

## **'Cheating' for Alpha with Beta**

### **A Look at the Biases of Active Managers & How They Have Impacted Recent Performance**

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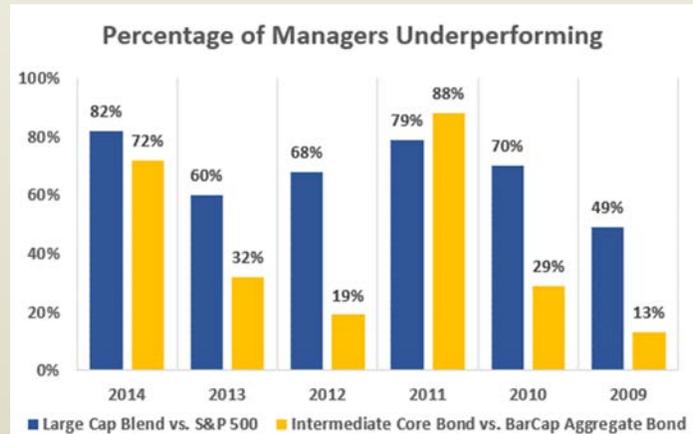
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In a recent iCM Advisor Group LinkedIn post, we examined the active management landscape during 2014 and concluded that last year was a particularly difficult period for active mutual fund managers. In particular, two of the broadest categories within the industry, U.S. Large Cap Blend and Intermediate-Term Fixed Income (i.e. Core Fixed Income), saw the majority of managers underperform their stated benchmarks. In the case of the Large Cap Blend universe, 82% of managers underperformed the S&P 500 Index, while similarly 72% of Core Fixed Income managers lagged the Barclays Aggregate Bond Index. In a recent white paper, our colleagues at GMO very appropriately asked the question 'Is Skill Dead?'<sup>1</sup>. In this paper they examined the results of the Large Cap Blend peer group, where they drew many of the same conclusions that we wrote about late last year. Within this research paper we look to expand upon their, and our own, work by discussing how we have observed managers 'cheating' for alpha by taking positions in out-of-benchmark risk premiums and beta exposures, and how these bets have impacted recent results.

### **Return Expectations for Active Managers**

Before addressing the aforementioned risk premiums or betas, it is worth discussing our expectations for the average active manager. As Fama and French state in 'Luck versus Skill in the Cross Section of Mutual Fund Returns', investing is a zero sum game gross of fees and a negative sum game net of fees. Put more simply, for every investor (or in this case for every mutual fund) that produces a positive excess return there is another that produces a negative excess return, netting the average level of excess performance to zero (i.e. total average returns should be equal to the index return). However, when we factor fees into the equation, the average manager is no longer expected to perform in line with the index, rather they are expected to produce the index return minus fees. Why then are we surprised that the average Large Cap Blend and Core Fixed Income managers underperformed last year? The answer is that we are not, instead we are concerned by the degree of that underperformance and more importantly by the general lack of understanding of that underperformance by many investors.

