

Can a calculator with a Las Vegas jingle make clients trust their brokers more?

If You Build It, Will They Come?

BY LAUREN BARACK

Andy Byer is jittery. In New York for just two days, the senior vice president of Wachovia's Envision group is off to demonstrate to a roomful of Wall Street experts and technophiles how Wachovia's newest technological weapon is going to inspire customers—and bring in business. “This is about focusing on a client's goals and life,” says Byer, who is based in Richmond, Va. “This is about reducing uncertainties, deepening the connection of the adviser to the client, and giving advisers more power to give their clients more realistic horizons.”

This is about a calculator.

Meet the Monte Carlo calculator—actually a computer program—which some brokerage firms believe will reignite clients' trust in their brokers and strengthen a rep's ability to lure forecasting business away from financial planners. While Wachovia isn't the first brokerage firm to use it, it may be one of the first to roll out the tool with such fanfare and Madison Avenue-style packaging.

Financial analysts have long considered the Monte Carlo calculator one of their heavy-hitting planning tools. But both the Securities and Exchange Commission and the National Association of Securities Dealers had banned long-range forecasting tools like Monte Carlo that predict whether clients will reach their financial goals. After firms approached the NASD to change the rule, the SEC gave approval to Rule IM-2210-6 that now allows firms to use these calculators. And brokers got the final nod in mid-February to start using the program.

Reps at Wachovia, Merrill Lynch, and Smith Barney have already incorporated Monte Carlo into their sets of tools. But Wachovia is the only one to be so upfront with its plans. Smith Barney spokeswoman Kim Atwater has declined to comment further on its rollout of Monte Carlo other than to say: "We feel there is a right time and place with analytics." UBS has refused to comment on its intentions. Meanwhile, Merrill is keeping its strategy under wraps for now. "It's too premature for us to comment on this at this time, but maybe at a later date," says Erik Hendrickson, Merrill's director of global private client media relations, via a message from his assistant.

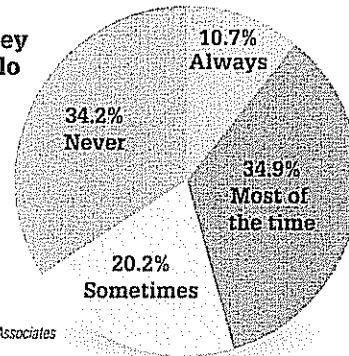
Discretion seems fitting when talking about Monte Carlo. After all, if the name evokes a turn of the roulette wheel in Monaco's haven for the discreetly rich and famous, that's the point. The calculator is meant to simulate every possible outcome that could happen to a client's portfolio—every dip in the market, every

upturn, every crash, every boom—every roll of the dice.

Currently, portfolio outcomes are calculated with simple equations based on a projected average rate of return. For example, consider a 45-year-old client with \$500,000 who wants to invest the money for the next 20 years. What would he have at age 65? He probably wants to know if he can count on drawing \$75,000, or even \$120,000, per year

SLOW TO CATCH ON

How often brokers say they use Monte Carlo as a portfolio construction method



Source: On Wall Street-Cerulli Associates March survey of 149 advisers

until his demise at age 90. And will there be anything left for his heirs? A junior high school student with basic skills, a sharp pencil, and a pad could tabulate this. But let's face it. How often does the market actually hit the average? "We call that a coin-flip chance," Byer says.

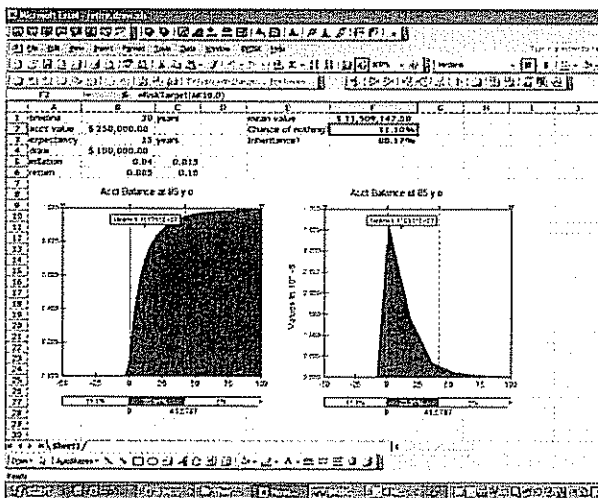
Monte Carlo takes that scenario and puts it through thousands of configurations or more. Coupled with the continually evolving computers of the last few decades, the software can make calculations like these in minutes. And by running thousands of scenarios instead of one static, fixed-rate possibility, clients can now obtain a range of answers. Not just yes or no, but maybe.

