

# Conviction in Equity Investing

*November 2012*

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### Key Points

- Active management plays a critical, positive role in the efficiency of capital markets
- In the first study of its kind to use data on institutionally-focused products, we find that, while a large percentage of active equity managers earn enough alpha on average to cover their costs, less than 2% have demonstrated evidence of skill net of fees
  - The demonstrated skill level in active equity has steadily declined since the 1990s
- Recent research suggests that the equivalent skill figure for hedge funds is over 30%
- Only the best of the best active strategies —not just standard “buy list” managers— representing the highest conviction of the *investor* are likely to be successful in adding value
- Statistical analysis of track records is a valuable tool for assessing our odds of success given a large dataset; it is not a replacement for expert analysis of skill
- Strategies that are highest-conviction on the part of the *manager*—higher active risk, less benchmark-sensitive portfolios—offer demonstrably better odds of success
- Most institutional investors take a disproportionately small amount of risk with active management compared with the resources spent on the effort and reasonable expectations for value added
- Given these facts, we believe that Investors should consider
  - An all-passive Efficiency approach to public equity that is likely to outperform the average investor, or
  - A high-conviction, mostly active Opportunity approach that maximizes the probability of success with active management
- We believe the Efficiency model is optimal for most investors
- At a minimum, investors should avoid “closet indexing” and employ a combination of low cost passive management and high conviction active strategies
- We call on investment managers, consultants and asset owners to step up their game to fix the dysfunctional traditional equity active management model

## The State of Active Equity Management

Active management plays a critical, positive role in global capital markets. It acts as the primary driver of market efficiency by exploiting, and in the process mostly eliminating, security mispricing in order to earn profits. A seminal 1980 research paper demonstrated the impossibility of fully efficient markets as long as obtaining and using information about markets costs money. Those who spend money to identify mispriced securities through research and analysis expect to get paid in the form of excess returns. If there were no excess returns available in the market, investors wouldn't have incentives to find mispriced

securities, those mispricings would go unexploited, and markets would be grossly inefficient. There is an “equilibrium level of disequilibrium” that both ensures that active management exists and always will exist, and makes it very difficult to do successfully.<sup>1</sup>

Active management benefits society at large by promoting market efficiency, and benefits investment managers by generating fees. But does it benefit *you*? Or are index fund investors enjoying low-cost returns of markets made mostly efficient with your active management dollars?

As we will show, the evidence suggests that active management with *some* skill (ability, on average, to obtain and use information to exploit mispricing) is relatively common. However, in the great majority of cases, the benefits of skill accrue only to the manager and not to the client, since their skill generates only enough excess return to cover fees and trading costs. Active portfolio management is nearly unique in the world of commerce, in the inability of the consumer to identify true value before—and often after—buying the product.

At the same time, over the decades, the proportion of funds demonstrating enough skill to add value for their investors (that is, above fees and costs) has been on steady decline. This has been driven by increased competition, and improved models and technology—and, as we will argue later, a dissipation of *conviction* in the active management industry. **We define conviction here as the willingness to take risk and express beliefs through a bold course of action, in pursuit of long term achievement of goals.**

It is widely accepted today that the average traditional active manager underperforms the benchmark—since active managers and index funds together *are* the market, together they must earn the return *of* the market, and active management involves higher fees and trading costs that drag down average return.<sup>2</sup> Therefore, success with active management is dependent on proactively identifying the best managers through careful research. New analytical techniques allow us to measure the odds of active management by showing the size of the pool of skilled active managers.

## Taking Active Management’s Measure

In an important analytical development for the industry, recent work by three academic researchers, Barras, Scaillet and Wermers (BSW), presents a method of separating skill from luck in a broad database of historical investment manager performance.<sup>3</sup> The method essentially measures statistical significance of risk-adjusted excess return, correcting for the flaws in traditional versions of such tests applied to large

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<sup>1</sup> See Grossman and Stiglitz [1980].

<sup>2</sup> See, for example, Standard & Poor’s [2012] for data on average active manager performance.

<sup>3</sup> See Barras, Scaillet and Wermers [2010].

samples of managers that tend to cause luck to be misidentified as skill.<sup>4</sup> The authors examine U.S. equity mutual fund performance from 1975 to 2006, using a database of over 2,000 funds that is free of survivorship bias and adjusting for investment style, and separate funds into three categories as described in Figure 1.<sup>5,6</sup>

**Figure 1**  
**Classifications of Manager Skill<sup>7</sup>**

Unskilled	Underperform on average after fees and trading costs	Net alpha < 0
No Evidence of Net Alpha <sup>8</sup>	Earn enough excess return on average to cover fees and costs, but no more	Net alpha ≈ 0
Skilled	Outperform on average net of fees and costs	Net alpha > 0

Additionally, we conducted a similar analysis on the widely-used eVestment Alliance database of institutionally-oriented separate accounts, commingled funds and mutual funds over the period 2000-2011. Our analysis was based on 3,494 investment products.<sup>9</sup> To reflect the global nature of the modern approach to management of the public equity asset class, we included both U.S. and non-U.S. equity strategies. The starting date of 2000 was chosen to coincide with the inclusion of closed and merged products in the database, to address survivorship bias; we also applied correction for back-filling or

<sup>4</sup> Specifically, the method corrects for the known percentage of errors in the statistical technique called hypothesis testing. Hypothesis testing, in this application, allows us to determine whether or not a manager's alpha is higher or lower than zero not due to random chance, within a certain "significance" level, say 5%. At a 5% significance level, we have a 5% chance of incorrectly concluding that alpha is truly better than zero when it is not. When we do many such tests (as we do here), we know we will be wrong in 5% of them. This method effectively reclassifies the erroneous results as findings of No Evidence of Net Alpha.