**Chart 1**



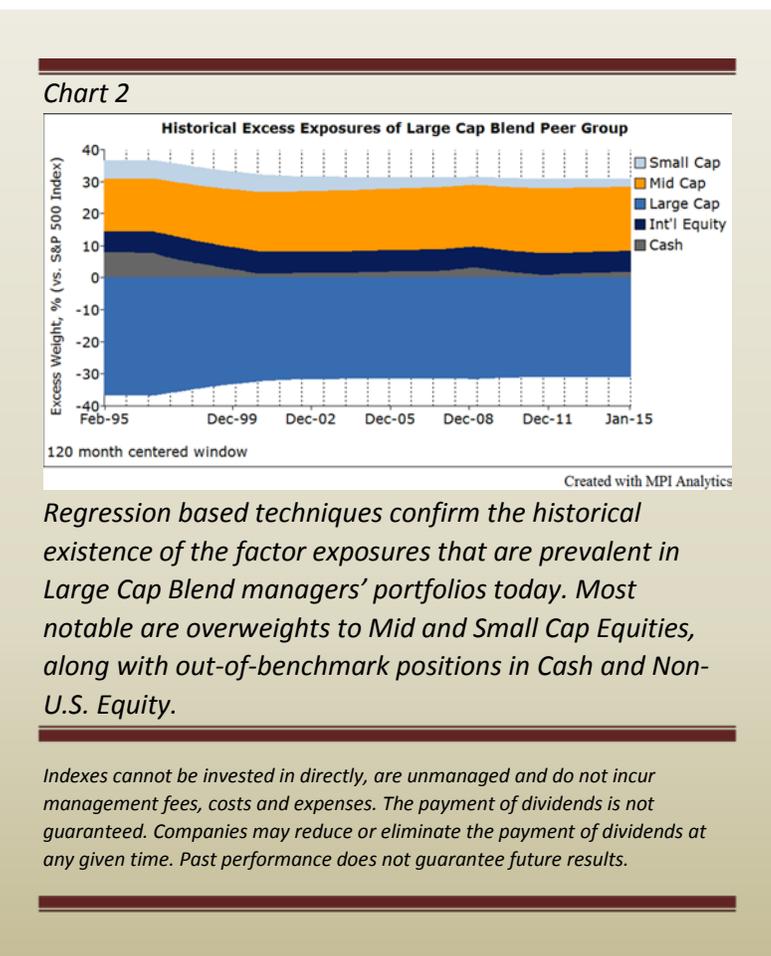
*In 2014, Large Cap Blend and Core Fixed Income managers produced one of their worst years of relative performance since the financial crisis. In aggregate 82% of Large Cap Blend managers underperformed the S&P 500, while 72% of Core Fixed Income managers lagged the Barclays Aggregate Bond Index.*

*Indexes cannot be invested in directly, are unmanaged and do not incur management fees, costs and expenses. The payment of dividends is not guaranteed. Companies may reduce or eliminate the payment of dividends at any given time. Past performance does not guarantee future results.*

<sup>1</sup> 'Is Skill Dead', Neil Constable and Matt Kadner, <http://www.gmo.com/America/>

Beginning with the Large Cap Blend universe, we witnessed the average manager underperform the S&P 500 by 275 bps in 2014 (10.94% vs. 13.69%). In theory, this level of underperformance should have been approximately 97 bps, the index return minus the average manager's expense ratio, which equates to a return of 12.72%. Within the Fixed Income category we find similar results, although not as extreme, where the average active manager underperformed the Barclays Aggregate Bond Index by 83 bps (5.14% vs. 5.97%). This comes in contrast to an expectation of 5.27%, given an average expense ratio of 70 bps. While this may sound like a minuscule difference compared to what managers experienced on the equity side of the market, we must be mindful of the fact that the return differentials between top and bottom performing managers vary widely across categories. For example, in 2014 the performance spread between Large Blend managers in the top and bottom 5% of their peer group was more than 11%, compared to less than 5% for the Intermediate-Term Bond category.

So, if logic and economic theory cannot explain the outsized underperformance of active managers last year, or for that matter outsized excess returns of the past, there must be an additional factor or factors that are driving results. Managers must be holding something in their portfolios that is inherently different and/or absent from their benchmark or some other market participant must be profiting from their lack of skill. To test this hypothesis we will examine two of Morningstar's largest mutual fund categories, beginning with U.S. Large Cap Blend.



### U.S. Large Cap Blend

The Morningstar Large Cap Blend peer group is comprised of 903 distinct funds. Using the most recently reported holdings data, we find that three primary differences exist between the average manager's portfolio and the S&P 500 Index. The most notable is their position in Mid and Small Cap equities, which in total accounts for 12.50% of the index, but over 22% of the average Large Cap manager's portfolio. In addition, we observe that the aggregate peer group maintains nearly a 6% position in Non-US Equities vs. only 1% in the index, as well as a 5% allocation to cash, which is not held in the S&P 500.

