Conviction in Equity Investing

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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 the existence and permanence of active management and makes it very difficult to do successfully.¹

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 fees and trading-cost dollars?²

As we will show, the evidence suggests that active management with some skill (the ability, on average, to obtain and use information to exploit mispricing) is prevalent. However, in the great majority of cases, the benefits of skill accrue only to the manager and not to its clients, because 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 evidence suggests that the proportion of funds that demonstrate enough skill to add value for their investors (that is, above fees and costs) has been on a steady decline. This has been driven by increased competition, 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 goals.

It is widely accepted today that the average traditional active manager underperforms the benchmark—because 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. Therefore, an investor who seeks to achieve excess returns from active
management can only do so by proactively identifying the best managers. New analytical techniques allow us to measure the odds of successful active management by estimating 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. The method essentially measures the statistical significance of risk-adjusted excess return, correcting for the flaws in traditional versions of such tests that are applied to large samples of managers and tend to misidentify luck as skill. The authors examine U.S. equity mutual-fund performance from 1975 to 2006, using a database of more than 2,000 funds that is free of survivorship bias and does not adjust for investment style, and separate funds into three categories, as described in Exhibit 1.

Additionally, we conducted a similar analysis on the widely used eVestment Alliance database of institutionally oriented separate accounts, commingled funds, and mutual funds from 2000 to 2011. Our analysis was based on 3,494 investment products. To reflect the global nature of the modern approach to management in the public equity asset class, we included both U.S. and non-U.S. equity strategies. We chose a starting date of 2000 to coincide with the inclusion of closed and merged products in the database, done to address survivorship bias. We also applied a correction for backfilling, or instant-history bias. We assumed that fees were those of the lowest-cost investment vehicle for each product. We provide more description of our methodology in Appendix A.

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 the track record of the active equity investment management industry.

**THE MOTIVATION**

Why should a practically minded investor concern herself with the statistical significance of an alpha-generating manager’s track record? Over the years, many have come to believe that achieving alpha is a nearly unattainable goal, requiring stellar performance results, a track record of many years, or both. It is indeed challenging, though not unattainable. In our study, a manager would need to generate an information ratio of about 0.65 over the full period of 2003 to 2011, or a 3.2% annual alpha at the average active risk level of 5.0%, to meet the threshold of significant outperformance.

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. Knowing the difficulty of identifying skilled managers would help investors approach the challenge in a way that has the best odds of success. Inescapably, there is an element of belief in relying on human skill, and taking risks based on those beliefs is a demonstration of an investor’s conviction. Science, as used here, is a link between belief and practice.

**EXHIBIT 1**

**Classifications of Manager Skill**

| Unskilled | Underperform on average after fees and trading costs | Net alpha < 0 |
| No Evidence of Net Alpha | 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 |

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. Fifty-eight percent 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?

Exhibit 2 shows the striking results of our study and that of BSW in a combined format. 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.

The majority (70% to 90%) of investment products belongs to the “No Evidence of Net Alpha” camp (represented by the black lines). These are 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 in addition to than fees and trading, such as oversight—so retaining these managers is worse than just a break-even proposition.

Truly skilled managers (dark grey 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 proportion of unskilled managers [light grey lines] has been steadily rising.) The most recent observation (in 2006) from the BSW study indicates evidence of skill in only 0.6% of U.S. equity mutual funds. Our most recent observation (in 2011) finds evidence of skill in 1.6% of institutionally oriented U.S. and non-U.S. equity investment products.16,17

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, which is significantly different from zero value, above fees and costs for investors over the past several decades. That proportion, furthermore, has been steadily rising during a period in which the active equity management industry has grown in size, and advances in information technology and analytical techniques have made data cheaper and more useful.

Our study considers primarily U.S.-based investment managers who trade 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 U.K. (3.7% of equity mutual funds in that country exhibited evidence of skill), Germany (7.5%), and China (7.9%).18

With odds like this, only the best of the best could be reasonably expected to outperform consistently. Managers that score well on all the standard evaluation criteria, but simply aren’t the highest-conviction choices, are unlikely to pay off for their investors.

**E X H I B I T  2**

Manager Skill over Increasing Cumulative Periods, 1975–2011
RISK, TIME, AND COST

The true risk of active management is not short-term underperformance, which happens even with managers with favorable long-term track records, but value destruction over time through wasted fees and costs. Active management can be thought of as a long-term game where winners (who identified skilled active managers in advance) gain excess returns, and losers (who discover that they have been 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 the soft costs of using active management, such as the investment committee time devoted to active manager issues.