<sup>5</sup> "Survivorship bias" refers to the tendency for many databases of fund performance to include only funds that have survived to the present time, and exclude those that have closed down or been merged with other funds. Since funds that are closed or merged are often those with weaker performance, including only the survivors tends to bias average performance upward. A database that is free of survivorship bias is one that includes "dead" (closed or merged) funds as well as survivors.

<sup>6</sup> Adjustment for investment style is done by measuring value added by excess return relative to a set of market, size, value and momentum factors.

<sup>7</sup> Alpha is defined in Figure 1 specifically as excess return relative to a style- and risk-adjusted benchmark. The term "alpha" is used elsewhere in this paper as referring to excess return relative to an appropriate benchmark.

<sup>8</sup> We use a slightly different terminology than does BSW. They use the term "zero alpha" for the group of products to which we refer to as "No Evidence of Net Alpha".

<sup>9</sup> Product count includes multiple vehicles per product (separate account, commingled fund, mutual fund). The vehicle with the longest history was used.

“instant history” bias.<sup>10,11</sup> Fees were assumed to be those of the lowest-cost investment vehicle for each product.<sup>12</sup> We provide more description of our methodology in the Appendix section.

Our study is the first of which we are aware that uses institutionally-oriented products rather than strictly mutual fund data, and therefore represents an advancement in understanding of the track record of the active equity investment management industry.

### *The Motivation*

Why should a practical-minded investor concern herself with statistical significance of the track record of a manager that has generated alpha? Over the years, many have come to believe that this is a nearly unachievable goal, requiring stellar performance results, a track record of many years, or both. It is indeed challenging though far from unattainable. In our study, a manager would need to generate an information ratio of about 0.65 over the full period of 2003-2011<sup>13</sup> (or a 3.2% annual alpha at the average active risk level of 5.0%) to meet the threshold of significant outperformance.<sup>14</sup>

In the natural world, mathematics can help us make correct decisions in individual applications, such as designing a bridge to be durable and safe. The world of human behavior, with its complexity and messiness, defies mathematics. Statistical analysis is not a sufficient tool for identifying an individual skilled manager, because of noise, limited data, and the simple inadequacy of quantitative measures in explaining human capability. If statistics were enough, identifying skill would be easy, and only truly skilled managers would survive.

However, given a large dataset and a long period of time, science can help us estimate the magnitude of the task before us. Knowing the difficulty of identifying skilled managers helps us approach the challenge in a way that has the best odds of success. Inescapably, there is an element of belief needed when relying on human skill, and taking risks based on those beliefs is a demonstration of conviction on the part of the investor. Science, here, is a link between belief and practice.

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<sup>10</sup> The database is survivorship-bias free only after 2000 (the database itself was launched in mid-2000 but data is available as far back as the 1980s).

<sup>11</sup> Backfilling or “instant history” bias refers to the upward bias in database results when investment managers adding new products are allowed to back-fill historical returns prior to the product’s inclusion. Because products that are submitted by managers for inclusion in a database are usually ones that have generated strong return histories, back-filling, while useful for completeness of data, tends to increase the average performance level.

<sup>12</sup> We assumed a \$50 million mandate size. Median fee over the full HEK sample was 68 basis points for U.S. equity products and 73 basis points for non-U.S. equity products.

<sup>13</sup> After excluding the first 36 months to correct for back-filling or instant history bias

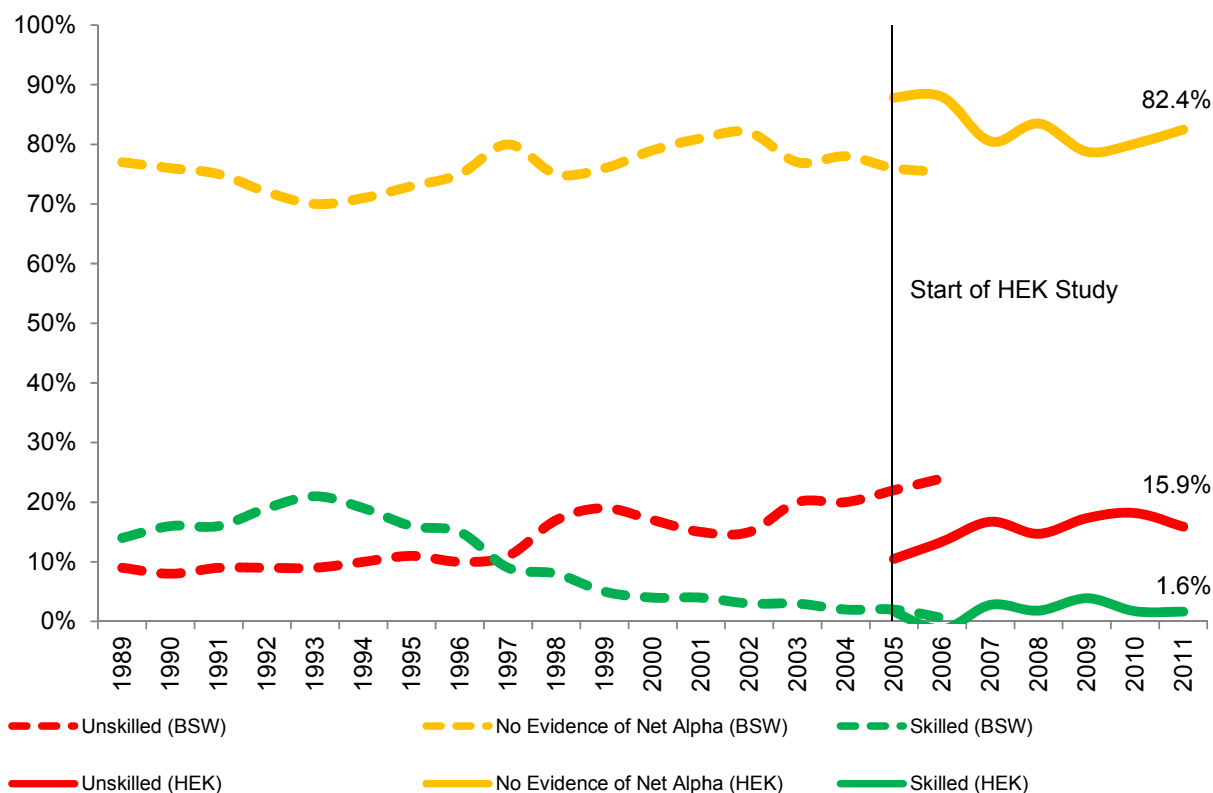
<sup>14</sup> Significant at a traditional 5% level, before any correction for misidentification of luck as skill. But at the 5% significance level, such corrections only make a small difference.