In terms of their historical prevalence, these biases are not new by any means. With the use of regression based techniques we can overcome the limited availability of holdings data to prove that these biases have existed for at least the last 20 years. As Chart 2 illustrates, the peer group has maintained a relatively stable weight of near 6% to Non-U.S. Equities over the entire period, while Mid Cap exposure has risen from approximately 16% to 20%, and small cap exposure declined from

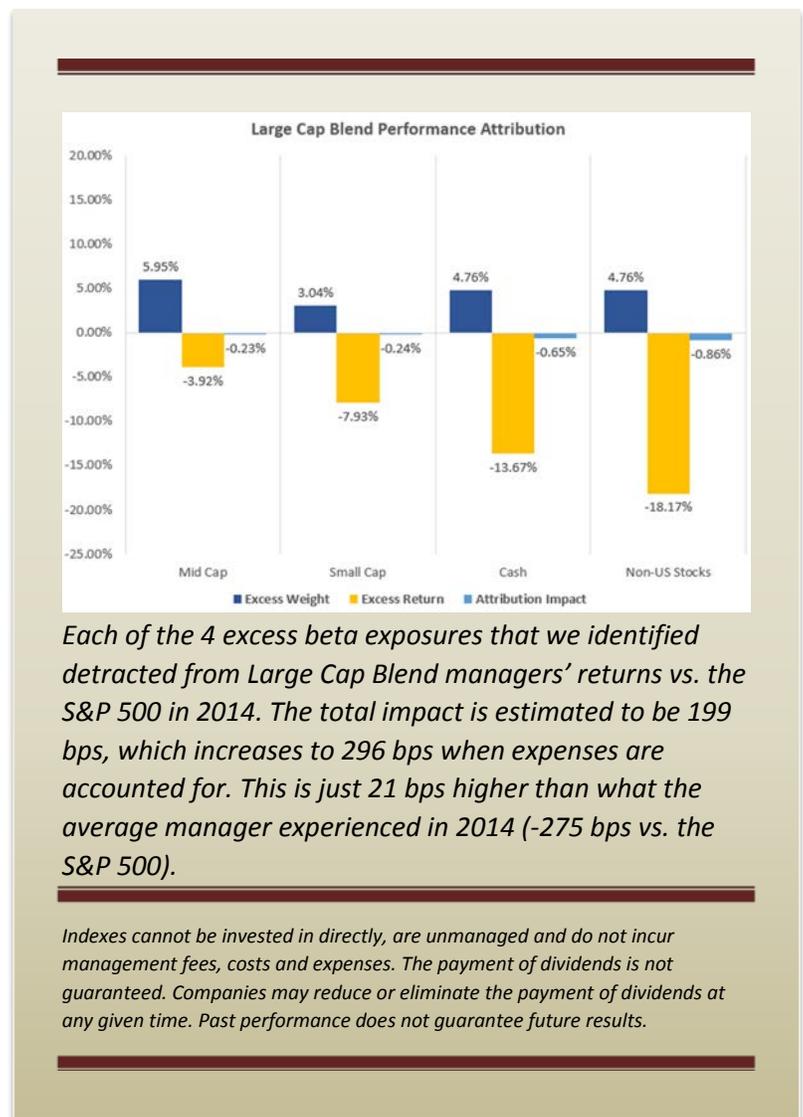
approximately 5.5% to 2.5%. Cash appears slightly more volatile, spiking around periods of market stress (e.g. 2008) and settling closer to 2% more recently. While there may be other less influential factors that this study has selected to exclude, such as fixed income or style, we are confident in its statistical reliability, as it produces a near 96% adjusted R<sup>2</sup> over the analysis period of 2/1/1995 to 12/31/2014.

