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Dr. David Esch Executive Director of Research New Frontier

Dr. David Esch is the Managing Director of Research at New Frontier, having joined the firm in 2008. Dr. Esch completed his Ph.D. in Statistics at Harvard University in 2004. His statistics, numerical analysis and computation, Bayesian statistics, and econometrics. He is author of the Management 1st Quarter 2010), selected as one of the best JOIM papers of 2010, and co-author of many other peer-reviewed journal articles. His educational background degree from Harvard College and a Masters degree in Mathematics and Statistics from Boston University.

Portfolio Monitoring and Rebalancing... Art or Science?

by Dr. David N. Esch

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Once a portfolio has been designed and implemented, what happens next? Studies show that asset mixes as well as proper rebalancing are keys to successful ROI. However, a portfolio based on certain historical statistical and financial analysis during a specific period in the past may only be valid for an indeterminate length of time. Macro and micro economics and their accompanying market conditions are continuously changing. So, how does an investment manager decide when it's time to rebalance a portfolio?

Believe it or not, even some large institutional investment management companies rebalance on a calendar basis; the process may take place monthly, quarterly, semi-annually, or even just annually. In other words, portfolios are reviewed on a periodic basis and not on a performance basis.

Another anecdotal rebalancing procedure practiced by many investment managers is to watch for the results of market induced portfolio drift and then make rule-of-thumb adjustments. For example, if a portfolio starts out with a 65% equities, 25% bonds, and 10% commodities mix, a portfolio manager may decide that when the portfolio asset proportions change to—for example—68% equities, it would be time to make adjustments. However, the point at which a portfolio needs to be changed appears to be purely dependent on the manger's interpretation and discretion. Choosing the anecdotal "optimal situation" to rebalance with this rule is more art than science.

Monitoring portfolios for the purposes of maintaining optimality can be a full time activity for many financial advisors, portfolio managers, and trust officers. This need to constantly monitor and define when a portfolio has made a significant change can lead to over or under trading that may reduce the value and effectiveness of the investment portfolio and result in reduced portfolio performance.

A Better Way

However, in today's world of computers, data mining and predictive analysis, New Frontier's research department developed a patented program that helps managers filter for statistically significant signals that indicate portfolio rebalancing and establishes a standardized protocol for optimizing portfolio performance. Moreover, the portfolio monitoring software program helps investment managers



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be more productive with their time. For example, benchmarking relevant, measureable statistics using Michaud Optimization can provide an alert for rebalancing consideration.

Obviously, having the real time capability to constantly monitor for portfolio performance optimality will promote better overall performance, lower trading costs, and happier clients.

This note was posted as an entry on New Frontier's investment blog on April 29, 2013. Read this entry and other posts at: <u>newfrontieradvisors.com/blog.</u>

