Planning Perils

Some of the current retirement planning processes can leave clients penniless when they are most vulnerable and expose advisors to litigation.

Susan, your client, visits you in your office. She is 65, has $1 million for retirement. She does not like much risk; she has 30% in broad-based, diversified equities and 70% in various fixed income investments. She needs your advice for her retirement planning, She wants to retire as soon as possible.

First you want to figure out her time horizon. You look up the average life expectancy tables: Female, current age 65, has a life expectancy of 20 years. So, you decide to design a retirement plan to last until age 85 for Susan.

FLAW #1:

Confusing the life expectancy with the time horizon.

The average life expectancy indicates the median age of death. In other words, if the average life expectancy at age 65 is 20 years, this means that 50% of those who are 65 right now will be dead within the next 20 years. So, there is a 50% chance that Susan would live beyond age 85.

No advisor would want half of his/her clients to run out of money during their lifetime. Don't use the average life expectancy. Make sure to use an age of death that is high enough, such that there is only a 10% to 15% chance of survival. In Susan's case, that would be age 96.

Next, you ask Susan, "How much do you need to withdraw from your investments each year?" She says, "I need $50,000."

You say "OK. You can expect your portfolio to grow on the average 6% annually. And let's use a 3% average inflation rate."

You plug in these numbers into a retirement calculator, and lo and behold, it indicates (see Figure 1) that Susan should not worry about running out of money. Susan is very happy.

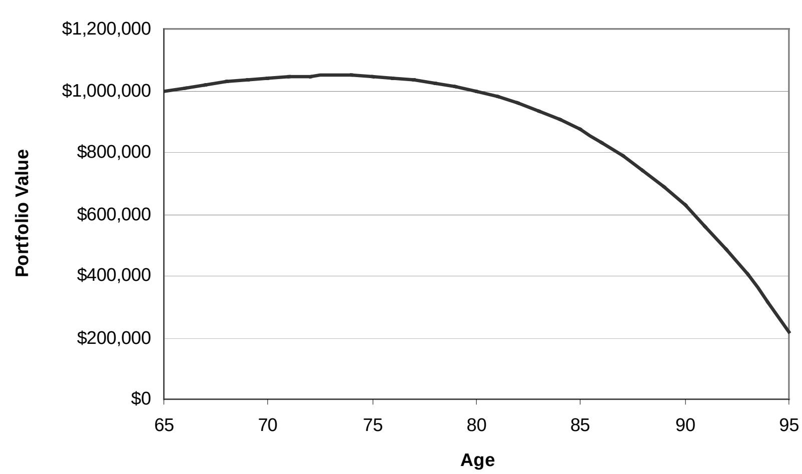
FLAW #2:

Confusing the average growth rate with design growth rate.

You cannot design a retirement plan on averages. It must be based on adverse conditions. Depending on how lucky Susan is, the sequence of returns matters greatly when it comes to distribution portfolios.

We can obtain a more complete picture if we chart asset values based on market history. Figure 2 depicts the "bird's eye" view of all outcomes, if Susan were to retire in each of the years since 1900, using actual market history (S&P500 for equity). Based on this, there is a 69% chance that Susan would be penniless before age 96.

Figure 1: Asset value using 6% average growth rate
Source: Otar & Associates



The remedy for flaw #2 is simple: use the design growth rates indicated on the table below. These design rates (used S&P500 as equity proxy) will ensure a 90% portfolio survival rate. You can still use estimated average growth rates for estate planning. But for retirement planning, you need to use these design growth rates to account for adverse outcomes.

Withdrawal Rate	Design Growth Rate
2%	4.0%
4%	4.0%
6%	3.0%

Source: Otar & Associates

Susan says that she heard of Monte Carlo Simulators. She wants to see how that works for her retirement plan. You reply, "Sure, let's run it through the Monte Carlo simulator".

FLAW #3:

Using the wrong model.

Most Monte Carlo simulators (MC) used for retirement planning have three shortcomings.

The first one is that they create outcomes that are random. In reality, markets are random in the short term, cyclical in the medium term and trending in the long term.

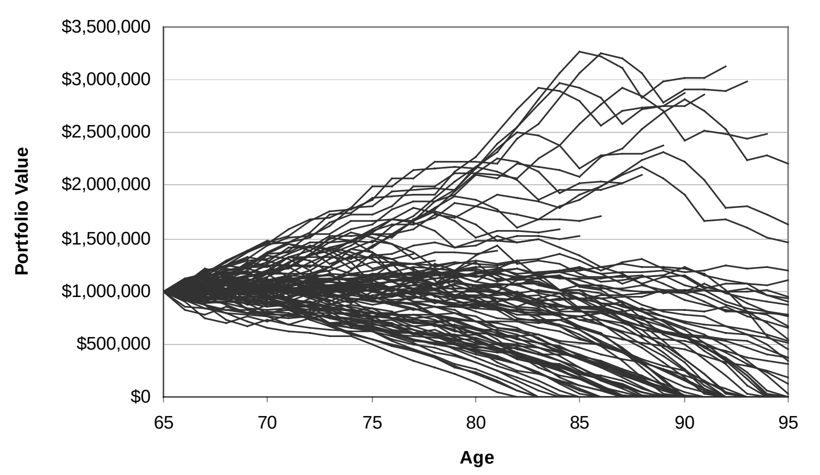
Their second shortcoming is that MC's do not forecast multi-year trends realistically because of the way they generate random numbers. Long-term bullish or sideways trends that can last as long as 20 years and multi-year bear markets, occur much less often in MC simulations than in real life.