Now that we have identified a number of biases and confirmed their long term persistence it is worth understanding why they exist. In our opinion the answer simple; performance and more specifically excess performance versus the S&P 500 Index. With the exception of Cash, each of these biases would fit our definition of a risk premium; defined broadly as an asset that is expected to produce higher returns over the long term in order to compensate investors for assuming additional risk. By taking an out-of-benchmark position in a risk premium, a manager can seemingly improve their “alpha” by adding nothing more than permanent risk enhancing beta to their portfolio. While risk premiums typically outperform over extremely long periods of time, as academics have shown with extensive research on the value and small cap premiums, this is not necessarily true over shorter windows. In fact, these premiums can be quite time period dependent, vacillating in and out of favor. This has happened regularly throughout time and can be evidenced by the underperformance of the value premium during the 1990’s. This has also occurred more recently, from 2008 to 2014, where we saw the Russell 1000 Value Index lag its growth counterpart by 196 bps annually with an annualized standard deviation that was nearly 100 bps higher.

By examining the past 10 years it becomes clear why managers have been attracted to these risk premiums, in particular Mid Caps, Small Caps, and Non-U.S. Equities. From the period of January 2005 through June 2011, Mid Caps outperformed Large Caps by 3.94% annually, Small Caps outperformed by 2.29%, and International Equities led by 2.37%. As a result, a position in any of these asset classes would have been greatly accretive to the excess performance of a Large Cap Blend mutual fund. Empirically, we see this in the peer group statistics, as the S&P 500 outperformed just 56% of Large Cap Blend managers over that same time period versus a long term average that has been closer to 65%. Fast forward to the period of July 2011 through year-end 2014 and we see a significantly different picture, as the relative performance of all three asset classes reversed course. Mid Caps lagged by an annualized 1.03%, Small Caps trailed by more than 3.00%, and Non-US Equities produced an annualized excess return of -11.59%. Not surprisingly, this had a near opposite impact on the relative results of the Large Cap Blend universe, as the index outperformed more than 80% of active funds over the entire period.

Upon examining the evidence it is relatively easy to see how the average manager could have underperformed by such a wide margin in 2014. However, let us do the math to better understand the direct impact of each decision on relative performance. To begin, the universe maintained aggregate-level active positions versus the S&P 500 of roughly +6% in Mid Caps, +3% in Small Caps, and +5% in both Non-US

Equities and Cash. While the S&P 500 returned 13.69% in 2014, Mid Caps returned 9.77% (-3.92% vs. the index), Small Caps returned 5.76% (-7.93% vs. the index), cash was flat, and International Equities lost 4.48% (-18.17% vs. the index). Taking the combined effect of each exposure’s weight along with its relative performance, we can attribute a negative 199 bps of the average manager’s excess return

