



Luck versus Skill in Active Management: A Perspective on the Debate

By Robert Huebscher
September 23, 2008

Our article, [Luck versus Skill in Active Mutual Funds](#), which appeared on August 5, stirred a lively debate among our readers, led by Tom Howard, CEO of AthenaInvest, and Dave Loeper, CEO of [Financeware, Inc.](#) We thought this would be a good opportunity to summarize where the debate stands, and the key questions that remain unresolved.

The initial article was based on an interview with Russ Wermers, whose academic work has attempted to statistically identify and measure how much luck exists in a universe of funds through a calculation he calls the False Discovery Rate (FDR).

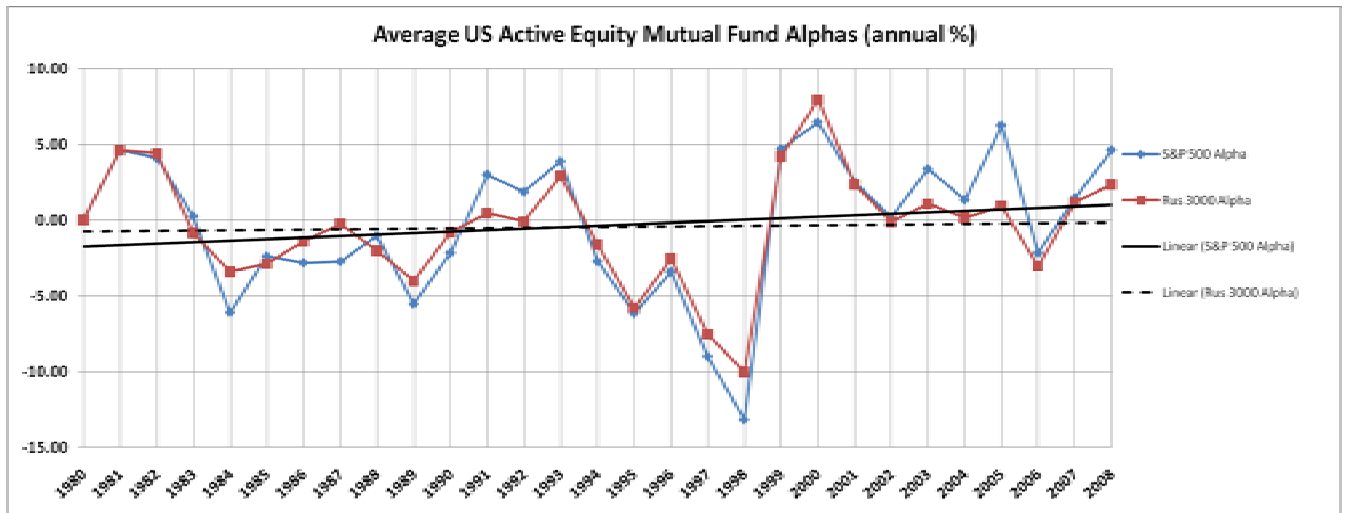
Howard argues that alpha for actively managed funds has increased over time, and this is indicative of an increasing level of skill among fund managers. Howard further argues that conventional metrics for identifying skill are insufficient, advocating instead the use of Strategy Based Investing (SBI), a methodology that his firm has commercialized. Loeper questions Howard's conclusion, asserting that Howard's analysis didn't compare funds to a benchmark appropriate to measure all domestic equity funds. Loeper believes skillful managers exist, but argues that that luck does as well and the conclusion Howard drew was based on analysis that presumed luck does not exist.

But that central disagreement just scratches the surface. The comprehensive discourse of the debate is available through links to each installment appearing at the end of this article.

The debate has revolved around several issues:

- (1) Does historical data support the claim that alpha is increasing over time?
- (2) If alpha has been increasing, does this mean skill is increasing?
- (3) Is there statistical evidence that skillful managers can be separated from those that are merely lucky?

Howard has provided the following data primarily regarding the first question:



This graph is based on all US equity active open-end mutual funds that existed in any month from Jan 1980 through June 2008, a total of 482,443 fund/month observations mostly of long only funds. Fund returns are net of automatically deducted fees and average the returns on all share classes that existed that month. The data set excludes index, allocation, mixed-asset, and 529 funds. Actual alpha reported is the average monthly return over all funds existing that month minus the S&P 500 or Russell 3000 return for that month, summed over the 12 months (Jan, Feb,..., Dec) to obtain the annual alpha. The 2008 alpha is the Jan-Jun alpha times 2. (Source: July 2008 Thompson data base.)

These data raise a number of questions and highlights points on which the debaters disagree:

- (1) The data shows an upwardly sloping alpha against both indices. However, the slope is fairly modest against the Russell 3000 and the data points are fairly dispersed. Can it be said, with statistical significance, that there is an upward trend in alpha?
- (2) In the case of the Russell 3000, the trend alpha is negative over the entire time interval. Can some of the increase in the Russell 3000 alpha slope line be attributed to a decline in expenses over the observation period?
- (3) One of the issues raised over the course of this debate is whether it is correct to measure all domestic equity funds against a large cap market index such as the S&P 500 or whether a broader index that is more representative of the investable universe of all domestic equity funds should be used, such as the Russell 3000. One might also measure performance against the more commonplace style boxes so frequently used today, but neither Howard nor Loeper advocates that, although



Loeper's first response to Howard analyzed this. Howard argues that, since we are dealing with an overall average across the universe of US equity funds, such comparisons are correct. Loeper argues that it is erroneous to draw conclusions by comparing all domestic equity funds to just a large cap benchmark. Loeper's analysis confirmed the negative alpha against the broader Russell 3000, as shown in Howard's chart above. However, Howard and Loeper disagree that the slope in the trend line against the Russell 3000 is evidence of increasing skill so, this issue remains unresolved.