That may sound worse to some customers. Clients can get maybes by investing on their own. They come to brokers for assurances—for answers, not hopeful scenarios. But to Monte Carlo fans, those calculated possibilities are far more preferable to the so-called definite answers that never bear fruit.

"Maybe the calculator comes back and says it's only a 53% chance of reaching their goals," Byer says. "So we can go back and ask, are they willing to work a little longer? Or save more money towards their retirement?"

To Byer, it's about creating a partnership between the broker and client. The more realistic a forecast—even one that is possibly negative—the more chances of actually getting a client what he wants.

The Monte Carlo generates a range of probability on a 0% to 100% scale. Think of it as a grading system. At 70% and above, a client passes or can feel fairly confident of meeting his goals. Anything below that, and a broker may want to go and readjust the plans: Would a two-week cruise suffice, or does the client



Monte Carlo simulations can be used for many financial calculations. The one above is for a 50-year-old woman planning to retire in 20 years. Graphics courtesy of Palisade Corp. www.palisade.com

really need to buy a yacht to reach his dream retirement?

"There's no crystal ball," says John Catalano, manager of financial planning software at regional firm Raymond James & Associates, which hopes to roll out the Monte Carlo calculator to its brokers by early 2006. "Naturally, we know there's no way to predict the future. But Monte Carlo gives us a better tool to model uncertainty."

Financial planners, unencumbered by the NASD, have been using these tools for the last five years or more. And firms like Morningstar and Financial Engines have been hawking them to their financial advisory clients for almost that long as well. T. Rowe Price, the Baltimore-based investment management firm, even offers a free cal-

culator on its Web site. It's as if everyone—even the public—has had his or her hand on a Monte Carlo calculator. Everyone except brokers

forecasts will be accepted by clients. "Some people's reactions are that this opens a lot of doors for problems," says Mike Henkel, president of Ibbotson Associates, a Chicago-based provider of asset allocation data that sells its own version of the Monte Carlo calculator to financial firms.

Other critics are concerned that firms may start relying too heavily on Monte Carlo and leave other, well-tested calculators behind. "It's a mistake to show just one result and say this is going to cover our projection going forward," Ghodsi says. "It's not a magic bullet, but just one tool."

Still, any system that takes downturns into account has to be more accurate than one that assumes a Pollyanna attitude of regular returns. What broker or client could

'Envision' This

A 45-year-old woman with \$500,000 wants to retire at age 65. She wants to draw \$125,000 per year at retirement.

THE OLD WAY

Calculating her accounts with a 2% rate of inflation and an 8.5% rate of return, the methodology shows she would meet her goal and have \$2 million left for her heirs when she dies at age 92.

THE MONTE CARLO WAY

Throwing these points into Wachovia's Envision showed the client only had a 53% chance of meeting her goals. Her possible range actually showed her dying with anywhere from \$74 million in the bank to \$7 million in debts. With these results, the simulation showed she had a 47% chance of running out of money by age 92. She also had a 51% chance of leaving behind less than \$2 million when she dies—not good odds. Wachovia might suggest that the client continue to save a little each year by adding to her nest egg and pulling back on her income expectations to some \$90,000 a year. That way, she would receive a score closer to the 75% or 80% that Wachovia would consider a more positive outcome.

Source: Numbers and scenarios provided by Wachovia

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"No one ever said you can't do this," says Greg Ghodsi, a broker with Robert W. Baird & Co. based in Tampa, Fla. "But it was like don't even bother trying because it's not going to happen."

Wachovia rolled out Envision long before February, piloting the program in June 2003 and launching it to all of its brokers in early 2004. But the firm claims it did so with the regulatory agencies' full approval. "We actually filed everything with the NASD long before we launched Envision," says Byer, who joined Wachovia in February 2004 just to run the new program after nine years at UBS PaineWebber. "They just wanted more disclosures around investment-analysis tools." (The NASD says it will not comment on individual firms.)

If other brokerages have dragged their heels in incorporating Monte Carlo or seem cautious in discussing the calculator at all, it may be over uncertainty on how these

have imagined the events that affected Wall Street in the last five years? A bear market, 9/11, corporate malfeasance, and crooked chief executive officers—not just one, but *all* those circumstances hit the market, and with devastating results, diminishing or even destroying many retirees' dreams. No one is suggesting that Monte Carlo will predict all possibilities. But it can help create a model for many implausible outcomes.

"It's very much like a heart monitor," says Byer. "We call it putting the scenarios through the stress test of the Monte Carlo. It tells you where you as a client are in your goals. And then we make adjustments."