*The Results*

Consistent with many past studies, the average product in our analysis underperformed its risk- and style-adjusted benchmark, in this case by 0.4% per year. 58% of products generated negative alpha. But some outperformed—some by a material amount. What percentage of equity investment managers would you expect to demonstrate skill?

The striking results of the HEK and BSW studies are shown in a combined format in Figure 2. The three lines represent the percentage of investment products whose histories, cumulative since the beginning of the respective studies, place them in the Unskilled, No Evidence of Net Alpha and Skilled categories.

**Figure 2**  
**Manager Skill Over Increasing Cumulative Periods, 1975-2011**



The majority (70-90%) of investment products belongs to the No Evidence of Net Alpha camp (represented by the yellow lines); strategies run by managers with enough skill, on average, to earn back their fees and costs, but not to provide statistically meaningful excess return to investors. As we will discuss later, the use of active management involves costs other than fees and trading, such as oversight—so retaining these managers is worse than just a break-even proposition.

Truly skilled managers (green lines), who earn significant alpha net of fees and costs, have been steadily declining in proportion, from about 20% in the early 1990s to a very small number today. (At the same time, the representation of unskilled managers [red lines] has been steadily rising.) The most recent observation (2006) from the BSW study indicates evidence of skill in only 0.6% of U.S. equity mutual funds. Our most recent observation (2011) finds evidence of skill in 1.6% of institutionally-oriented U.S. and non-U.S. equity investment products.<sup>15,16</sup>

Put another way, more than 98 out of 100 institutionally-oriented equity investment products of all styles spanning the global equity opportunity set have failed to add true value, significantly different from zero, above fees and costs for investors over the past several decades. That proportion, furthermore, has been steadily rising as the active management industry continues to grow in size, and advances in information technology and analytical techniques make data cheaper and more useful.

Our study considers primarily U.S.-based investment managers of the equities of firms domiciled around the world. These same techniques are beginning to be applied globally to investment management firms located in a variety of regions, with similar results in the UK (3.7% of equity mutual funds in that country exhibited evidence of skill), Germany (7.5%) and China (7.9%).<sup>17</sup>

**With odds like this, only the best of the best are likely to outperform consistently. Managers that score well on all the standard evaluation criteria, but simply aren't the highest conviction choices, aren't likely to pay off for their investors.**

### *Skill in Alternative Investments*

In a recent paper, we argue that certain types of alternative investments, including hedge funds, enjoy a tailwind in performance relative to traditional stock and bond managers. Another recent study applies the BSW methodology to the Lipper TASS database of hedge fund performance over the period 1994-2009, correcting for survivorship, backfill and other biases.<sup>18</sup> In this analysis, the proportion of skilled hedge funds is 31%, with skill fairly stable, not declining, over time. The broader, higher-conviction approach of

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<sup>15</sup> Before the correction for misidentification of luck as skill that is the defining feature of the method we use in this study, the percentage of products with statistically significant positive alpha was 18.0%, at a significance level of 40%. Approximately 50% of products had alphas insignificantly different from zero. We know that, given the significance level, 40% of products classified as Unskilled and Skilled were done so in error (luck misidentified as skill), and truly belong in the No Evidence of Net Alpha group. Therefore, the true No Evidence of Net Alpha group must be 40% larger than 50%, or approximately 83% of product. 20% of *these* (half of the 40% error), or about 16% of total products, were misclassified as Skilled. Therefore, the Skilled group is 18% minus about 16%, or about 2%. Under this method, using a more traditional significance level of, say, 5% has minimal impact on results.

<sup>16</sup> We repeated the analysis using the benchmarks specified for each product in the database, rather than the market, size, value and momentum style factors. The proportion of products in the Skilled category under this analysis, which counts some elements of manager style as "alpha", is 11.5%.

<sup>17</sup> See Cuthbertson, Nitzsche and O'Sullivan [2011]; Otamende, Doncel, Grau and Sainz [2008]; Tang, Liu and Yang [2011]

<sup>18</sup> See Chen, Cliff and Zhao [2011].

hedge funds, as well as their ability to attract strong talent from traditional active management, lead to stronger odds of success.

