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## Deficient Frontier

By Kerry Pechter     Sun, Jun 23, 2013

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*A forthcoming research article suggests that the concept of the efficient frontier should be replaced—and in practice is often replaced by planners—by the more flexible concept of the 'efficient range,' which incorporates principles of behavioral finance.*

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A Vanguard investor went online the other day to check his account balance—sadly, it was off 3.5%—and read the fund giant’s familiar reminder that his allocation to stocks was about half the “suggested target... for people in his age group.”

Adjacent to those words, however, the emptor saw this caveat: “The illustration and tools on this page are educational only, and do not take into consideration your personal circumstances or other factors that may be important in making investment decisions.”

OK, so what was this self-directed investor supposed to do? Obey Vanguard’s initial suggestion to hike his equity exposure? Or, as Vanguard’s disclaimer seemed to allow, follow his gut, which was based partly on his native conservatism but also on the knowledge that his spouse was taking a lot of risk with *her* retirement portfolio.

This is the sort of dilemma that Meir Statman, Ph.D. (right), and Joni L. Clark, CFP/CFA, seem to be addressing in [“End the Charade: Replacing the Efficient Frontier with the Efficient Range,”](#) a research paper to appear in the July issue of the *Journal of Financial Planning*.

A professor at Santa Clara University in California and author of *What Investors Really Want* (McGraw-Hill, 2010), Statman is one of the behavioral economists who have argued that Harry Markowitz’ mean-variance optimization algorithm, which generates the efficient frontier, excluded certain valid real-world qualifiers even as it refined a powerful insight.



As Statman and Clark, chief investment officer at Loring Ward in San Jose, Calif., write in their current paper:

“Mean-variance portfolio theory is not a ‘consumption’ theory as it is silent about investors’ consumption goals, such as a secure and comfortable retirement, college education for children and grandchildren, and bequests to family and charities. Ultimately, however, investors care about their consumption goals, and portfolios are merely production means for reaching consumption goals.”

“End the Charade” suggests that the concept of the efficient frontier should be replaced—and in practice is often replaced by many financial planners and advisors—by the concept of the “efficient range.” They define efficient range as “the location of portfolios that acknowledge imprecise estimates of mean-variance parameters and accommodate investor preferences beyond high mean and low variance.”

By investor preferences, the two authors give the examples of socially-conscious investors who might want to avoid shares in certain companies no matter how profitable they may or who might want to under-weight international equities for no other reason than that they’d rather invest in their home country.

By “imprecise estimates,” the authors are referring to the arbitrary assumptions that almost by necessity go into any individual calculation of the efficient frontier. In fact, they say, advisors sometimes make whatever assumptions are necessary to arrive at the results they want. Hence the title, “End the Charade.”

“We place the estimated parameters in the mean-variance optimizer and give it a spin. Out comes an efficient frontier with portfolios such as the one with 70 percent in European stocks and 30 percent in gold. We find this portfolio unappealing, so we push down the estimated return of European stocks or add a constraint that limits European stocks to 10 percent of portfolios. We give the optimizer another spin and get another efficient frontier. We continue spinning until we get an efficient frontier with portfolios that really appeal to us, the ones we wanted all along,” they write.

But the article has good news for advisors: Their instincts that inspire them to “massage” the parameters are valid:

“Advisers share a guilty feeling. They are eager to note that asset allocation matters most in investment success, and that they derive their asset allocation from the mean-variance portfolio optimizer of Nobel Prize winning modern portfolio theory.

“Yet advisers find asset allocation in optimized portfolios unappealing. They modify optimized portfolios by constraints, whether maximum constraints on commodities or minimum constraints on bonds. But they often feel guilty for straying from modern portfolio theory. We argue that advisers’ guilt is misplaced.”

“The argument is that any diversified portfolio, such as the ones offered by Vanguard, is in the efficient range,” Statman told RIJ in an email. “In other words, we should use the mean-variance optimizer as a calculator rather than as an optimizer.”