A Vanguard study collected survey data on investment committee dynamics, including how meeting time is spent. The data is summarized in Exhibit 3. In addition to spending 10% of time on manager selection, committees spent 40% of their time 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.

These costs have a semi-fixed element, which is 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 manager does.

EXHIBIT 3
Investment Committee Time Spent on Various Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage of Time Allocated at Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past performance review</td>
<td>40%</td>
</tr>
<tr>
<td>Manager selection</td>
<td>10%</td>
</tr>
<tr>
<td>Strategy decisions</td>
<td>25%</td>
</tr>
<tr>
<td>Non-investment issues</td>
<td>11%</td>
</tr>
<tr>
<td>Other investment issues</td>
<td>13%</td>
</tr>
</tbody>
</table>

Source: The Vanguard Group, Inc., used with permission. Data are rounded to nearest whole percentage point.

This effect suggests that there is an efficiency argument for using more active risk, if a fund uses any at all.

A SOLUTION: MANAGER CONVINCION

For decades, studies have searched for a link between active management and outperformance (e.g., small-cap active)—and for the most part come up short. Where evidence of such a link has been found (as summarized in Exhibit 4) is with material active risk and more concentrated portfolios. We argue that greater active risk and concentration is a manifestation of conviction, or willingness to take risk in pursuit of outperformance. We suggest that an intuitive link exists between conviction and success, as well as between benchmark-like portfolios and mediocre performance. Managers may have stock-picking skill, but tend to hold alpha-reducing deadweight positions to reduce benchmark risk, in addition to using their best ideas (see Cohen et al. [2010]).
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.

Exhibit 5 illustrates the relationship between active risk, alpha, and skill in our study, dividing products into deciles (10 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 strategies with high active risk outperform. After fully adjusting for style, only the highest risk group earned positive alpha—an economically significant single 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% of the highest-risk group show evidence of skill.

To mitigate the potential effect of backfilling bias on our sample, we deleted the first 36 months of return data for each product from our sample. This correction introduces potential survivorship bias in that it excludes products that both entered the dataset and left it (by being closed or merged with another product) within a 36-month window. Given that poorly performing funds are more likely to be closed or merged with other funds, and higher active risk funds are arguably more likely than lower active risk funds to experience extreme negative short-term performance events, there is a risk that our dataset disproportionately advantages high active risk products by excluding those that experienced such events.

To address this concern, we conducted an additional analysis that includes all products, regardless of length of available history, and compares performance only to the manager’s chosen benchmark, to avoid issues with insufficient data to estimate Fama–French benchmarks, thus eliminating the survivorship bias concern previously described, but while necessarily also introducing potential backfilling bias. The results (shown in Appendix B) are broadly similar to those arising from the comparable analysis that excludes the first 36 months of data, which show a positive relationship between levels of active risk and excess return. Within the subsample of dead products with less than 36 months of history, there is no discernible relationship between active risk and excess return. As a note of caution, among dead products with greater than 36 months of history, products in the highest decile of active risk posted an average excess return that,
although positive, was well below the averages in deciles six through nine. The attenuation of high active risk products with poor performance shows the importance of manager selection in this area.

None of this should 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. (Likewise, high active risk coupled with lack of skill and/or bad luck can produce significant underperformance.) It may also be a signal for other positive characteristics, most importantly conviction in one’s own abilities. Those who can truly add value rationally want to profit from their skill. Those who cannot may not stray too far from the benchmark. Investors’ challenge is to be willing to take their business to managers with high-conviction volatile strategies.

Next, we discuss asset owners’ risk-taking practices.

A RISK PUZZLE

It has been argued that the relationship between active risk 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. 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 their clients, who punished managers who strayed too far. 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.

A similar effect exists in diversified portfolios of active managers held by asset owners. Institutional investors behave in a way that’s 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 consistent with broadly accepted research that active management typically contributes only a small percentage of total fund risk and return, as a logical consequence of asset allocation accounting for 90% or more of long-term results.

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 5 to 10 basis points. In general, investors’ portfolios are positioned to earn much less alpha than they likely expect, even if the active managers they choose are successful.

When an investor with reasonable expectations for long-term equity market returns—perhaps 6% to 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 their differing views about active management—has been described as the “active risk puzzle.”

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. Passive management aims to:

- Reduce volatility of active return, or the short-term variance of results achieved by active managers the investor believes to be skilled and expects 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, or limit exposure to active management in case the active managers are actually 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.