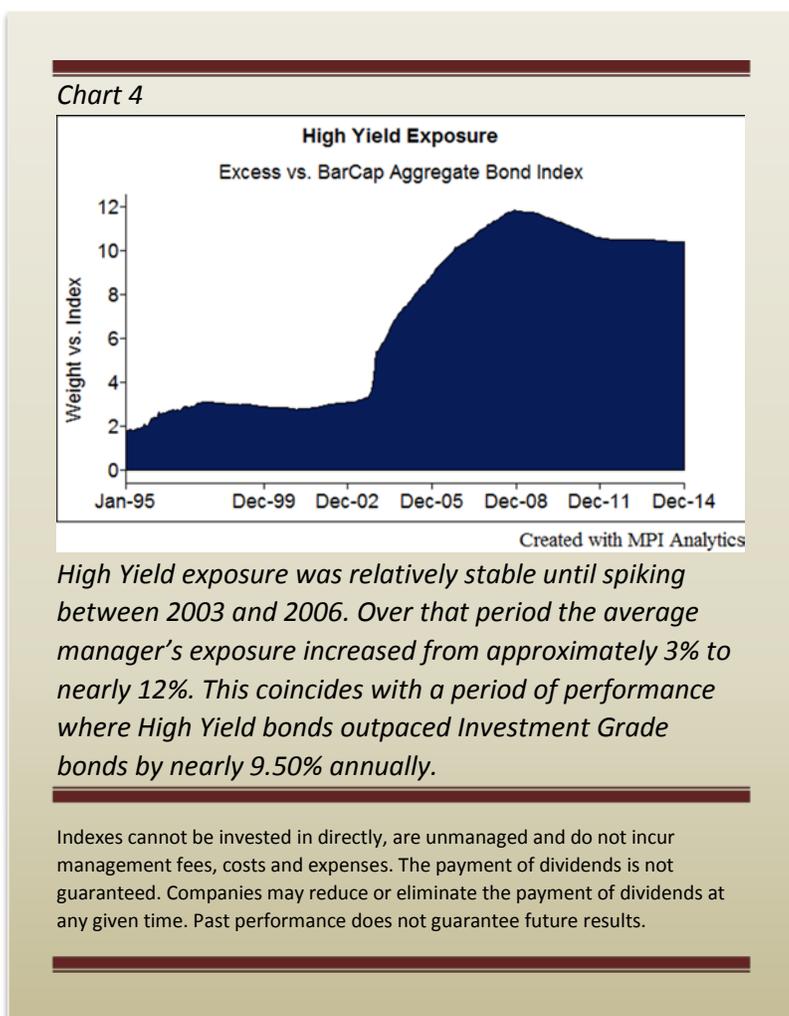


to these four factor exposures. Couple this with an average net expense ratio of 97 bps and we would predict the average Large Cap Blend manager to have trailed the S&P 500 by 2.96% in 2014. In reality the average manager trailed by 2.75%, meaning that our bottoms up estimate was off by just 21 bps, which was likely the result of some small overlooked exposure or positive security selection. Either way it is clear that the underperformance we witnessed in 2014 is not necessarily indicative of a lack of skill, but rather the result of the peer group, in aggregate, investing in multiple risk premiums (i.e. 'cheating') that happened to be out of favor at precisely the same time.

## U.S. Core Fixed Income

Unlike traditional Equity managers, actively managed Fixed Income funds are somewhat more difficult to analyze, given the number of levers that managers can pull in an effort to deliver excess returns. Managers can vary duration, curve positioning, sector allocation, as well as credit quality in an effort to outpace their benchmark. While we noticed some variation from the Barclays Aggregate Bond index in terms of the first three factors, we will focus our analysis on the latter and most impactful factor as of late, credit quality.

Examining recent holdings data for the Morningstar Intermediate-Term Bond (i.e. Core Bond) peer group, which contained 510 unique funds, we found an approximate allocation of 8.5% to High Yield bonds. This includes all issues that are rated below BBB or classified as 'not rated'. To analyze this exposure historically we can use the same



regression based techniques that we utilized for the Large Cap Blend universe. By applying this method we observe a current position of roughly 10% allocated to High Yield bonds, which is relatively in line with what we found in our holdings data. However, what is more interesting is the change in this positioning over time and the relative speed at which it occurred. Looking at the pre-2005 period, we see an average manager weighting of less than 3% in High Yield. In the matter of just a few years this number increases 4-fold, to a peak of roughly 12% in 2008. What explains the spike in ownership over the last 10 years? Our answer comes directly from our discussion of the Large Cap Blend peer group; managers allocating to strong performing out-of-benchmark risk premiums.