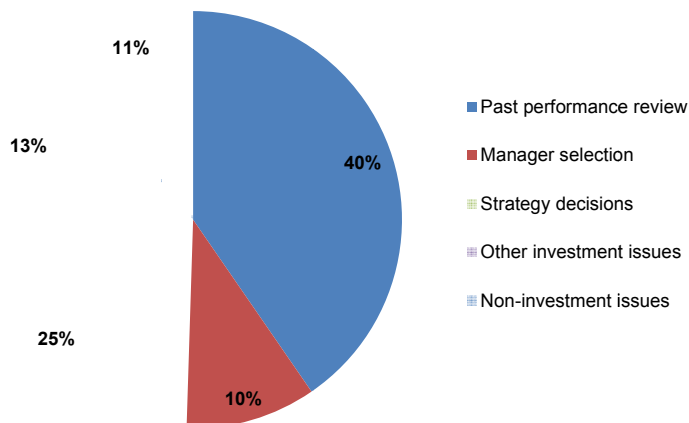
## Risk, Time and Cost

The true risk of active management is not short-term underperformance, which happens even with skilled managers, but value destruction over time through wasted fees and costs. Active management can be thought of as a long-term game where winners (successful in identifying skilled active managers in advance) gain excess returns, and losers (who discover that they are unskilled in manager selection) leave the contest poorer by the amount of their fees and costs.

These costs are significant, consisting not just of management fees and trading expenses but also the slippage associated with suboptimal investor behavior, such as hiring and firing managers based on short term performance results. Importantly, they also include “soft costs” of using active management, such as Committee time devoted to active manager issues.

A Vanguard study collected survey data on investment committee dynamics, including how meeting time is spent.<sup>19</sup> The data is summarized in Figure 3. In addition to the 10% of time reported as spent on manager selection, 40% of committee time was spent on past performance review. Issues relating to active management, especially reasons for underperformance, dominate quarterly discussions of investment results. Employing active management takes significant resources.

**Figure 3**  
**Investment Committee Time Spent on Various Activities**



Source: Vanguard Investment Counseling & Research

<sup>19</sup> See Stockton [2009].



These costs have a semi-fixed element associated even with relatively small allocations to active management. Hiring one more manager doesn't increase oversight resources spent on the margin by as much as retaining the first one does.

**This effect suggests that there is an efficiency argument for using *more* active risk if any is to be used at all.<sup>20</sup>**

## A Solution: Conviction on the Part of the Manager

For decades, studies have searched for a link between active management style or strategy and outperformance (e.g., small cap active)—and for the most part come up short.<sup>21</sup> Where such a link consistently *has* been found is with high conviction, as expressed through material active risk and more concentrated portfolios. The link between conviction and success—or benchmark-like portfolios and mediocre performance—is intuitive. Managers may have stock-picking skill but tend to hold large amount of alpha-reducing deadweight positions to reduce benchmark risk in addition to their best ideas. They need sufficient active risk to overcome the drag of their fees, which don't decrease proportionally with risk. And some unskilled managers may know they are unskilled and hug the benchmark to hide that fact and continue to collect fees. Notable findings from this emerging area of research are summarized below.

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<sup>20</sup> Active risk is a measure of a portfolio's deviation from a benchmark, or the aggressiveness of an active strategy. It is defined mathematically here as the annualized volatility of excess monthly or quarterly excess return relative to the benchmark, and is synonymous with "tracking error".

<sup>21</sup> See, for example, Ennis and Sebastian [2002].

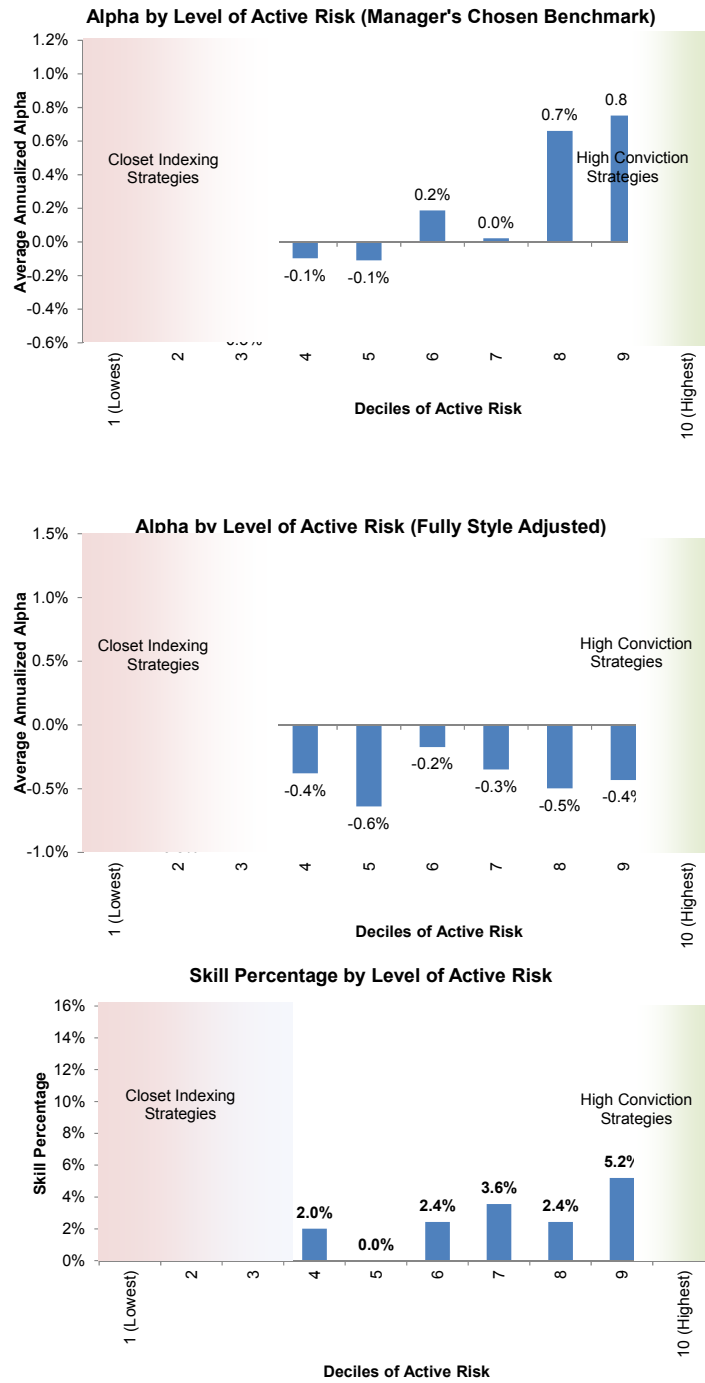
**Figure 4**  
**Review of Literature on Performance of High-Conviction Strategies<sup>22</sup>**