To which camp do you and your passive investment belong? Can investors who lack conviction with active management succeed with it in the long term?
A SOLUTION, CONTINUED:
INVESTOR CONVITION

We believe that investors find significant, lasting success with active management more readily when they use high-conviction strategies. Stated differently, a low-conviction, benchmark-like portfolio with active management costs appears highly unlikely to produce outperformance. A high-conviction strategy consists of taking a meaningful portion of total fund risk with highly active strategies that represent the absolute best ideas of those responsible for manager selection.

Investors 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 do not make them good candidates 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, to which the industry’s active-management efforts contributes. All else being equal, this portfolio 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 more realistic chance of achieving their active-management excess return goals, and mines the existing portfolio for a new and significant risk factor (active risk) with a low correlation to most markets.

If you are an experienced active-management investor who seeks to maximize returns in your public equity portfolio, 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, differing from peers who subscribe to the current model of active equity management (and have not found success, on average). 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 we believe that 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 took the most risk relative to the benchmark stood out from the crowd, demonstrating positive alpha and greater evidence of skill.

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 as illiquid as private investments and resist making portfolio changes mid-stream.

Investors unwilling to go to such extremes should 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 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 it’s 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 the major players to step up their game.

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

Investment consultants should 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 should look within themselves to discover whether they are true believers. Those who really are 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 A

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.30

We start with monthly gross-of-fees returns obtained from a 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. Although the original dataset included more than 6,000 investment products,31 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.32 To correct for backfilling bias, we used information from the 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.33 Our final dataset has 3,494 funds.34

As per BSW framework, the key inputs required are the t-statistics and p-values of individual fund’s 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.35

Among the 3,494 funds (and using the performance of each fund over the period from 2003 to 2011), we estimate that the majority, or 82.5%, are “No Evidence of Net Alpha” funds, or funds that earn enough excess return to cover fees and costs and no more (net alpha ≈ 0). Further, 15.9% of the funds are “Unskilled” (net alpha < 0), and 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 time. As we move forward in time, we add new funds after they have a 36-month record. For example, we made our initial estimates at the end of 2005; they cover the first three years of our sample: 2003 to 2005 (2,145 funds). Our final estimates, made at the end of 2011, are based on the entire nine years: 2003 to 2011 (3,494 funds).

EXHIBIT A1

Decision Tree

<table>
<thead>
<tr>
<th>Step</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify Dataset</td>
<td>3,494 products (100%)</td>
</tr>
<tr>
<td>Test for Significance</td>
<td>Non-significant alpha (50%)</td>
</tr>
<tr>
<td>Correct for Misl-identification of Luck as Skill</td>
<td>Unskilled (16%)</td>
</tr>
<tr>
<td>Correct for Misl-identification of Luck as Skill</td>
<td>Significant positive alpha (18%)</td>
</tr>
<tr>
<td></td>
<td>Average alpha = 3.4%</td>
</tr>
<tr>
<td></td>
<td>Average active risk = 5.6%</td>
</tr>
<tr>
<td></td>
<td>Significant negative alpha (32%)</td>
</tr>
<tr>
<td></td>
<td>Average alpha = -3.0%</td>
</tr>
<tr>
<td></td>
<td>Average active risk = 4.4%</td>
</tr>
<tr>
<td></td>
<td>Non-significant alpha (50%)</td>
</tr>
<tr>
<td></td>
<td>Average alpha = 0.0%</td>
</tr>
<tr>
<td></td>
<td>Average active risk = 5.1%</td>
</tr>
</tbody>
</table>

CONVICTED IN EQUITY INVESTING SUMMER 2014
APPENDIX B

EXHIBIT B1
Active Risk, Alpha, and Skill without 36-Month Return History Requirement

Excess Return by Level of Active Risk (Manager's Chosen Benchmark)