Not surprisingly, over the same period where managers drastically increased their allocation to High Yield bonds, 2003 through 2006, the asset class outperformed the Barclays Aggregate index by nearly 9.50% on an annualized basis. In the relatively low return universe of fixed income, an out-of-benchmark position in High Yield would have been quite additive to a manager's relative performance, particularly one that is benchmarked to a purely investment grade index. In reality it

was, as the average Core Fixed Income manager outperformed the index by 18 bps over that period. Fast forward past the recent Financial Crisis and we see even more striking results. From January 2009 through December 2013, High Yield outperformed Investment Grade bonds by 12.50% annually (18.93% vs. 4.44%). This helped the average manager to

outperform the Barclays Aggregate Index by nearly 200 bps annually over the period, translating into an 82<sup>nd</sup> percentile peer ranking for the index.

As is inevitably the case, mean reversion occurred in 2014 and High Yield bond spreads expanded meaningfully, causing a large percentage of the Core Fixed Income peer group to suffer a whipsaw effect. To quantify, coupling an average allocation of 8.50% to High Yield bonds and the asset class' underperformance of 350 bps during 2014 (2.45% vs. 5.97%), we would estimate a negative impact of 30 bps vs. the Barclays Aggregate index. Combining this with an average fee level of 70 bps, we would expect the average manager to have underperformed by 100 bps. In actuality, the average manager underperformed by 0.83% in 2014, with the small difference likely being the result of a positive effect from duration positioning, curve positioning, or issue selection.

## Conclusion

While 2014 was a difficult market for the majority of mutual fund managers, especially those within the Large Cap and Core Fixed Income space, it should by no means call for the death active management. Rather it should be a wakeup call for investors to gain a better understanding of their underlying portfolio holdings or to engage someone who has the ability to do so. Overall, managers did not underperform in 2014 due to a systemic failure in their ability, instead they trailed due to an industry wide overweight to multiple risk premiums that happened to fall out of favor all at the same time. Remember, alpha is risk-adjusted excess return after identifying all possible beta exposures. If one happens to overlook a beta driver like those discussed in this paper, it can lead to potentially disastrous consequences, including underperformance, as well as poor hire and fire decisions of the managers within your portfolio.

At iCM we believe that active and passive management both offer investment merit and that the decision to use one versus the other depends on a number of factors including the asset class, a client's goals, and fee considerations, to name a few. However, when evaluating the merits of an actively managed investment strategy we practice exactly what we preach. Each manager is put through a rigorous quantitative and qualitative analysis process, with the goal of identifying any unintended risk premiums or beta exposures, like those that were discussed throughout this paper. When coupled with an extensive valuation framework like ours, we can use this process to identify and value any out of benchmark beta exposures that may exist. By doing this, we are able to make a conscious decision as to whether or not we should include these exposures in a portfolio. In the end, we believe that this can lead to a more fruitful manager selection exercise and potentially better results for our clients.



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**Index Definitions:**

**“U.S. Large Cap” (S&P 500)** – The S&P 500 Index is a market-capitalization weighted index, designed to track the performance of the 500 largest companies in the U.S. equity market. By design, the largest companies will constitute the largest positions in the index and Impact performance more than smaller index members.

**“U.S. Mid Cap” (Russell Mid Cap)** – The Russell Mid Cap Index is a market-capitalization weighted index, designed to track the performance of companies in the U.S. equity market defined by Russell as Mid-Capitalization (~\$3B Market Cap to \$22B Market Cap). By design, the largest companies will constitute the largest positions in the index and Impact performance more than smaller index members.

**“U.S. Small Cap” (Russell 2000)** – The Russell 2000 Index is a market-capitalization weighted index, designed to track the performance of the 2000 smallest companies in the U.S. equity market. By design, the largest companies will constitute the largest positions in the index and Impact performance more than smaller index members.

**“International Developed Equity” (MSCI EAFE)** – The MSCI EAFE Index is a market-capitalization weighted index, designed to track the performance of the developed non-U.S equity markets. By design, the largest companies will constitute the largest positions in the index and Impact performance more than smaller index members.

**“High Yield Bonds” (Barclays US Corporate High Yield)** – The U.S. Corporate High-Yield Index measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high yield if the middle rating of Moody’s, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt.