio to last at least 30 years.

His initial withdrawal rate is 5%. From the 5% point on the horizontal scale, draw a vertical line (shown as a green line on Figure 4) until it meets the 0% depletion line. On the vertical scale, we see the minimum portfolio life as 21 years. This is nine years short of my client's minimum 30-year target!

If I extend the vertical line further to 30 years (the blue line) then the probability of depletion at the end of 30 years is about 50%. This is not good, is it?

Here is the solution: Multiply the probability of depletion with the portfolio value and use this amount as your single premium (in this case, 50% of $1 million) to obtain an annuity quote. For that $500,000, my client can obtain a life annuity of $33,000 per year, indexed by 2% annually with a minimum payout period of 10 years.

Now my client needs to withdraw only $17,000 ($50,000 minus $33,000) from his remaining investment portfolio of $500,000. His initial withdrawal rate is reduced from 5% to 3.4% (the red line). Thus, the "withdrawal stress" on his portfolio is greatly reduced.

With this new plan, my client now has an indexed lifetime income from his annuity that covers 66% of his income needs, and the life of his investment portfolio is increased to at least 40 years!

Figure 2

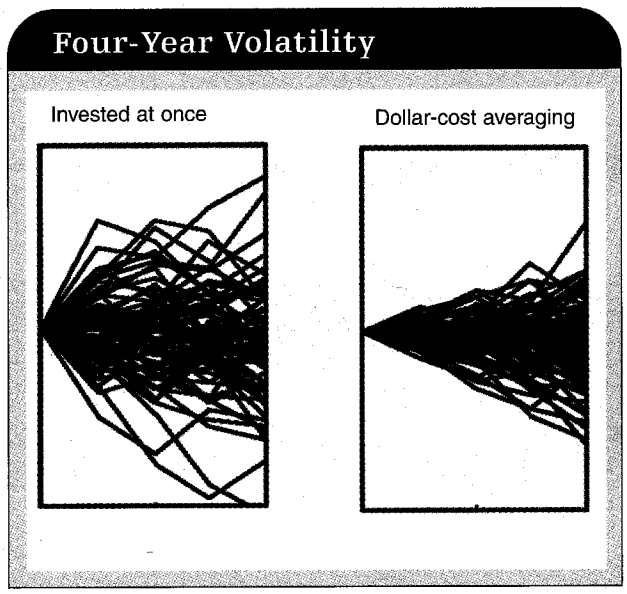


Figure 3

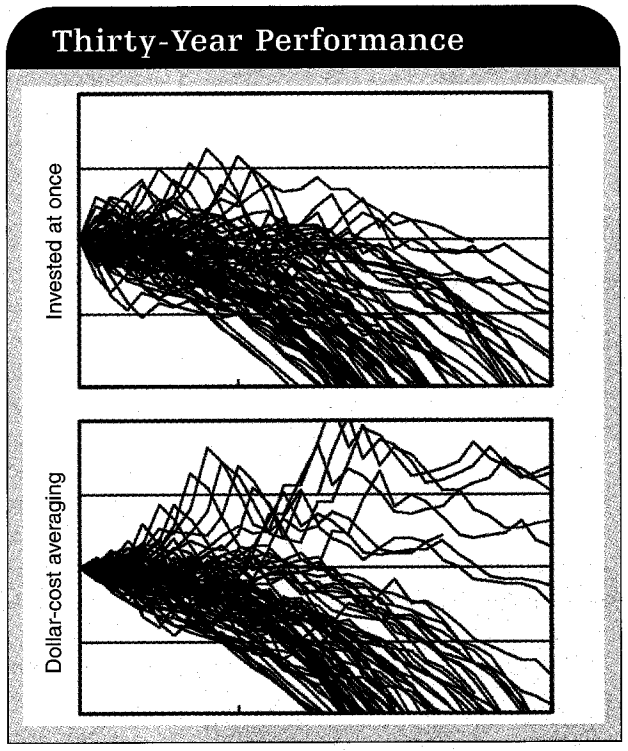
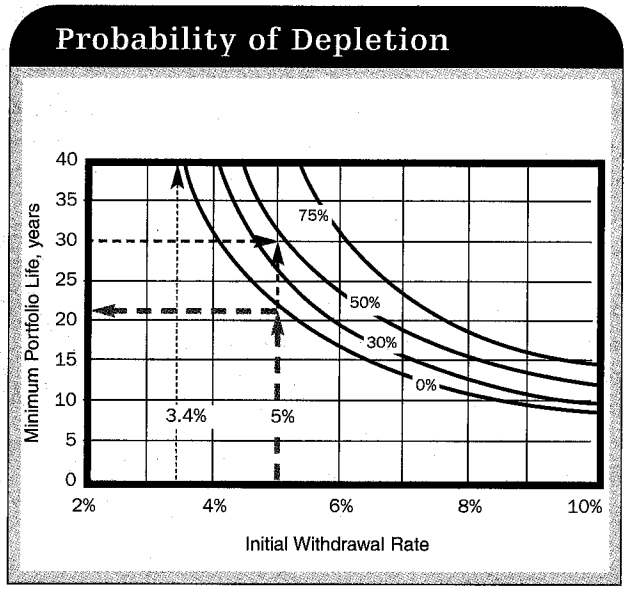


Figure 4



This particular case worked fine because the client was sufficiently old to benefit from a life annuity. At prevailing interest rates, it will generally not work if the client is much younger than 70 years of age.

To review the key concepts that we have looked at in this series of articles:

- Do not plan to withdraw more than 3.5% to 4% of portfolio assets at the start of retirement.
- An asset mix of 60% fixed-income and 40% equity is the most optimum for retirement portfolios. The two exceptions are: For high initial withdrawal rates (over 8%) or if equities in the portfolio underperform the index by 3% or more, use an asset mix of 80% fixed-income and 20% equity. This simple rule of thumb can triple the minimum portfolio life compared with an all-equity portfolio.
- At lower initial withdrawal rates, you can double the portfolio life by holding only the top performing equities or equity mutual funds. At higher rates, index funds can be used.
- Don't rebalance if the initial withdrawal rate is 3% or less. Rebalance annually if it's 7% or higher. Otherwise, rebalance only once every four years at the end of presidential election years. This can add as much as 10% to the average portfolio life.
- Reducing the initial risk can extend the minimum portfolio life by up to 15%.
- Always withdraw income from the cash, money market or other very low volatility assets and never from equities or balanced funds.
- Avoid the straight-line retirement model entirely. Analysis of historic data demonstrates that the standard retirement models are accurate only about 10% to 15% of the time. If you use them for your clients, you may be exposing yourself to future liabilities.

My annual report to each of my clients includes a paragraph on sustainable withdrawal rates. I simply advise clients, given their portfolio value, on the maximum sustainable annual withdrawal amount for 10, 20 and 30 years based on 100 years of market history. If any client is withdrawing excessive levels of income, I also warn them as to how long they can expect their portfolio to last at-best and at-worst cases.

I believe that by following these simple guidelines you will add tremendous value to your clients' financial well-being during their retirement years. It will also protect your practice. **FP**

Jim C. Otar, CFP, is an independent financial adviser in Thornhill, Canada, and the author of High Expectations and False Dreams: One Hundred Years of Stock Market History Applied to Retirement Planning. *His e-mail is cotar@rogers.com.*