

Active Management Environment

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» Foreword

The Reality of Alpha

The investment colloquialism “alpha” is arguably one of the most misused and misunderstood terms in modern day investing. The misinterpretation of alpha can be a costly mistake to institutional investors manifesting itself in the form of poor hiring and firing decisions for investment managers, inappropriate compensation schemes that mistake skill for market beta, and an overall lack of awareness of the fundamental forces driving portfolio returns. To understand this assertion, recall the true meaning of alpha.

Academically speaking, alpha is the excess return generated by an investment over and above that of a market portfolio, but with the caveat of doing so with commensurate or lower risk, both realized and unrealized. In an everyday forum, alpha often refers to a manager’s return over a public benchmark or to an arbitrary absolute return goal. However little attention is generally given to what a manager did in order to beat its benchmark or return goal, as most investors tend to fixate on realized returns more so than volatility thereof, or more importantly, the potential downside in a given strategy.

As a result of failing to incorporate all salient risk factors, investors often inappropriately assign credit or blame to investment managers for their perceived value added activities, when in fact aggregate market forces may have driven their returns for better or worse. These decisions consequently carry forward into rather serious implications on portfolio structure that can result in heightening risk and minimizing expected return. This of course is not in the best interest of any investor.

We must be honest with ourselves in the pursuit of true risk adjusted alpha as institutional investors. The fact of the matter is it does not exist in the aggregate of capital markets. It is fleeting, randomly distributed amongst market participants, and literally impossible to predict with any consistent accuracy. Investment managers know this, which is why the best of them have chosen to pursue a practice we believe is best described as “Beta-Alpha,” which is simply the process of structuring portfolios with a more judicious allocation of market betas than a particular index.

In our opinion, such a feat is far more realistic than the goal of identifying and exploiting a security’s mispricing that was somehow missed by multitudes of market participants equally motivated and equipped to achieve the same goal. This is how equity and fixed income managers beat their benchmarks, how hedge fund managers create absolute return portfolios, and how consultants create portfolios that beat diversified mixes of market benchmarks over long periods of time.

It is the very recognition of Beta-Alpha as the primary source of excess returns that permeates our thinking with respect to analyzing, selecting, and monitoring active investment managers. This is why we are far less concerned with absolute or benchmark relative returns than we are with the measures taken to generate them. We cannot affect the past, but can affect the future by understanding the market forces that drive active management returns at both the aggregate and individual manager level.

» Foreword (Cont'd)

Looking backwards to identify alpha is a zero value added activity, as anyone with access to data can accomplish this. In fact, we would go so far as to argue such practices are a value detracting proposition. When you consider the reality posed by the concept of Beta-Alpha, alongside the fact macroeconomic and capital market forces are cyclical in nature, one must conclude backward looking analysis will implicitly identify managers that have benefited from market forces at the peak of their cycle.

Logically speaking, this would result in lower prospective returns and higher downside potential. This is because good active managers tend to have a consistent investment process that proves accretive over time, as opposed to those attempting to time aggregate market forces. The first approach is far more reliable than the latter. After all, why would anyone hire an investment manager with an inconsistent process? It would make return forecasting all but impossible.

To use a simple analogy, backward looking analysis is the equivalent of driving with only a rearview mirror. As long as the road in front of you is the same as that behind you...well we all know the world does not work that way. So the very concept that past performance is indicative of future performance is inherently flawed, which is probably why it is illegal to make such statements when selling investment management services. These views are the basis of our efforts in seeking both manager specific and overall portfolio Beta-Alpha. We do not believe in the repetition of past performance in itself, but instead believe in the enduring behavioral characteristics of market participants and the cyclical and mean reverting nature of capital markets.

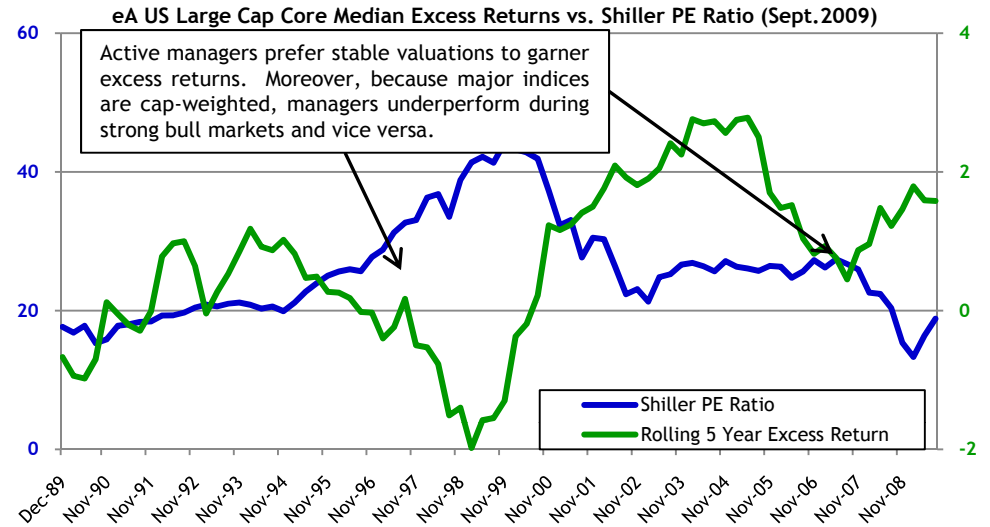
Our efforts therefore center on identifying the underlying forces driving aggregate and individual manager behavior, creating realistic expectations thereof in light of prevailing macroeconomic and capital markets conditions, and integrating these risk and return characteristics holistically into overall asset allocation and portfolio design.

We believe it imprudent to expect a series of active managers, each operating independently of one another and narrowly fixated on outperforming specific asset classes, to serve the best interests of the portfolio without strategic supervision. This is our responsibility as fiduciary advisors, and is the reason we publish this report.

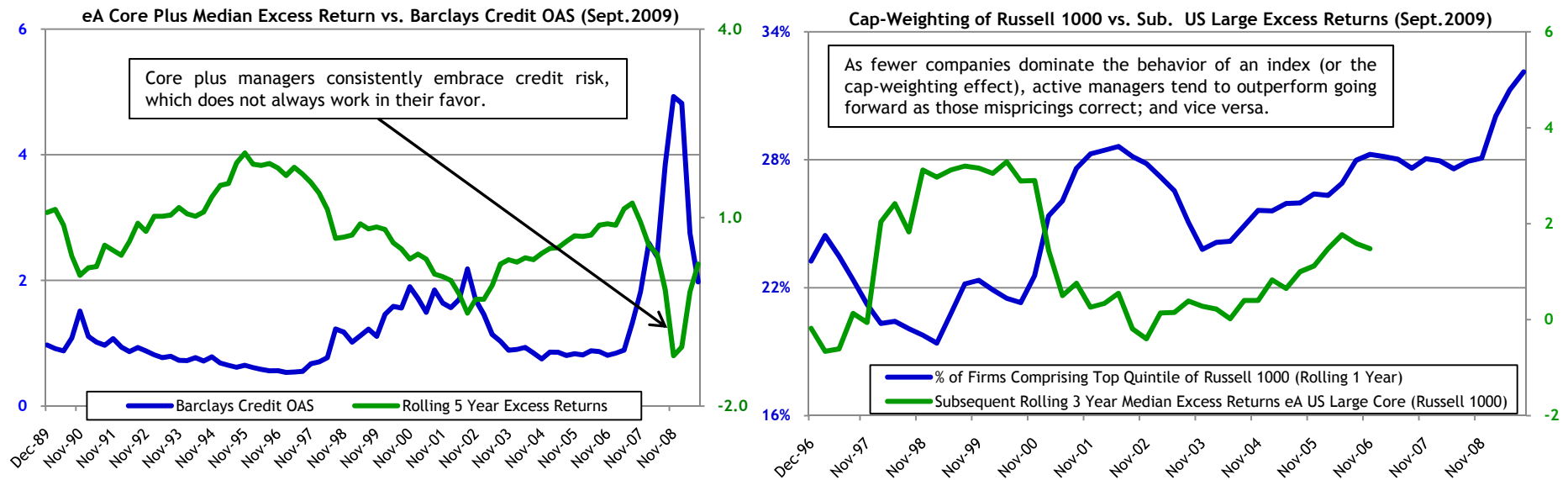
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» The Natural Enemies of Active Managers