The third shortcoming of the MC is that all events happen independent of each other in the simulations. In real life, interest rates, inflation, bond yields, equity performance are all correlated.

In Susan's case a typical Monte Carlo simulator projected a 36% chance of running out of money by age 96. This is far below the historic reality, which indicated a 69% chance of running out of money. Use a retirement model that uses actual market history.

Figure 2: Asset value using actual market history

Source: Otar & Associates



You observe that Susan may not have sufficient financial resources for retirement. You tell Susan, "You need higher returns in your portfolio. I suggest you take more risk. Let's increase your equities and change your asset mix from 30/70 to 50/50".

FLAW #4:

In distribution portfolios, increasing the equity allocation will likely reduce the portfolio life.

Higher equity percentage means a higher volatility. Higher volatility means a higher Time Value of Fluctuations (TVF). The TVF are the permanent losses in a distribution portfolio due to the fluctuations. It can reduce portfolio life by as much as 70%.

In Susan's case, if she were to choose a 50/50 asset-mix, the probability of running out of money at age 90 would be 49% as compared to 40% with the 30/70 asset mix.

The optimum equity allocation based on time value of fluctuations for most distribution portfolios is between 30% and 40%. Based on market history, taking a higher risk will shorten the portfolio life in 85% of cases.

Susan says she is willing to cut back her withdrawals by 20% in years when her portfolio does not grow.

FLAW #5:

If the withdrawal rate is above the sustainable withdrawal rate then cutting back withdrawals in bad years has an insignificant effect.

Susan's withdrawal rate is 5% ($50,000 as percentage of $1 million). Her sustainable withdrawal rate is about 3.6%.

Time Horizon	Sustainable Withdrawal Rate
40 years	3.0%
30 years	3.6%
20 years	5.1%

Source: Otar & Associates

Her withdrawals definitely exceed the sustainable withdrawal rate. Therefore, cutting back withdrawals only during bad years will not help.

If Susan were to cut back her withdrawals by 20% in bad years, then the probability of running out of money would be about 64% by age 96. This is hardly different than the 69% probability with no such pay-cuts.

You recently read some research on asset dedication. After reviewing it, you suggest to Susan to keep six years of withdrawals in money market and short-term bond funds, and investing the rest of her money in equities.

FLAW #6:

In distribution portfolios, asset dedication strategies generally do not work if the withdrawal rate is higher than the sustainable rate.

If Susan were to set aside six years of withdrawals and invest the rest in equities, then she would have 73% chance of having no money left by age 96. This is slightly worse than the probability for the strategic asset allocation, which is 69%.

Consider the asset dedication strategy only if the withdrawal rate is less than the sustainable rate.

If the withdrawal rate is higher than the sustainable rate, then there are only a few choices available:

- Delay retirement: If Susan were to delay her retirement until age 71, then she would have lifelong income.
- Reduce withdrawals: If Susan were to cut back withdrawals to $39,000 annually instead of $50,000, then she could retire now.
- Get a part time job: If Susan retired now but start working part time for $33,000 / year for the next 10 years, then her savings would likely be sufficient to last her for the rest her life.

Susan has to make some tough choices. Your function is to provide her all the information that she needs to help her make retirement decisions that are acceptable to her.

ALTERNATIVE SOLUTIONS

You may want to consider a variable annuity (VA) with guaranteed withdrawals. There are many types of VA's available in the market. Most provide a guaranteed 5% payout for life. This means Susan would get the $50,000 annual income that she needs for the rest of her life if she were to retire right now. Keep in mind, there is no inflation protection with VA's.

Most VA's come with a reset option, which might bump up the payments when investments do well. Sales material from insurance companies may suggest that resets could provide some inflation protection. This is generally incorrect. Resets usually occur in secular bullish trends where inflation is already tame. However, during secular sideways trends, where inflation is significantly higher, resets rarely happen. In other words, resets during retirement increase the estate value in good times but do little for inflation in bad times.

Nevertheless, for Susan, it may be still better to have a non-indexed but guaranteed lifelong income using VA's instead of facing the high probability of running out of money at later stages of her life.

Jim C. Otar, CFP, CMT, MEng, is a retirement analyst, a financial planner and a professional engineer in Thornhill, Canada. He is the founder of retirementoptimizer.com