- (4) The data do not adjust for two factors highlighted by previous academic research. First is the dispersion of returns. When the stock returns are more dispersed, there is more opportunity for fund managers to earn excess returns. When stock returns are less dispersed, it is harder for funds to demonstrate alpha. (Statisticians call this adjusting for heteroscedasticity.) The second issue concerns adjusting for the relative performance of small- and large-cap stocks. Active funds will look good anytime small-cap stocks outperform their large-cap counterparts and look bad anytime the reverse occurs. Managers can't underweight small-cap stocks enough to produce meaningful amounts of money to add to their large cap position even if they want to do so. But if small caps are hot, it is easy to sell some large-cap names and get the cash to invest in small-caps. As such, the aggregate alpha of active managers tends to correlate strongly with return differences across size categories. Should the data be adjusted to reflect these factors? Loeper's first response to Howard included size and style, but should it merely be based on size alone?

The question of whether alpha is increasing has been studied widely in the literature. The broader question is whether it is statistically possible to "prove" either the side of the argument. If there is a lot of noise in the data, then selective choices of assumptions and applications of statistics can provide very different answers.

We invite Howard, Loeper, and other readers to continue this debate.



Chronology of the debate

[Luck versus Skill in Active Mutual Funds](#)

August 5, 2008. Robert Huebscher's original article on the study by Russ Wermers, including an interview with Wermers. Wermers' study used a statistical technique known as the False Discovery Rate (FDR) to argue that equity managers added little value over time, net of fees, and the proportion of skilled managers is on the decline.

[Letter to the Editor \(Tom Howard\)](#)

August 12, 2008. Tom Howard responds to the original article, arguing that fund alpha has been increasing ("an upward alpha slope," when measured against the S&P 500) and risk (as measured by standard deviation) has been decreasing.

[Letter to the Editor \(Ron Surz\)](#)

August 12, 2008. Ron Surz argues that the FDR advocated by Wermers provides only one level of analysis and other analytical techniques are crucial to understanding whether skill or luck is the determinant of performance.

[Letters to the Editor](#)

August 19, 2008. Four letters to the Editor take issue with various points raised by Howard in his August 5 letter. These letters primarily take issue with two points in Howard's research. First, they challenge Howard's claim that Wermers' research is biased because it fails to include funds less than five years old. Second, they challenge Howard's choice of the S&P 500 as a benchmark.

[Letter to the Editor \(Tom Howard\)](#)

August 19, 2008. Howard responds to the four letters in this issue, arguing that it is easier to find skill among newer funds with less than five years of history. He also defends his choice of the S&P 500 as the correct benchmark, since he is measuring aggregate performance across all funds, rather than the performance of individual funds.



[When Will Objectivity Enter the Active vs. Passive Debate? \(Dave Loeper\)](#)

August 19, 2008. Loeper responded to the original study and to Howard's arguments by analyzing the data available, finding that the majority of funds underperformed their best-fit benchmark over the time period in question. Loeper concluded that although skill likely exists, there was no clear evidence that out-performance by funds was attributable to skill as opposed to luck on the part of the managers.

[The New Ptolemains \(Tom Howard\)](#)

August 26, 2008. Howard's response to Loeper takes the position that breaking the market into fund subsets, based on portfolio characteristics, makes little sense for creating benchmarks. Howard agrees that a manager who has produced good returns may just be lucky rather than skillful but concludes that it is possible to build a portfolio of skilled active managers by taking additional factors – beyond long-term performance – into consideration

[Alpha during Market Cycles \(Brent Bentrin\)](#)

September 2, 2008. Bentrin provides data showing that alpha is inversely correlated to the S&P 500: alpha surges when the S&P 500 does poorly, and vice versa. Bentrin cites this as further evidence the S&P 500 is not the correct benchmark for the universe of funds.

[Howard is Right. The World is Flat \(Dave Loeper\)](#)

September 9, 2008. Loeper moves beyond fund subsets and style boxes to address the universe of all domestic equities and the universe of global equities in search of evidence of skill. With these very broad measures, Loeper finds that less than fifty percent of funds had higher return and a majority of funds had greater risk than the broad all domestic equity benchmark. In conclusion, Loeper restates that skill probably exists but luck is also present and cannot be ignored.

[Travels in Four-Pakistan \(Michael Edesess\)](#)

September 9, 2008. Edesess uses an analogy to cigarette smoking to argue that it is impossible to determine whether a manager who performed well over time did so by virtue of luck or skill.



[Luck versus Skill and the Analogy to Astronomy \(Adam Apt\)](#)

September 9, 2008. Apt, who studied the history of science, argues that Howard's analogy to Copernicus and Ptolemy is flawed.

[Benchmark Battles \(Tom Howard\)](#)

September 16, 2008. Howard responds to the charge that the S&P 500 is the incorrect benchmark. He measures performance against the broader Russell 3000 index starting in 1984, and finds the S&P 500 was a more difficult index to beat over this time period, reasserting that average fund alphas are increasing over time.

Howard provided the data in this article in order to be consistent with his original comparison to the S&P 500, which was done from 1980.

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