The key to Monte Carlo's success and continued use is going to be deciphering the information for clients. "If there are a thousand different paths from the data, the investors' eyes are going to glaze over," Henkel says. "The people who summarize it better than others will have much more effective tools."

Working with a third-party software company is one place to start. Both Wachovia and Raymond James turned

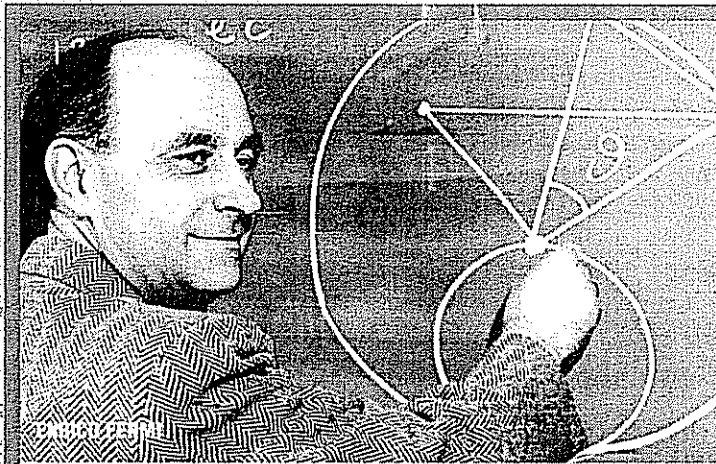


PHOTO COURTESY OF FERMIO

From Bomb to Bust to Boom

If nuclear geniuses trusted Monte Carlo in figuring out where radioactive dust would settle after an atomic explosion, investors should feel safe enough to apply it to their investment portfolios.

Of course, it's not that comforting to think of scientists at the Manhattan Project using a tool they tagged Monte Carlo to determine fallout ranges for the atomic bomb. And yet that's how and when the program reportedly made its initial appearance in modern science.

While some research papers mention a similar kind of probability calculation method being used in the 1800s, a trio of physicists is most closely associated with popularizing the Monte Carlo statistical simulation. Nobel Prize-winner Enrico Fermi reportedly used the method to tabulate the randomness of neutron diffusion during World War II. Physicist Nicholas Metropolis is often credited with naming the calculating strategy and running it on a computer for the first time. But it is fellow scientist Stanislaw Ulam who is often cited for actually inventing the statistical sampling technique. Ulam and Metropolis published the first paper on the Monte Carlo method in 1949.

It wasn't until the last 30 years or so, as computing power grew, that Monte Carlo calculators became more widespread in both the scientific and financial communities. Besides determining if a client can retire to Boca in style, the calculators are used in a variety of other scenarios, such as oil-well exploration, cancer therapy, and outlining the behavior of nanostructures. Wave that pedigree before prospective clients, and they may feel confident gambling on a broker using Monte Carlo on their assets. —LB

to Finaceware of Richmond, Va. But even Finaceware didn't start from scratch. Simulations generated with this kind of calculator reportedly date back more than 100 years. The first modern use of the tool—and its catchy name—had little to do with determining whether someone could retire in comfort. Instead, as one may do to calculate the random possibility of winning a game of Baccarat, nuclear scientists used it to determine possible fallout from the first atomic bomb. (See "From Bomb to Bust to Boom," left.)

Even though many wirehouse brokers have just gotten their hands on the calculator this year, Monte Carlo has already had a decent run. Web surfers can find the calculators just by typing in the words "Monte Carlo" and "retirement" into Google. McRetire's calculator, for example, costs \$29 for a download. Free downloads are available on the Web site moneychimp.com, as well as the site for T. Rowe Price.

A recent test of T. Rowe Price's version tabulated in seconds that one user's measly 401(k) would not yield a living monthly income at retirement. Unless she started socking away more, the user was looking at spending the golden years in her daughter's extra bedroom. Of course that answer does little to explain how a client could actually reach her goals of finding a little beach house with a garden and a spare room for her daughter. That's where the broker's expertise comes in—and that's what the wirehouses are counting on.

Wachovia has trained more than one-third of its fleet—2,700 brokers out of 8,000—on Envision since last month. With Wachovia gaining such a lead, the other wirehouses will have to consider the risks of their slow start: Will the client feel anxious about forecasting—or worse, feel his firm is behind the times?

With Monte Carlo's easily availability on the Web, clients and prospects are bound to stumble onto the calculator and turn to their brokers with questions. And for wirehouses trying to pull business away from financial planners, having fewer tools than their competitors shows a lack of business savvy.

Still, some brokers remain concerned about opening the door to long-range predictions and forecasting—and what that does to clients' expectations. But Henkel says: "To me, not using [Monte Carlo]—and not helping investors understand downside risk and not being able to document it—is worse than forecasting." ■