Study	Finding
Amihud and Goyenko [2012]	Funds with lower R <sup>2</sup> (greater deviation from the market) outperform
Baks, Busse and Green [2006]	Managers willing to take big bets outperform
Brands, Brown and Gallagher [2005]	More concentrated funds outperform
Cremers, Ferreira, Matos and Starks [2011]	The most active funds outperform; closet indexers underperform
Da, Gao and Jagannathan [2010]	High active share and aggressive growth managers outperform
Duan, Hu and McLean [2009]	Managers exhibit stock picking ability only in high-volatility stocks
Huij and Derwall [2011]	Fund managers willing to take big bets, and with broader investment strategies, outperform
Ivkovic, Sialm and Weisbenner [2008]	Households with more concentrated stock holdings earn better returns
Jiang, Verbeek and Wang [2011]	Managers' highest-conviction stock holdings outperform
Kacperczyk, Sialm and Zheng [2004]	More concentrated funds outperform
Petajisto [2010]	The most active stock pickers outperform; closet indexers underperform
Wang and Zheng [2012]	Hedge funds with strategies more distinctive from peers outperform
Wermers [2000]	Funds that trade more actively outperform

Figure 5 illustrates the relationship between active risk, alpha and skill in our study, dividing products into deciles (ten equal groups) sorted by active risk. There is a clear positive relationship between active risk relative to a manager's preferred benchmark and alpha. Closet indexing strategies with low active risk generate negative alpha, while high conviction strategies with high active risk outperform. After fully adjusting for style, *only* the highest risk group earned positive alpha—a healthy 1 percentage point after fees. And when conducting our skill analysis within each group, we find no evidence of skill among the closet indexers, but nearly 14% in the highest risk group. High conviction active strategies are truly a separate category, whether found in the traditional equity space or among alternative investments.

<sup>22</sup> See the References section at the end of this paper for more identifying details on the studies listed here.

**Figure 5**  
**Active Risk, Alpha and Skill**



None of this is meant to suggest that an active strategy is better simply because it takes on more risk—risk seems to be a necessary, but not sufficient, condition for adding value. Higher active risk removes constraints and allows managers who truly have skill to add value. It also can be a signal for other positive characteristics, most importantly conviction in one’s own abilities. Those who can truly add value will want to profit from their skill. Those who cannot will not stray too far. **The challenge for the investor is to be willing to reward managers with high conviction, but volatile, strategies with their business. Doing so improves your odds of success.**

Next, we examine the risk-taking practices of the investors themselves.

## A Risk Puzzle

It has been argued that the relationship between conviction and outperformance (or conversely, over-diversification and underperformance) has developed only since the mid-1990s, and accounts for a large part of the decline in observed skill since that time.<sup>23</sup> Closet-indexing active equity strategies began to replace traditional stock picking around that time as precise benchmarking and style boxes came in vogue with consultants and clients, who punished managers who strayed too far.<sup>24</sup> The shift of talent from traditional equity management to hedge funds has likely accelerated this effect. The creator of the “active share” measure of deviation from benchmarks argues that closet indexing has gained even more popularity since the beginning of the financial crisis.<sup>25</sup>

A similar effect exists in diversified portfolios of active managers held by clients. Institutional investors behave in a way consistent with expecting value added from their active managers; for example, they spend significant resources (money and soft costs) selecting and monitoring managers. But it is well known that active management typically contributes only a small percentage of total fund risk and return, with asset allocation accounting for 90% or more of long-term results.<sup>26</sup> This is true of institutional investors with whom we work, who routinely exhibit total risk allocations from active management of 5%, 3% or even less.

As a result, the implied alpha (expected aggregate active manager excess return consistent with portfolio structure including risk allocations) of a typical investor is in the neighborhood of five to ten basis points.<sup>27</sup>

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<sup>23</sup> See Senechal [2010].

<sup>24</sup> Closet indexing refers to active portfolios that are so close to the benchmark as to provide index-like returns with active fees and costs.

<sup>25</sup> See Petajisto [2010].

<sup>26</sup> Long-term results are defined here as volatility of total returns, but the assertion also holds true for level of long-term returns. See Brinson, Singer and Beebower [1991] and Ibbotson and Kaplan [2000] for discussion.

<sup>27</sup> We use the implied expectations calculation methodology described in Sharpe [2002] for an investor with a 75% allocation to the broad global equity market, a 25% allocation to the broad, market duration investment grade bond market, a 3% aggregate active risk level in active equity, a 50% active allocation within fixed income with aggregate risk of those active managers of 1%, and a 70% active allocation within equity. Roughly, implied alpha is equal to marginal contribution to risk from active equity divided by the marginal contribution to risk from the equity market, divided by the expected return on the equity market.

**In general, investors' portfolios are positioned to earn much less alpha than they likely expect, even if successful with active management.**

When an investor with reasonable expectations for long-term equity market returns—7-8%—structures the portfolio, as most institutional investors do, to take the vast majority of total risk from asset allocation, the implication is that little is expected from active management. Only an all-active portfolio of high-conviction concentrated strategies comes close to being consistent with the typical investor's alpha expectations, likely 0.5% per year or more.

