Financial Planning

21st-Century Portfolios

To a growing number of sophisticated investors, modern portfolio theory is beginning to seem a bit outmoded.

By Bob Veres

July 1, 2007- These aren't happy times for advisors who invest according to the strict principles of Modern Portfolio Theory. Earlier this year, Bill Sharpe came out with his long-awaited book *Investors and Markets*, in which he admits that his Capital Asset Pricing Model is really a small subset of a more comprehensive—and messier—picture of the investment world. The book examines a marketplace in which investors reasonably disagree about the true value of a security and have different preferences (risk tolerances) and positions (their need for return or income).

It's always big news when a Nobel laureate moves beyond the prevailing academic wisdom. Indeed, the subject was on the lips of attendees at the recent NAPFA National Conference in Chicago. And they got a lot more to talk about from the podium. An array of speakers, including Woody Brock of Strategic Economic Decisions; Rick Ferri of Portfolio Solutions in Troy, Mich.; Werner DeBondt, a DePaul University behavioral finance professor; Ken Solow of Pinnacle Advisory Group in Columbia, Md.; and Bryce James of Smart Portfolios in Seattle, all boldly proclaimed that it's time (maybe past time) to get outside the MPT box and move beyond an investment methodology that really hasn't been updated since Harry Markowitz first published it in the 1950s.

MPT's biggest area of vulnerability is correlation coefficients—the mathematical definition of how much different securities move up or down together. If you combine correlations with expected returns, and look at portfolios with different percentages of two assets (100% stocks, 0% money market instruments; 90/10, etc.), you get points on a graph that looks a bit like a fishhook on its side—the efficient frontier.

Unfortunately, these correlations are far from stable from decade to decade. Bryce James—possibly the most entertaining speaker of the group—showed the audience slides of efficient frontiers (he used stocks and bonds) over different recent 10-year periods. They were all over the lot, no two even closely resembling each other. "The MPT-efficient frontier is like a broken clock that is correct twice a day," he told the audience.

In his session, Rick Ferri presented a slide that graphed the correlation between the S&P 500 and five-year Treasury notes. The long-term average correlation is 0.10, but the actual number, measured on rolling 10-year periods, ranged from near .50 on the plus side to somewhere around -.25.

His solution: Don't bother with correlations. "In our portfolios, we assume that everything is positively correlated all the time," says Ferri. He calculates a portfolio's expected return risk by taking the weighted average returns and volatilities of the asset classes. "If you wind up with the benefits of lower correlations and lower volatility, that's a bonus," he says. "In the meantime, you're overestimating the amount of risk, so the actual portfolio will usually be less

volatile than what you've illustrated."

Instead of ignoring correlations, James prefers to watch them in real time. He noted that Markowitz himself admitted it would have been more effective to use correlations between individual assets (rather than whole indexes) and forward-looking earnings forecasts to anticipate what those correlations might be in the future. The technological limitations of his era forced him to accept simplifications.

Today, James is under no such constraints. He can assess the day-to-day movements of individual security correlations. Since they tend to go up during market downturns, he will watch for times when the correlations seem to be tightening. Then he adds assets that are less correlated, trying to keep the overall diversification stable. That, in turn, should help keep the portfolio on an even keel. The portfolio could presumably sidestep bear markets, since money is moving into things that aren't moving down in lockstep with the market. It's like MPT on steroids.

Woody Brock examined the issue from a different vantage point. He compared Markowitz's work with Galileo's astronomy theories—advanced for their time, but a bit out of date now. The biggest problem, he said, was that MPT assumed a stationary environment and that "things change, but the way they change doesn't change, which means that we can extrapolate from history."

Except that we really can't. Brock pointed to structural changes that have introduced new dynamics into the world markets, making the future different from the past. The list includes the rise of the Chinese and Indian economies; emerging middle classes in those two countries, plus Russia and Brazil; a steeper demand curve for oil, gas and metals like copper; and the explosion of derivative investments around the world. Gain a slightly better view of how these new dynamics will play out, he said, and you have an edge over other investors.

Ken Solow's session offered a synthesis of Brock's and James' presentations. He suggested that portfolio managers of the future will use their skill and judgment to reduce the chances of negative returns for clients. One of his most interesting slides broke all of the S&P 500's rolling 20-year returns since 1926 into deciles—the lowest returns grouped at the top (average return: 3.2% per year), the next lowest, a step below (average return: 4.9% per year), all the way to the highest (13.4% per year). Next to each decile, the chart showed the starting and ending price/earnings ratios—or how expensive it was, on average, to buy into the market at the beginning of each set of 20-year periods.

The results were pretty dramatic. The worst decile started with an average p/e of 19 (about where the market is today) and ended at 9. This is almost exactly the story of the second-worst decile (18 and 9, respectively). The highest-performing 20-year periods, meanwhile, started with relatively cheap average P/E ratios of 10. Next highest: 12. The point? Contrary to allocate-and-hold logic, long-term returns seem to be highly dependent on whether you are buying in cheaply or expensively at the beginning. Those who know how to interpret those initial conditions will have a significant edge over those who don't.

Recipe for a Bubble

Werner DeBondt, meanwhile, presented the simplest possible evidence that markets are not totally efficient. First he tracked the returns of major indexes in developed economies like Canada, the U.S., the U.K., Germany, etc., over rolling three-year periods. Then he looked at their performance over the next two years. The countries with the worst returns subsequently outperformed the countries with the best returns by an average of 40%.

How do you explain this? After trying to correlate these performance numbers with economic growth (no luck) or movements of currencies or interest rates (even less luck), DeBondt

concluded that he was seeing evidence of herd behavior and reversion to the mean. He proposed a three-stage process by which market bubbles form:

1. Some economic or fundamental shock actually justifies an upward market movement;
2. the market experiences rising investor confidence, investors begin to extrapolate from past (bullish) returns, and we begin to see the use of leverage and speculation; and
3. herding behavior sets in as newcomers flock to the market.

The bubble pops either when some economic or fundamental shock convinces people that the inflated prices are not sustainable, or when some of the early investors jump ship, setting off a herd phenomenon not unlike what we would experience if somebody yelled "Fire!" in a crowded theater.

With the exception of Ferri's, all of these presentations had one thing in common: They suggested that it might be possible for sophisticated investors (and advisors) to get a significant edge on the market as a whole. The edge could result from knowing more, having more sophisticated analytical tools or traveling independently of the herd.

Not everybody welcomes this news. Joe Tomlinson, who practices in Greenville, Maine, points out that even if MPT math is incomplete or primitive, it still induces investors to do the right things: Invest in low-cost funds, avoid costly trading and avoid wasting money on unproven strategies. Scott Leonard, who practices in Redondo Beach, Calif., goes a step further, saying that looking beyond MPT is an invitation to bring "snake-oil salesmen" back into our investment lives.

I think we must agree with their concerns. Exploration outside of MPT doesn't invalidate the need to be smart about asset class exposure, expenses or diversification. Going forward, the planning profession will be looking, cautiously, at how to bring the investment process into a new century.

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