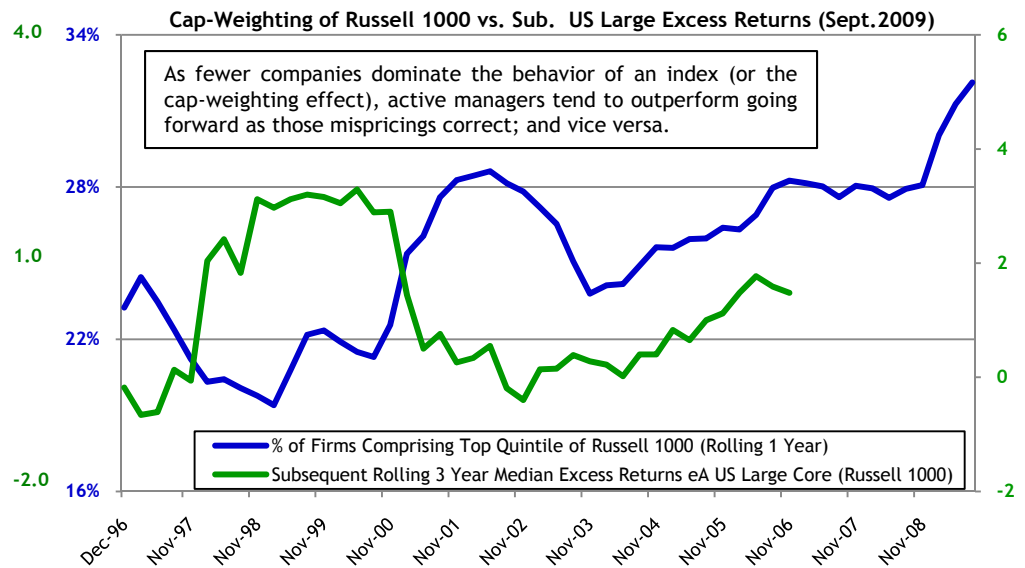
- When examining aggregate forces in capital markets, the primary risk factors to active management excess returns become clear.
- As one would expect, active equity managers do very poorly during times of heightened volatility and significant changes in valuations.
- After all, one must realize the crux of any active manager's process is an assumption for the terminal value of their equity holdings (or a PE ratio for example). So as valuation ratios fluctuate, active managers' models break down in terms of their effectiveness.
- This concept applies not only to equity managers, but to fixed income managers as well. However, they are mostly concerned with credit spreads relative to US Treasuries.



Source: eVestment Alliance; Wurts & Associates; Yale/Shiller



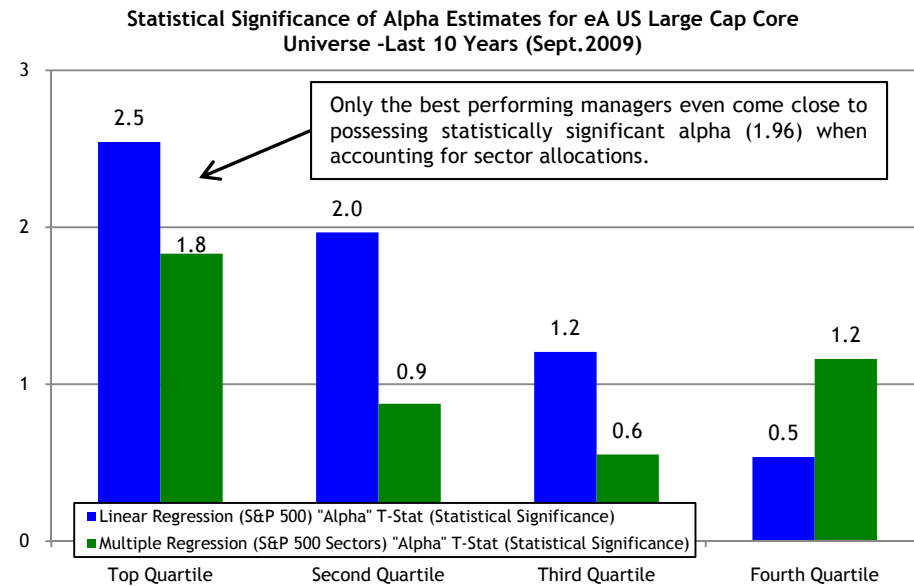
Source: eVestment Alliance; Wurts & Associates; Barclays



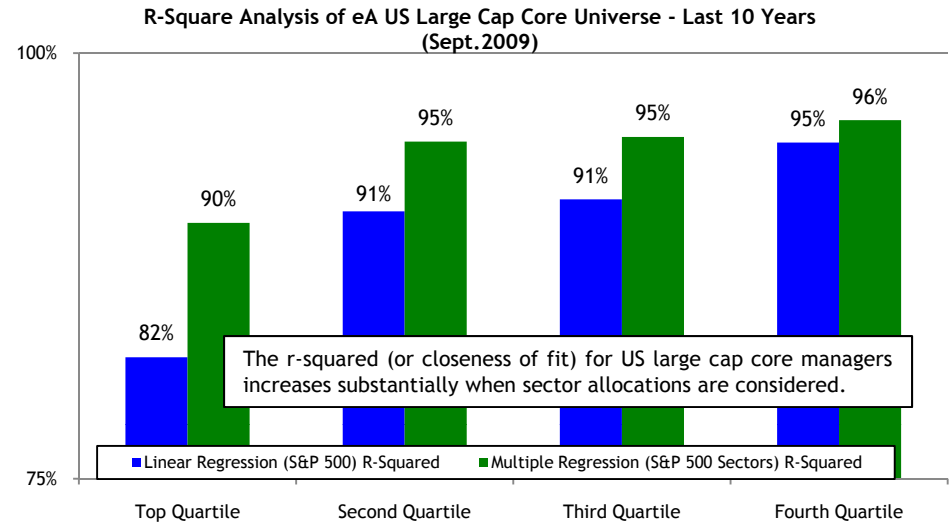
Source: Russell; eVestment Alliance; Wurts & Associates