This phenomenon—that investors take so little risk, and that risk taking is so similar across organizations, despite the fact that they must have differing views about active management—has been described as the “active risk puzzle”.<sup>28</sup> Low risk contributions from active management are driven by several factors, including the use of low-risk strategies, closet indexing by over-diversifying across portfolios, and the use of passive management. We argue that passive management has two motivating factors.

- *Reduce volatility of active return*; that is, the short-term variance of results of active managers the client believes to be skilled and expected to add value in the longer term. This is entirely reasonable, but given the small contribution to the bottom line from even skilled active management, the additional dilution reduces the chance of significant total fund success with active management.
- *Hedge the active management bet*; that is, limit exposure to active management in the event that the managers are in fact unskilled. This signals a lack of conviction in the chosen strategies, which is unlikely to be associated with long-term success with active management, especially if it is associated with value-destroying behaviors such as frequently hiring and firing managers. In an often-cited study, two academic researchers found that plan sponsors' manager termination decisions led to no better outcomes than if they had stayed with the fired managers.<sup>29</sup>

To which camp do you belong with your passive investments? Can those investors who lack conviction in active management succeed with it in the long term?

## A Solution, Continued: Conviction on the Part of the Investor

Impactful, lasting success with active management requires a high conviction strategy. This means taking a meaningful portion of total fund risk with highly active strategies that represent the very best ideas of the professionals conducting manager selection.

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<sup>28</sup> See discussion in, for example, Litterman [2004].

<sup>29</sup> See Goyal and Wahal [2008]

Clients who do not want the cost, complexity and volatility of such a strategy, or who do not have the necessary conviction in active management, or whose short time horizon or very large size does not make them a good candidate for a highly active aggregate equity portfolio, would be well-served by a traditional global public equity portfolio that is all-, or nearly all-, passive.

We recommend that investors consider one of two directions:

**An Efficiency equity portfolio that is 100% indexed to a broad global equity benchmark.** This minimum-cost and complexity portfolio reaps the benefits of market efficiency driven by the industry's active management efforts, and can be expected to earn a return equal to or better than that of the average investor over long periods of time.

**An Opportunity portfolio that maximizes the odds of success from active management in a high-conviction approach that is 80% or more actively managed,** focusing on more concentrated active portfolios and avoiding low active risk and closet indexing deadweight at all costs. This higher cost, higher complexity approach gives investors a realistic chance of achieving the active management excess return goals they expected to achieve all along, and mines the existing portfolio for a new and significant risk factor with a low correlation with the markets.

If you are an experienced user of active management who seeks to maximize returns in your public equity portfolio, and yet the Opportunity approach doesn't sound appealing to you, consider what this reveals of your true beliefs about active management in this area.

**We believe that the Efficiency model is optimal for most investors. Efficiency investors demonstrate conviction through a bold course of action of differing from peers who subscribe to the current model of active equity management.** Those who choose to reduce or eliminate active risk in public equity free up resources for a shift in risk taking to hedge funds, private equity and non-core real estate investments, where investors have a tailwind relative to traditional active management.

Those who choose Opportunity in public equity might effectively combine those strategies with their alternative investments in a broad High Conviction asset category that includes higher active risk traditional equities, hedge funds and hedge fund-like strategies (including long/short), private equity and more. Recall that the equity managers who were willing to take the most risk relative to the benchmark stood out from the crowd, demonstrating positive alpha and skill percentages that could reasonably compete with those of hedge funds.

High conviction strategies require a long-term focus and patience with short-term volatility. Investors who allocate to more volatile concentrated managers should choose to treat these public investments *as if they were illiquid* like private investments, and pledge to resist making portfolio changes mid-stream.

For investors unwilling to go to such extremes, at a minimum consider a strategy that combines indexing with high-conviction active strategies and avoids the expensive diversification of low active risk strategies and multitudes of actively managed portfolios.

**Whatever the chosen course of action, investors should place a very high hurdle in front of prospective active managers.** Accept only the highest-conviction choices (the very highest-rated managers), and choose indexing wherever there is any doubt about the quality of the available products in a given category.

## A Call to Action

The existing traditional equity active management model is broken. Enormous sums of money chase a tiny proportion of skilled managers. Institutional investors spend significant time and resources on a portion of their programs that, for most, contributes little to the bottom line even when successful. What should be done? Many investors will choose, over time, to move to an Efficiency-type model of passive management. The traditional active management industry will also likely transform over time toward the more unconstrained approach of hedge funds and other alternative investment strategies.

But the active management industry, with the size and incentives to act as the enforcer of capital market efficiency, isn't going anywhere. We call on all of the major players to step up their game.

*Investment managers* must focus on higher-conviction strategies that allow their skill to flow through to client returns, and reject low active risk strategies whose alpha is eaten up by fees and trading costs.

*Consultants* must also act with greater conviction, putting forward only their strongest recommendations, avoiding "safe" managers and being willing to recommend indexing instead in areas where credible products are lacking, or closed to new investors.

*Asset owners* must look within themselves to discover whether they are true believers. Those who are (the Opportunity investors) must demand conviction from managers and consultants, but also defeat their own value-destroying tendencies to chase returns and fire underperformers.

We may be at an inflection point in portfolio management—one that presents an opportunity for our industry to find success in its most difficult endeavor.

## Appendix

We conduct a similar analysis of separating skill from luck in a broad database of historical actively-managed equity investment manager performance using the framework described in BSW research study<sup>30</sup>.

We start with monthly gross-of-fees returns obtained from widely-used eVestment Alliance database of institutionally-oriented separate accounts, commingled funds and mutual funds that exist at any time between 2000 and 2011 (inclusive). To reflect the global nature of the modern approach to management of the public equity asset class, we included both U.S. and non-U.S. equity strategies. While the original dataset included over 6,000 investment products<sup>31</sup>, we further select only funds having at least 36 monthly return observations (the monthly returns need not be contiguous). Further, we calculate net-of-fees returns using fees that were assumed to be those of the lowest-cost investment vehicle for each product<sup>32</sup>. To correct for back-filling bias, we used information from eVestment database that reports both the inception date of each fund as well as the date the fund was added to their database. Using this information, we drop the first 36 monthly returns of every fund<sup>33</sup>. Our final dataset has 3,494 funds<sup>34</sup>.

As per BSW framework, the key inputs required are the *t-statistics* and *p-values* of individual fund estimated alphas. For each fund, we estimate the alphas (and subsequently *t-statistics* and *p-values*) using the four-factor regression model (proposed by Carhart) employed by BSW<sup>35</sup>.

Among the 3,494 funds (and using the performance of each fund over the period 2003 to 2011), we estimate that the majority – 82.5% - are No Evidence of Net Alpha funds – funds that earn enough excess return to cover fees and costs and no more (Net alpha  $\approx$  0). Further, 15.9% of the funds are unskilled (Net alpha < 0); while 1.6% are skilled (Net alpha > 0). We also examine the evolution of manager skill over time using the framework described by BSW. At the end of each year from 2005 to 2011, we estimate the proportions of unskilled, No Evidence of Net Alpha, and skilled funds using the entire return history for each fund up to that point in time. As we move forward in time, we add new funds once they exhibit a 36-month record. To illustrate, our initial estimates, at the end of 2005, cover the first three years of our sample, 2003 to 2005 (2,145 funds), while our final estimates, at the end of 2011, are based on the entire 9 years, 2003 till 2011 (3,494 funds).

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<sup>30</sup> See Barras, Scaillet and Wermers [2010]; Specifically, we used the fixed-value procedure as described in the Internet Appendix section of their article [with  $\lambda^* = 0.6$  and  $Y^* = 0.4$ ].

<sup>31</sup> Product count includes multiple vehicles per product (separate account, commingled fund, mutual fund). The vehicle with the longest history was used.

<sup>32</sup> We assumed a \$50 million mandate size. Median fee over the full HEK sample was 68 basis points for U.S. equity products and 73 basis points for non-U.S. equity products.

<sup>33</sup> The median incubation period – from a fund's inception to its entry into eVestment – was 49 months for U.S. equity products and 35 months for non-U.S. equity products. We used 36 months for simplicity and consistency.

<sup>34</sup> 3,138 U.S. equity products and 356 non-U.S. equity products.

<sup>35</sup> U.S. equity factor returns were obtained from Kenneth French's website. Non-U.S. equity factor returns were provided by Jason Hsu (see References section).



## HEK Study Decision Tree

Step	Data <sup>36</sup>		
<b>Identify Dataset</b>	3,494 products (100%) Average alpha = -0.4% Average active risk = 5.0%		
<b>Test for Significance</b>	Significant negative alpha (32%) Average alpha = -3.0% Average active risk = 4.4%	Non-significant alpha (50%) Average alpha = 0.0% Average active risk = 5.1%	Significant positive alpha (18%) Average alpha = 3.4% Average active risk = 5.6%
<b>Correct for Misidentification of Luck as Skill</b>	Unskilled (16%)      16% →	No Evidence of Net Alpha (82%)	← 16%      Skilled (2%)