- All Products

- Live Products with Less Than 36 Months History

- Live Products with Greater Than 36 Months History

- Dead Products with Less Than 36 Months History

- Dead Products with Greater Than 36 Months History

Deciles of Active Risk

n = 4,491 products

n = 98 products

n = 2,800 products

n = 234 products

n = 1,359 products

Average Annualized Alpha

-0.5% to 0.5%

-1.2% to 1.8%

-2.7% to 1.2%

-0.7% to 0.4%

0.0% to 0.4%
well as survivors. Bias is one that includes "dead" (closed or merged) funds, as performance upward. A database that is free of survivorship bias is one that includes only the survivors. Tends to bias average findings of "No Evidence of Net Alpha." This method effectively reclassifies the erroneous results as 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." Survivorship bias refers to the tendency of many fund-performance databases to include only funds that have survived to the present time and exclude those that have closed down or merged with other funds. Since funds that are closed or merged are often those with weaker performances, 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. Adjustment for investment style is done by measuring the value added by excess return, relative to a set of market, size, value, and momentum factors. Alpha is defined in Exhibit 1 specifically as excess return relative to a style- and risk-adjusted benchmark. The term "alpha" is used elsewhere in this article to refer to excess return relative to an appropriate benchmark. We use a slightly different terminology than do BSW. They use the term "zero alpha" for the group of products to which we refer to as "No Evidence of Net Alpha." Product count includes multiple vehicles per product (separate account, commingled fund, mutual fund). We used the vehicle with the longest history.

ENDNOTES

1 See Grossman and Stiglitz [1980].
2 For example, see Sharpe [1991]; Standard & Poor's [2011] for data on average active-manager performance.
3 See Barras et al. [2010]; Fama and French [2010].
4 Barras et al. [2010] (BSW) use a multiple-hypothesis-testing framework, employing the false discovery rate (FDR) technique to qualify the impact of “luck” on fund performance in a multiple-test setting. The FDR is the expected fraction of statistically significant results that are mistakenly declared significant. The point estimate of proportion estimators (e.g., the proportion of skilled funds, and so on.) under the FDR approach will not depend on the sample size, but the precision of the estimates will. However, the precision of the FDR estimators in our study is high, because of the large cross-section of funds (e.g., 3,494 funds) used. Interested readers are referred to the BSW study for an excellent discussion of the FDR technique.
5 Specifically, the method corrects for the known percentage of errors in the statistical technique called hypothesis testing. Hypothesis testing, in this application, lets us determine whether or not a manager’s alpha is higher or lower than zero for reasons other than random chance, within a certain significance level, perhaps 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.”
6 Survivorship bias refers to the tendency of many fund-performance databases to include only funds that have survived to the present time and exclude those that have closed down or merged with other funds. Since funds that are closed or merged are often those with weaker performances, 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.
7 Adjustment for investment style is done by measuring the value added by excess return, relative to a set of market, size, value, and momentum factors.
8 Alpha is defined in Exhibit 1 specifically as excess return relative to a style- and risk-adjusted benchmark. The term “alpha” is used elsewhere in this article to refer to excess return relative to an appropriate benchmark.
9 We use a slightly different terminology than do BSW. They use the term “zero alpha” for the group of products to which we refer to as “No Evidence of Net Alpha.”
10 Product count includes multiple vehicles per product (separate account, commingled fund, mutual fund). We used the vehicle with the longest history.
11 The database is free of survivorship bias only after 2000. (The database itself was launched in mid-2000, but data are available as far back as the 1980s).
12 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 managers typically submit products for database inclusion that have generated strong return histories, back-filling, though useful for completeness of data, tends to increase the average performance level.
13 We assumed a $50 million mandate size. The median fee over the full sample was 68 basis points for U.S. equity products and 73 basis points for non-U.S. equity products.
14 After excluding the first 36 months to correct for back-filling or instant history bias.
15 The result was 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.
16 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 that were insignificantly different from zero. We know that, given the significance level, 40% of products classified as “Unskilled” and “Skilled” were so classified 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. Twenty percent 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 perhaps 5% has a minimal effect on results.
17 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%.
18 See Cuthbertson, Nitzsche, and O’Sullivan [2012]; Otamende et al. [2008]; Tang et al. [2011].
19 See Stockton [2009].
20 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 returns relative to the benchmark, and is synonymous with “tracking error.”
21 See, for example, Ennis and Sebastian [2002].
22 See the References section at the end of this article for more identifying details on the studies listed here.
See Sénéchal [2010].

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

25See Petajisto [2010].

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

27We 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.

28See discussion in Litterman [2004], for example.

29See Goyal and Wahal [2008].

30See Barras et al. [2010]. Specifically, we used the fixed-value procedure as described in the Internet Appendix section of their article (with $\lambda^* = 0.6$ and $\Upsilon^* = 0.4$).

31Product count includes multiple vehicles per product (separate account, commingled fund, mutual fund). We used the vehicle with the longest history.

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

33The 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.


35U.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).

36Alpha and active risk statistics shown are annualized.

REFERENCES


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