<sup>36</sup> Alpha and active risk statistics shown are annualized

## References

- Amihud, Yakov and Goyenko, Ruslan, Mutual Fund's R2 as Predictor of Performance (October 23, 2012). Available at SSRN: <http://ssrn.com/abstract=1319786> or <http://dx.doi.org/10.2139/ssrn.1319786>
- Busse, Jeffrey A., Green, T. Clifton and Baks, Klaas, Fund Managers Who Take Big Bets: Skilled or Overconfident. AFA 2007 Chicago Meetings Paper. Available at SSRN: <http://ssrn.com/abstract=891727> or <http://dx.doi.org/10.2139/ssrn.891727>
- Laurent Barras & Olivier Scaillet & Russ Wermers, 2010. "False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas," Journal of Finance, American Finance Association, vol. 65(1), pages 179-216, 02.
- Brands, Simone, Brown, Stephen J. and Gallagher, David R., Portfolio Concentration and Investment Manager Performance (March 12, 2004). Available at SSRN: <http://ssrn.com/abstract=846065> or <http://dx.doi.org/10.2139/ssrn.846065>
- Brinson, Gary P.; Singer, Brian D.; Beebower, Gilbert L., Determinants of Portfolio Performance II: An Update, Financial Analysts Journal; May/Jun 1991; 47, 3; ABI/INFORM Global pg. 40
- Chen, Yong, Cliff, Michael T. and Zhao, Haibei, Hedge Funds: The Good, the (Not-So) Bad, and the Ugly (February 2, 2012). Available at SSRN: <http://ssrn.com/abstract=1915511> or <http://dx.doi.org/10.2139/ssrn.1915511>
- Cohen, Randolph B., Polk, Christopher and Silli, Bernhard, Best Ideas (March 15, 2010). Available at SSRN: <http://ssrn.com/abstract=1364827> or <http://dx.doi.org/10.2139/ssrn.1364827>
- Cremers, Martijn, Ferreira, Miguel A., Matos, Pedro P. and Starks, Laura T., The Mutual Fund Industry Worldwide: Explicit and Closet Indexing, Fees, and Performance (December 15, 2011). Available at SSRN: <http://ssrn.com/abstract=1830207> or <http://dx.doi.org/10.2139/ssrn.1830207>
- Cuthbertson, K., Nitzsche, D. and O'Sullivan, N. (2012), False Discoveries in UK Mutual Fund Performance. European Financial Management, 18: 444–463. doi: 10.1111/j.1468-036X.2009.00536.x
- Da, Z., et al. (2011). "Impatient Trading, Liquidity Provision, and Stock Selection by Mutual Funds." Review of Financial Studies 24(3): 675-720.
- Duan, Ying, Hu, Gang and McLean, R. David, When is Stock-Picking Likely to be Successful? Evidence from Mutual Funds (December 8, 2008). Financial Analysts Journal, Vol. 65, No. 2, pp. 55-66, 2009. Available at SSRN: <http://ssrn.com/abstract=1313411>
- Ennis, Richard M., and Michael D. Sebastian, 2002. The small-cap alpha myth. Journal of Portfolio Management 28(3):11–6.
- eVestment Alliance database <https://www.vestment.com/global/Home.aspx>
- Fama, E. F. and French, K. R. (2010), Luck versus Skill in the Cross-Section of Mutual Fund Returns. The Journal of Finance, 65: 1915–1947. doi: 10.1111/j.1540-6261.2010.01598.x
- French, Kenneth, Data Library. [http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data\\_library.html](http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html)
- Amit Goyal & Sunil Wahal, 2008. "The Selection and Termination of Investment Management Firms by Plan Sponsors," Journal of Finance, American Finance Association, vol. 63(4), pages 1805-1847, 08.
- Grossman, Sanford J. and Stiglitz, Joseph E., On the Impossibility of Informationally Efficient Markets, The American Economic Review, Vol. 70, No. 3 (Jun., 1980), pp. 393-408
- Hsu, Jason. Global Value, Size and Momentum Factor Portfolio Returns. <http://www.jasonhsu.org/research-data.html>
- Huij, Joop and Derwall, Jeroen, Global Equity Fund Performance, Portfolio Concentration, and the Fundamental Law of Active Management (August 17, 2009). ERIM Report Series Reference. Available at SSRN: <http://ssrn.com/abstract=1456352> or <http://dx.doi.org/10.2139/ssrn.1456352>
- Ibbotson, Roger and Paul Kaplan, Does Asset Allocation Explain 40, 90 or 100 Percent of Performance?, Financial Analysts Journal, 2000.

Ivkovich, Zoran, Sialm, Clemens and Weisbenner, Scott J., Portfolio Concentration and the Performance of Individual Investors. AFA 2006 Boston Meetings; Journal of Financial and Quantitative Analysis, Forthcoming. Available at SSRN: <http://ssrn.com/abstract=568156> or <http://dx.doi.org/10.2139/ssrn.568156>

Jiang, Hao, Verbeek, Marno and Wang, Yu, Information Content When Mutual Funds Deviate from Benchmarks (December 1, 2011). AFA 2012 Chicago Meetings Paper. Available at SSRN: <http://ssrn.com/abstract=1782692> or <http://dx.doi.org/10.2139/ssrn.1782692>

Litterman, Robert, The Active Risk Puzzle, Journal of Portfolio Management, 2004.

Kacperczyk, M., Sialm, C. and Zheng, L. (2005), On the Industry Concentration of Actively Managed Equity Mutual Funds. The Journal of Finance, 60: 1983–2011. doi: 10.1111/j.1540-6261.2005.00785.x

Otamendi, Javier, Luis Miguel Doncel, Pilar Grau, and Jorge Sainz, (2008) "An evaluation on the true statistical relevance of Jensen's alpha trough simulation: An application for Germany." Economics Bulletin, Vol. 7, No. 10 pp. 1-9  
<http://economicsbulletin.vanderbilt.edu/2008/volume7/EB-08N20001A.pdf>

Petajisto, Antti, Active Share and Mutual Fund Performance (December 15, 2010). Available at SSRN: <http://ssrn.com/abstract=1685942> or <http://dx.doi.org/10.2139/ssrn.1685942>

Edouard Sénéchal, "The Empirical Law of Active Management: Perspectives on the Declining Skill of U.S. Fund Managers" The Journal of Portfolio Management, Fall 2010, Vol. 37, No. 1: pp. 121-132

Sharpe, W. F. (1991). "The Arithmetic of Active Management." Financial Analysts Journal 47(1): 7-9.

Sharpe, William F., Budgeting and Monitoring Pension Fund Risk. Financial Analysts Journal, Vol. 58, No. 5, 2002. Available at SSRN: <http://ssrn.com/abstract=377422>

Standard & Poor's, S&P Indices vs. Active Funds (SPIVA) Scorecard, Year-End 2011.  
<http://www.spindices.com/documents/spiva/spiva-us-yearend2011.pdf>

Stockton, Kimberly A., Investment Committee Decision-Maker Study, Vanguard Investment Counseling & Research, 2009.

Tang, Ya, Liu, YU-Jane and Yang, Yi, Measuring Luck in Mutual Fund Performance: Evidence from False Discovery Ratio Method (October 12, 2011). Available at SSRN: <http://ssrn.com/abstract=1942862> or <http://dx.doi.org/10.2139/ssrn.1942862>

Sun, Z., et al. (2011). "The Road Less Traveled: Strategy Distinctiveness and Hedge Fund Performance." Review of Financial Studies.

Russ Wermers, 2000. "Mutual Fund Performance: An Empirical Decomposition into Stock-Picking Talent, Style, Transactions Costs, and Expenses," Journal of Finance, American Finance Association, vol. 55(4), pages 1655-1703, 08.

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