» Like It or Not, Managers Mostly Repackage Beta

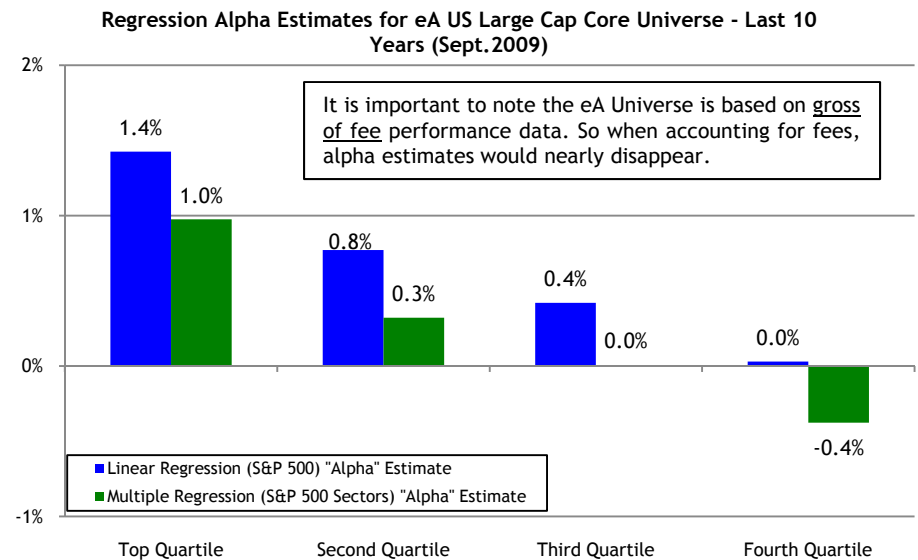
- As discussed in the foreword of this presentation, the primary driver of manager returns are underlying market forces (or betas).
- Beta commonly refers to various market indices which consist of diversified baskets of stocks; i.e, S&P 500, Russell 2000, etc.
- However, beta can also refer to sector exposures within indices, as any collection of 30 or more stocks is theoretically devoid of company specific risk.
- With this in mind, an examination of active managers relative to sector returns eliminates much of the mystery surrounding alpha generation.
- In other words, excess returns can mostly be explained through sector rotation, as opposed to stock picking.



Source: eVestment Alliance; Wurts & Associates; ICC



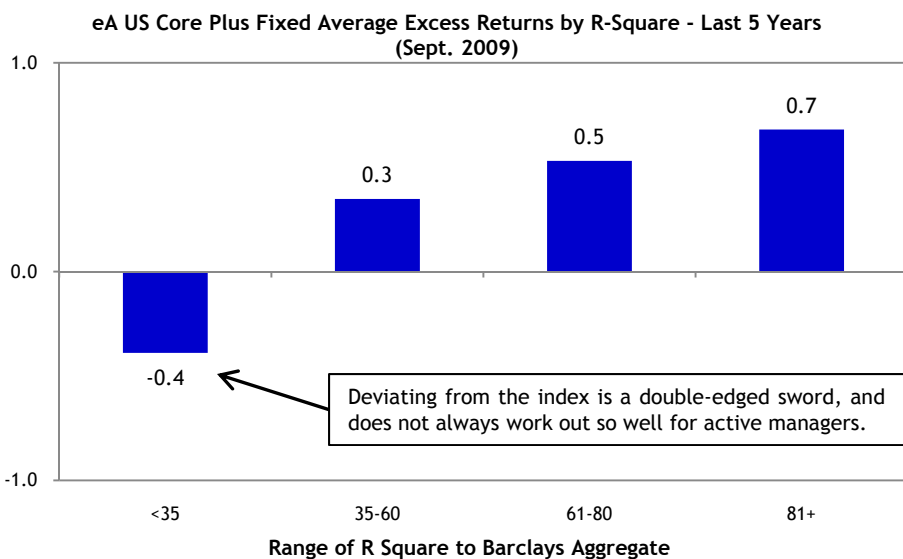
Source: eVestment Alliance; Wurts & Associates; ICC



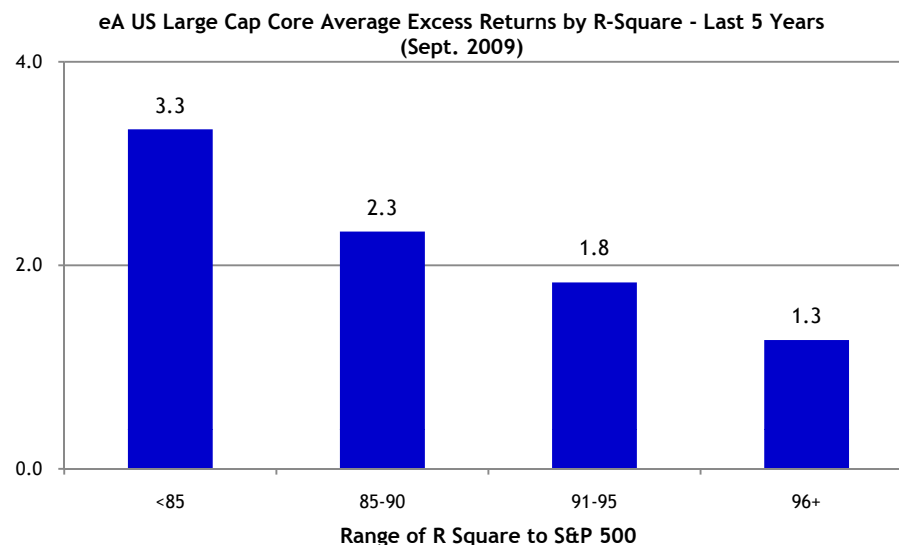
Source: eVestment Alliance; Wurts & Associates; ICC

» Differing From the Index is Key to Excess Returns (+/-)

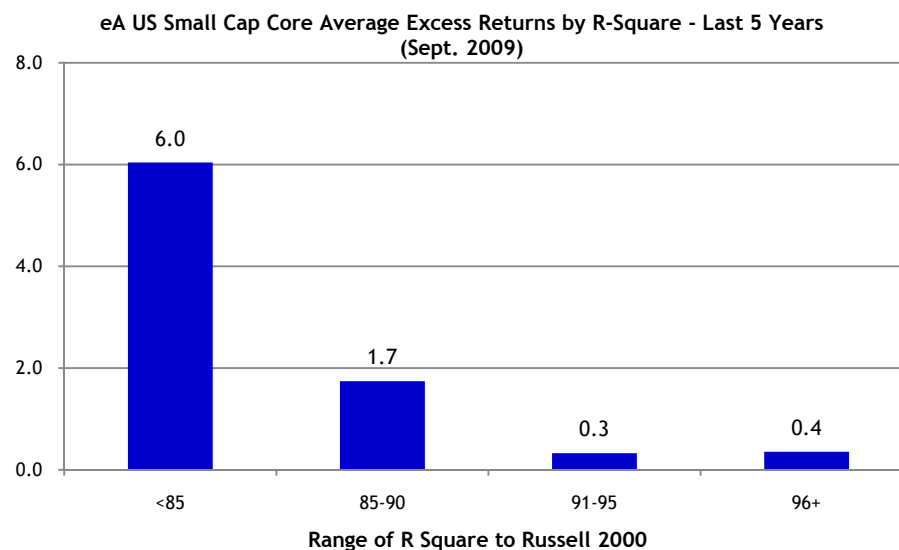
- Given the informational and trading efficiency of global capital markets, it is difficult to consistently add value through security selection, at least in any sort of a meaningful way. So this leads us to one very simple conclusion - one cannot beat an index by trading its constituents.
- Therefore in order to beat an index, active managers must construct materially different portfolios, which is a behavior most easily dimensioned by the r-square (or closeness of fit) statistic.
- As we can see from several asset classes, the largest excess returns seem to be garnered by those managers deviating most from the index.
- This is one way to add value relative to a benchmark, but is also a way to detract value from the overall portfolio, as this approach negates much of the benefits of structuring specific asset allocation targets.



Source: eVestment Alliance; Wurts & Associates



Source: eVestment Alliance; Wurts & Associates

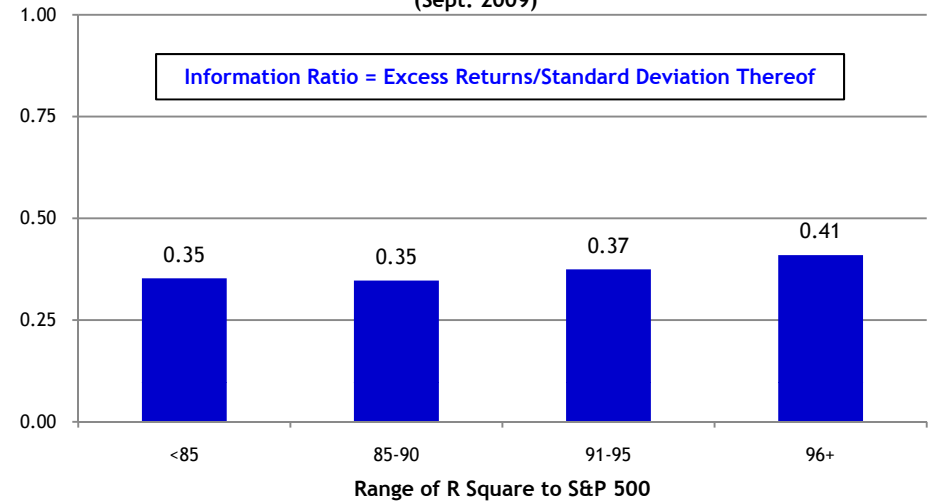


Source: eVestment Alliance; Wurts & Associates

» Is There an Optimal Difference From the Index?

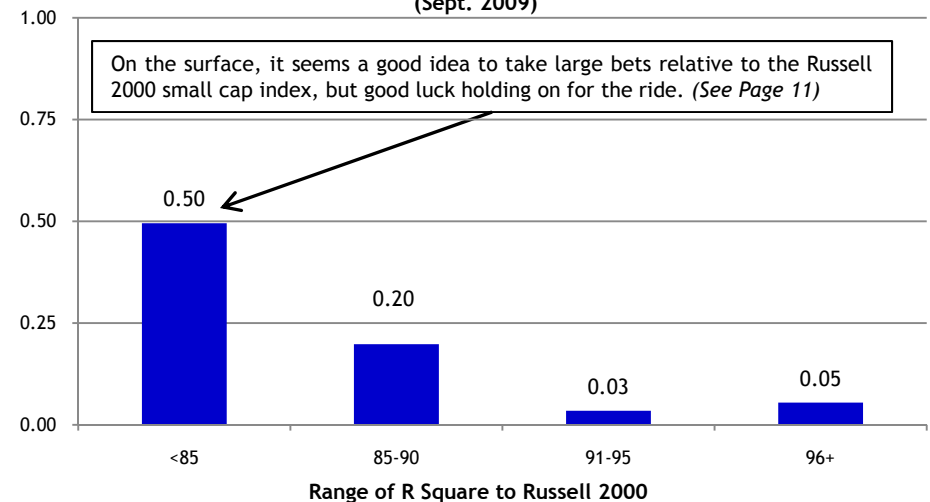
- As a follow up to the previous page, investors must ask themselves if there is an optimal target for deviating from an index to achieve the most efficient risk adjusted excess returns. Research into this concept seems to indicate the answer depends on the asset class in question.
- As one would expect, achieving superior risk adjusted returns by taking significant index-relative bets appears difficult in US large cap stocks. On the other hand, it appears easier in US small cap stocks which are commonly perceived as being less efficient.
- However, one must not act on these observations in isolation because information ratios fail to dimension the absolute volatility in excess returns.
- This is important from a behavioral standpoint, as many investors would unlikely exercise an appropriate level of patience to realize these benefits.

eA US Large Cap Core Information Ratios by R-Square - Last 5 Years (Sept. 2009)



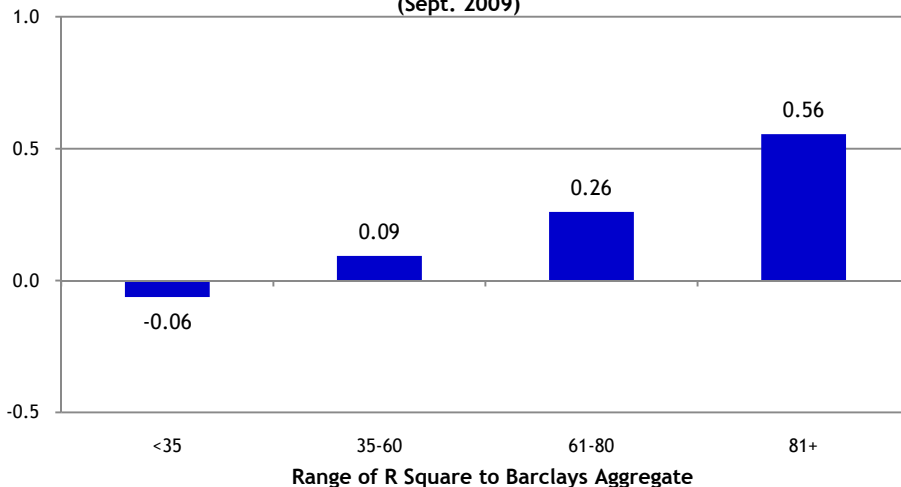
Source: eVestment Alliance; Wurts & Associates

eA US Small Cap Core Information Ratios by R-Square - Last 5 Years (Sept. 2009)



Source: eVestment Alliance; Wurts & Associates

eA US Core Plus Fixed Information Ratios by R-Square - Last 5 Years (Sept. 2009)



Source: eVestment Alliance; Wurts & Associates

» Is There Predictive Value to Be Found in Peer Rankings?

- In short, yes there is.
- But it's not necessarily what one would expect to find.
- In US large cap stocks we find first quartile performance does seem to indicate about a 1 in 4 probability of achieving future top quartile performance, but an equal probability of being second quartile.
- For small cap and core plus fixed income managers, top quartile has about a 1 in 3 chance of producing future top quartile results, which are not such good odds.
- What is important to note about this study is the limited value of using peer rankings as a means to predict future success.
- The results appear fairly random and change depending on the time frame examined; *i.e., compare to our last update of this research.*
- The problem with peer ranking-based hiring and firing decisions is they have been documented to cost institutional investors money as they tend to fire the worse performing managers and hire the top performing managers. (See "The Selection and Termination of Investment Managers by Plan Sponsors, Wahal & Goyal; summary in appendix)
- It does seem there is strong predictive value for those managers that fall into the fourth quartile. Presumably due to the behavioral biases, poor performance will likely result in termination and therefore declining assets under management, which dramatically increases the chances a firm will close a given strategy.

eA US Large Cap Core Universe Peer Ranking Study (298 Observations)

5 Quartile Year Rank (9/04)	Distribution of Subsequent 5 Year Ranks (9/09)					Most Likely Subsequent Rank
	First	Second	Third	Fourth	Inactive	
First	26%	28%	17%	8%	21%	Second
Second	16%	16%	15%	20%	32%	Inactive
Third	5%	13%	21%	25%	35%	Inactive
Fourth	8%	11%	12%	15%	53%	Inactive

eA US Small Cap Core Universe Peer Ranking Study (103 Observations)

5 Quartile Year Rank (9/04)	Distribution of Subsequent 5 Year Ranks (9/09)					Most Likely Subsequent Rank
	First	Second	Third	Fourth	Inactive	
First	33%	22%	15%	11%	19%	First
Second	32%	16%	24%	24%	4%	First
Third	8%	35%	15%	23%	19%	Second
Fourth	8%	8%	24%	12%	48%	Inactive

eA US Core Plus Fixed Universe Peer Ranking Study (134 Observations)

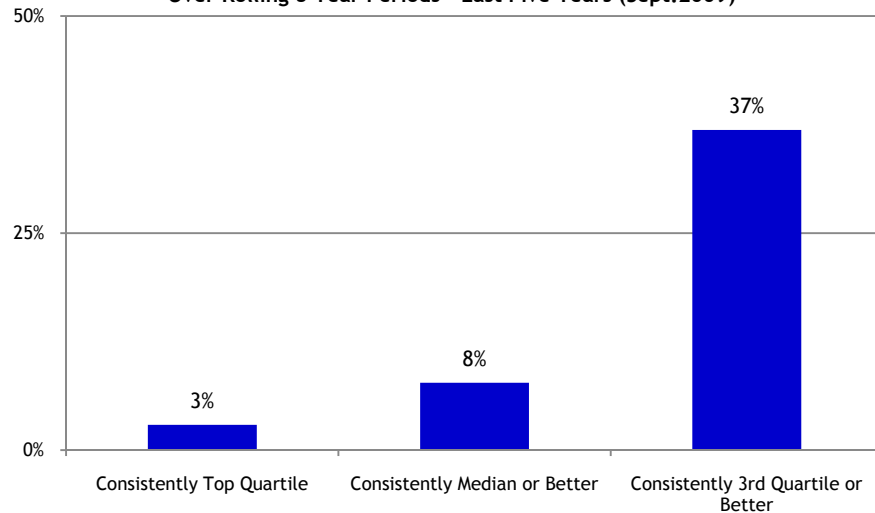
5 Quartile Year Rank (9/04)	Distribution of Subsequent 5 Year Ranks (9/09)					Most Likely Subsequent Rank
	First	Second	Third	Fourth	Inactive	
First	32%	15%	15%	26%	12%	First
Second	18%	15%	32%	18%	18%	Third
Third	24%	30%	6%	12%	27%	Second
Fourth	9%	15%	9%	12%	55%	Inactive

Source: eVestment Alliance; Wurts & Associates

» How Consistent are Peer Rankings?

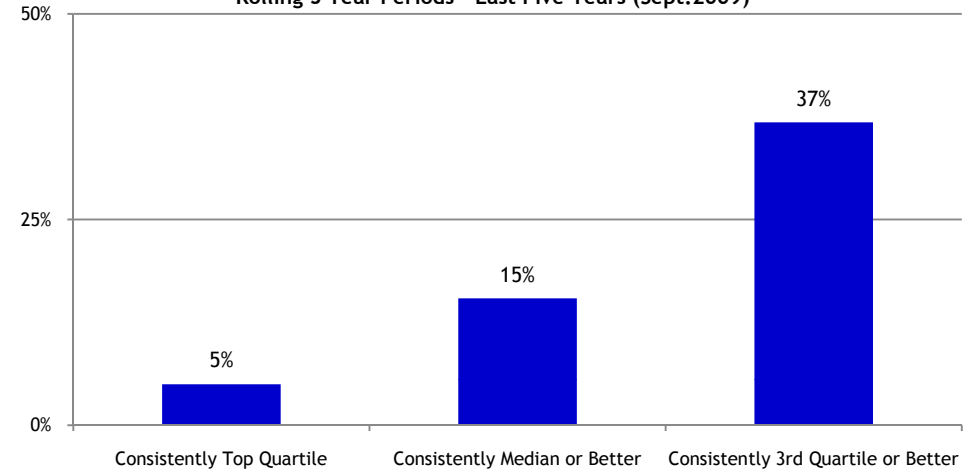
- It is nearly impossible for any active manager to consistently rank in the top quartile of its peer universe over any significant period of time.
- This is not necessarily surprising because such a goal is lofty to say the least, and if achieved is likely due to chance.
- What is interesting is not only how hard it is to realize consistent top quartile performance, but the amazing difficulty of avoiding fourth quartile performance. Only a little more than a third of managers succeeded in doing so.
- The lesson to be learned from this analysis is to place little credence in fluctuations in peer rankings as a measure of an active manager's level of skill or value added.

Percent of eA Core Plus Fixed Managers with Consistent Peer Rank Over Rolling 5 Year Periods - Last Five Years (Sept.2009)



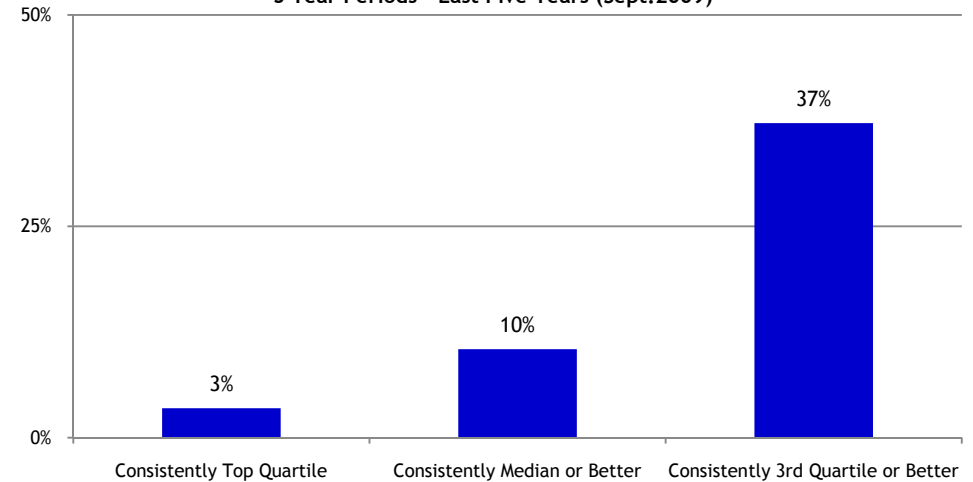
Source: eVestment Alliance; Wurts & Associates

Percent of eA US Large Core Managers with Consistent Peer Rank Over Rolling 5 Year Periods - Last Five Years (Sept.2009)



Source: eVestment Alliance; Wurts & Associates

Percent of eA US Small Core Managers with Consistent Peer Rank Over Rolling 5 Year Periods - Last Five Years (Sept.2009)



Source: eVestment Alliance; Wurts & Associates

» Is There Predictive Value to be Found in Excess Returns?

- In short, yes there is.
- But as was the case with peer rankings, it's not necessarily what one would think to find.
- As mentioned earlier, institutional investors have been documented to hire top performing and fire poor performing managers.
- This is not only an unfortunate practice for the active manager that loses its mandate, it is also unfortunate for the plan sponsor because such behavior is likely to detract from overall returns. (See appendix for Wahal & Goyal)
- Regardless of the asset class examined, it is obvious that managers providing large amounts of excess returns to their benchmarks are likely to see those excess returns eroded over the subsequent periods.
- So chasing top performing managers is in all likelihood a pursuit that will provide disappointing results.
- Another interesting aspect of this study is how the marketplace reacts to managers that either provide negative or small excess returns over a five year period.
- Their probabilities for going out of business are well in excess of managers that posted strong results.
- On the other hand though, for the worse performing managers that stay in business, excess returns are likely to reverse over subsequent years.

eA US Large Cap Core Universe Excess Return Study (298 observations)

Range of 5 Year Excess Return (9/04)	Average 5 Year Excess Return (9/04)	Average 5 Year Excess Return (9/09)	Difference in Excess Returns	% of Inactive Managers (9/09)
-5% to 0%	-1.3	1.1	2.4	54%
0% to 3%	1.5	1.1	-0.3	36%
3% to 6%	4.2	1.6	-2.6	29%
6%+	8.5	2.4	-6.2	23%

eA US Small Cap Core Universe Excess Return Study (103 observations)

Range of 5 Year Excess Return (9/04)	Average 5 Year Excess Return (9/04)	Average 5 Year Excess Return (9/09)	Difference in Excess Returns	% of Inactive Managers (9/09)
-6% to 2%	-1.2	0.2	1.4	55%
2% to 5%	3.8	-0.1	-3.8	20%
5% to 7%	6.1	1.1	-5.0	5%
7%+	9.6	2.1	-7.5	16%

eA US Core Plus Fixed Universe Excess Return Study (134 observations)

Range of 5 Year Excess Return (9/04)	Average 5 Year Excess Return (9/04)	Average 5 Year Excess Return (9/09)	Difference in Excess Returns	% of Inactive Managers (9/09)
-2.5% to 0%	-0.5	0.2	0.7	54%
0% to 0.3%	0.2	0.4	0.2	22%
0.3% to 1%	0.6	-0.1	-0.7	20%
1%+	1.9	0.4	-1.5	10%

Source: eVestment Alliance; Wurts & Associates

» Are Investors Well Compensated for Bearing Tracking Error?

- As discussed earlier, one way to achieve excess returns to a particular benchmark would be to embrace strategies that loosely track a particular asset class mandate; or low r-square/high tracking error managers.
- Such managers will necessarily have a wide dispersion of excess returns relative to their benchmark over time.
- So the question is whether or not investors are rewarded on a risk adjusted basis for bearing this benchmark relative tracking error.
- Interestingly, it appears investors can be rewarded for this practice. However the gains in efficiency of return seem relatively small given the potential tracking error.
- From a behavioral standpoint one must consider how likely an investor is to hold onto high tracking error managers in order to reap more efficient risk adjusted returns.
- Practically speaking, it seems unlikely most investors would be willing to bear large dispersions in excess returns when considering their propensity to fire managers with poor performance.
- It is also important to keep in mind these data refer to the aggregate behavior of these strategies, and that institutional investors will only hold a few such managers, dramatically increasing the potential costs of picking the wrong manager. (See page 13)

eA US Large Cap Core Universe Excess Return Study

Dispersion of Rolling 5 Year Excess Return (9/04-09)	Average Dispersion of Excess Return	Average Excess Return	Average R Squared	Average Information Ratio	Average Sharpe Ratio
0% to 3.5%	2.6	1.0	96%	0.32	0.19
3.5% to 5.0%	4.3	1.4	94%	0.34	0.22
5.0% to 8.0%	6.2	1.8	91%	0.38	0.24
8.0%+	10.8	3.7	82%	0.51	0.36

eA US Small Cap Core Universe Excess Return Study

Dispersion of Rolling 5 Year Excess Return (9/04-09)	Average Dispersion of Excess Return	Average Excess Return	Average R Squared	Average Information Ratio	Average Sharpe Ratio
0% to 7.5%	5.6	1.9	93%	0.34	0.42
7.5% to 9.5%	8.5	2.6	93%	0.44	0.47
9.5% to 12%	10.7	3.2	89%	0.41	0.47
12%+	14.1	3.9	87%	0.44	0.51

eA US Core Plus Fixed Universe Excess Return Study

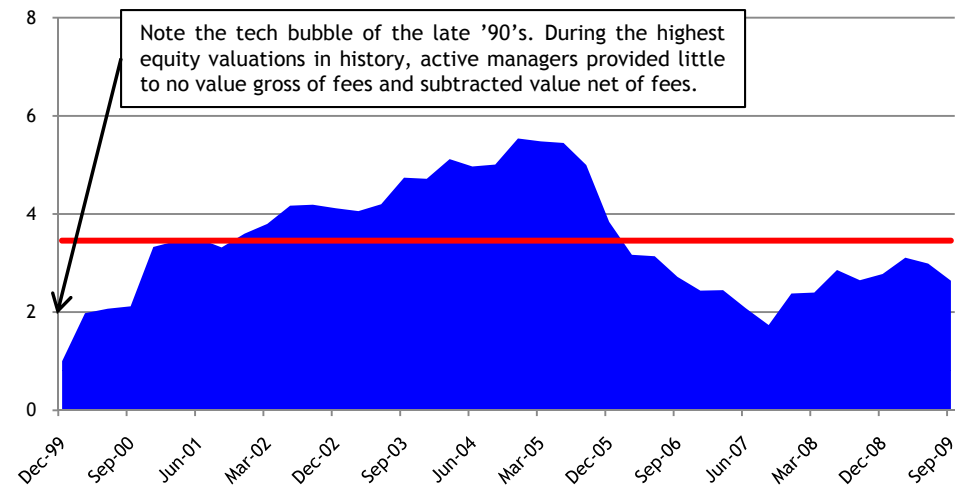
Dispersion of Rolling 5 Year Excess Return (9/04-09)	Average Dispersion of Excess Return	Average Excess Return	Average R Squared	Average Information Ratio	Average Sharpe Ratio
0% to 1.5%	1.1	0.4	92%	0.44	0.83
1.5% to 3.0%	2.3	0.4	78%	0.34	0.87
3.0% to 5.0%	3.8	0.6	69%	0.49	0.89
5.0%+	6.6	1.2	37%	0.44	0.85

Source: eVestment Alliance; Wurts & Associates

» What Happens if You Pick the *Right* Active Manager Every Quarter?

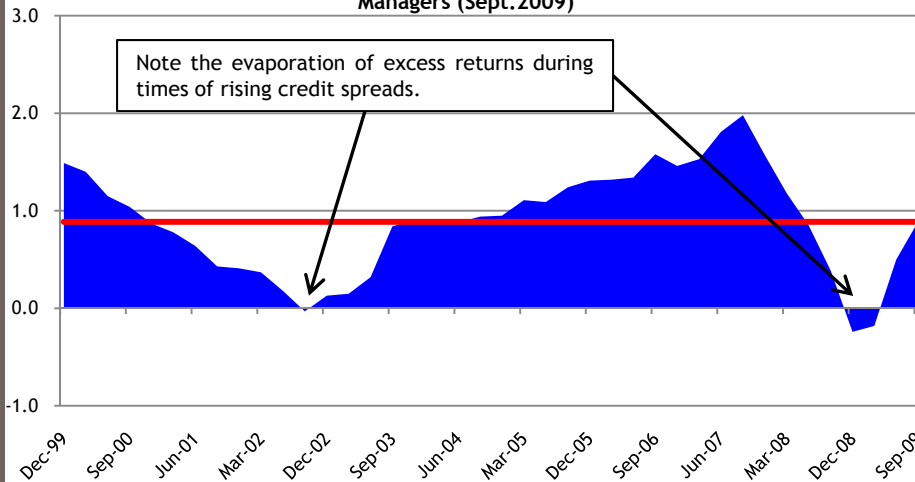
- On a *gross of fee basis*, investors are well rewarded for picking the right active manager ex-ante (or ahead of time).
- On average, top quartile US large & small cap core managers provide around 4% to 6% in excess returns respectively over rolling 5 year periods.
- In the core plus fixed income universe, excess returns are much smaller, as are the absolute returns associated with fixed income investments.
- Nonetheless, even if an investor realizes top quartile returns every single quarter, there remains a tremendous volatility in excess returns.
- Even at their best, active managers can provide disappointing excess returns over periods as long as 5 years.

eA US Large Cap Core Rolling 5 Year Excess Returns of Top Quartile Managers (Sept.2009)



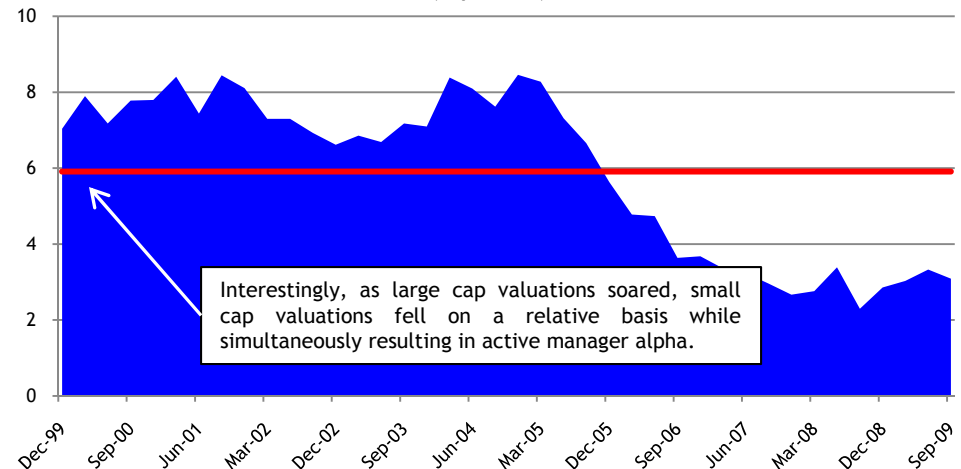
Source: eVestment Alliance; Wurts & Associates

eA US Core Plus Fixed Rolling 5 Year Excess Returns of Top Quartile Managers (Sept.2009)



Source: eVestment Alliance; Wurts & Associates

eA US Small Cap Core Rolling 5 Year Excess Returns of Top Quartile Managers (Sept.2009)

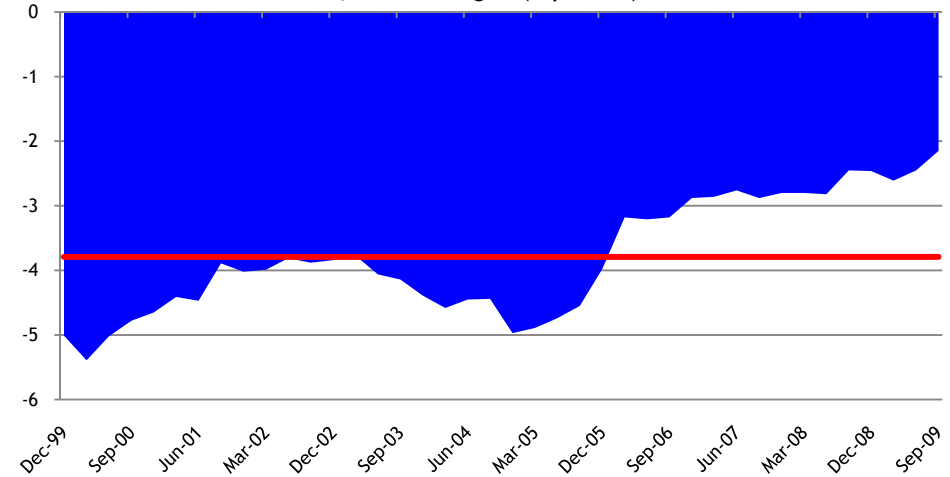


Source: eVestment Alliance; Wurts & Associates

» What Happens if You Pick the Wrong Active Manager Every Quarter?

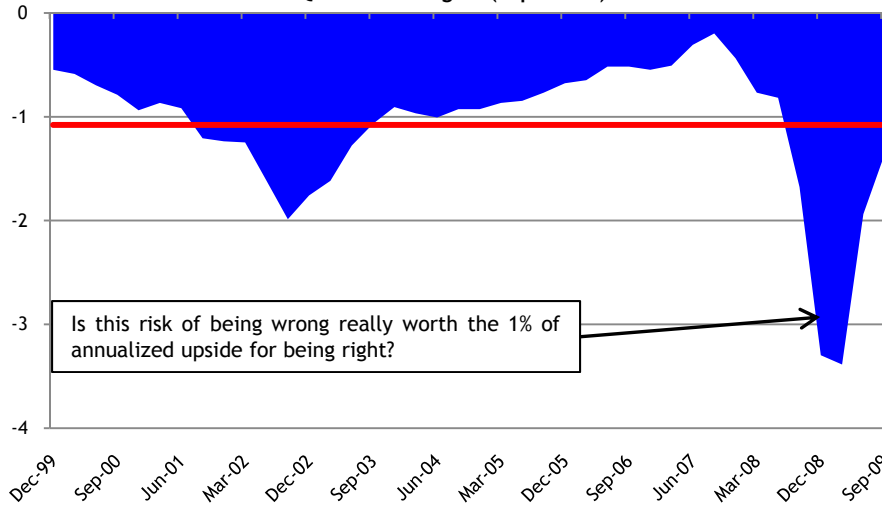
- In contrast to the benefits of picking top quartile managers, investors must also consider the risks of ending up with a bottom quartile manager.
- This is an important issue because downside must be considered alongside upside for any investment opportunity.
- And because we know managers rarely consistently achieve top quartile performance, such considerations are quite important.
- This study indicates the cost of being wrong can be very substantial over rolling 5 year periods, with difference for large & small cap managers ranging from 4%-5% annualized.
- So clearly one would target top quartile performers, but the question is how to do so given the overall poor predictive value of past performance.

eA US Large Cap Core Rolling 5 Year Difference Between First & Third Quartile Managers (Sept.2009)



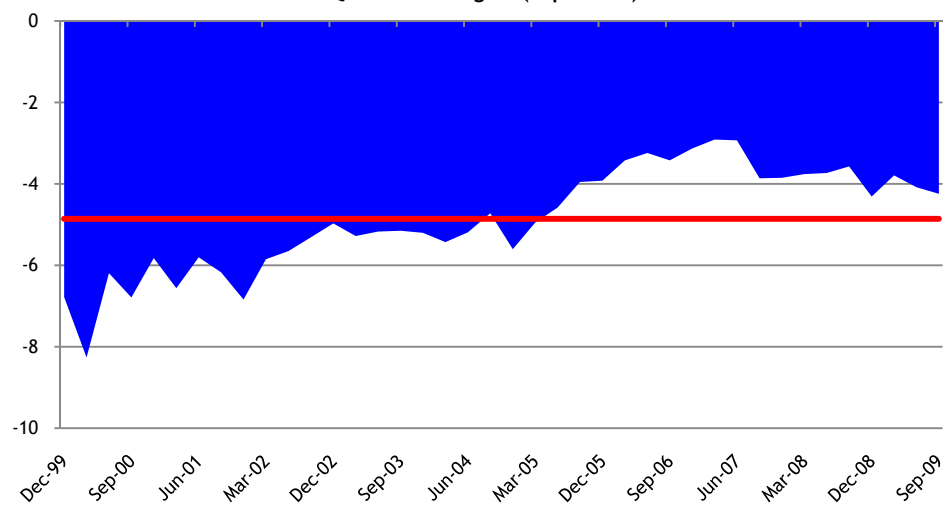
Source: eVestment Alliance; Wurts & Associates

eA US Core Plus Fixed Rolling 5 Year Difference Between First & Third Quartile Managers (Sept.2009)



Source: eVestment Alliance; Wurts & Associates

eA US Small Cap Core Rolling 5 Year Difference Between First & Third Quartile Managers (Sept.2009)

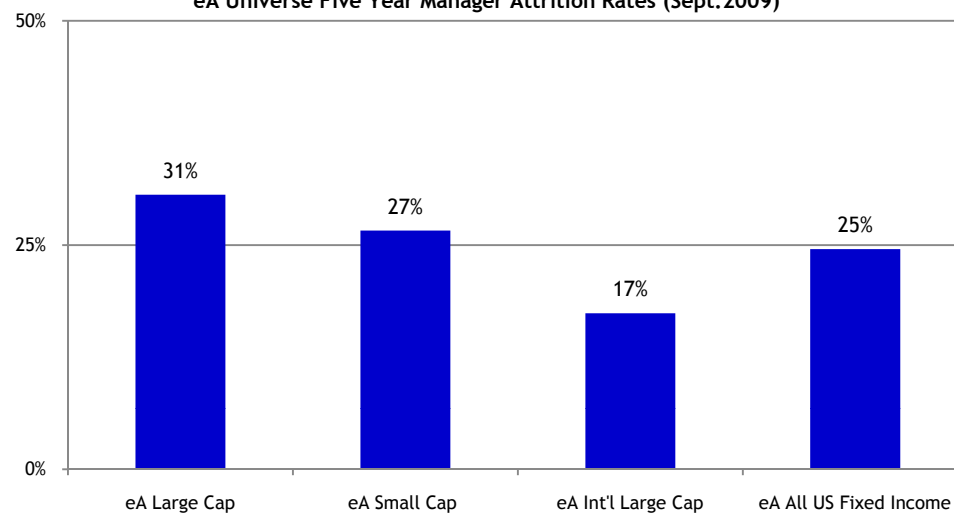


Source: eVestment Alliance; Wurts & Associates

» Some Inherent Problems With Studying Active Managers

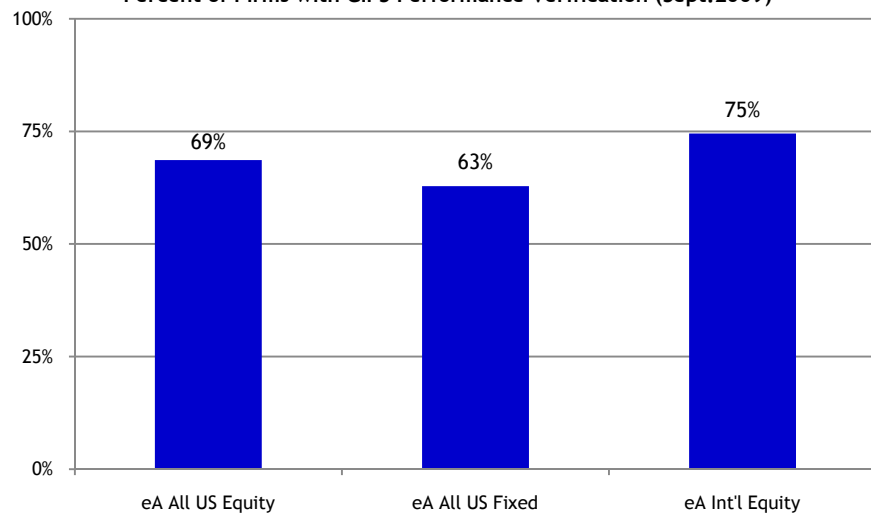
- Without a doubt, one of the biggest problems facing investors in the selection of active investment managers is quality and quantity of historic data.
- For example, every five years about one quarter of the active management strategies go inactive, which makes it difficult to provide robust historic analysis without incurring substantial survivorship bias
- On top of this, the majority of active managers within most universes have only been around for less than five years, which is generally not even a full market cycle.
- And on a more cynical basis, about one third of the firms do not have independent verification of their results.
- This perhaps is part of the reason why there is yet to be a reliable predictive model for seeking out successful managers.

eA Universe Five Year Manager Attrition Rates (Sept. 2009)



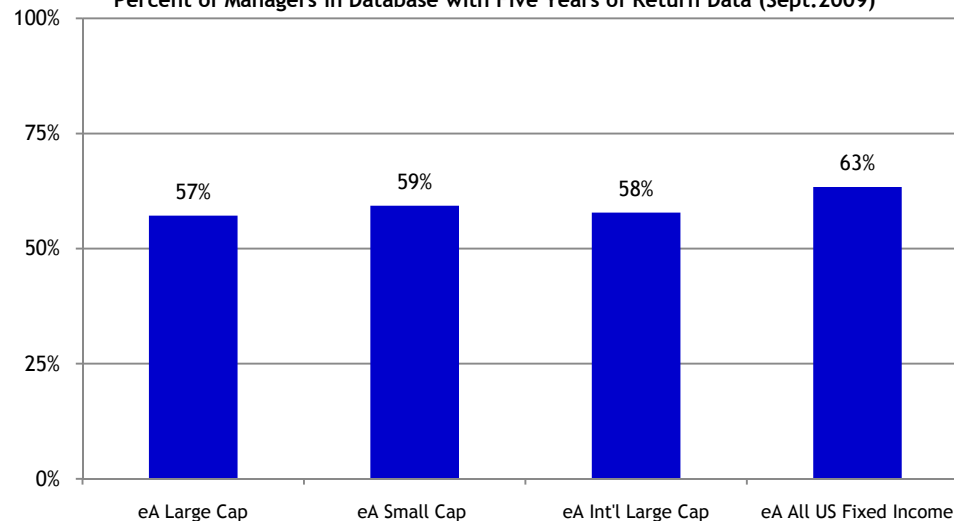
Source: eVestment Alliance; Wurts & Associates

Percent of Firms with GIPS Performance Verification (Sept. 2009)



Source: eVestment Alliance; Wurts & Associates

Percent of Managers in Database with Five Years of Return Data (Sept. 2009)



Source: eVestment Alliance; Wurts & Associates

»» What Can We Learn From Studying Active Managers?

Enduring Considerations

- Active managers are beholden to overall conditions in capital markets. Volatility and rapid changes in valuation disrupt active managers' predictive models, and during such times underperformance should be expected. Moreover, be wary of measuring managers relative to capitalization weighted benchmarks during strong bull and bear markets...it just isn't fair.
- "Alpha" is Beta in disguise. The fact of the matter is stock picking skill comprises a statistically insignificant portion of the value active managers bring to the table. Instead of finding great stock pickers, efforts are best spent seeking out managers with a more judicious mix of risk adjusted betas relative to any particular benchmark.
- Chasing strong past performance is likely a value detracting practice. If anything, a contrarian strategy is more likely to add value. However, we must not ignore the irrefutable impatience of institutional investors for weak performance. Managers with poor performance are very likely to go out of business. So placing assets with stable firms with diversified revenue and product streams is the most likely means to weather poor performance and benefit from the mean reverting nature of capital markets.
- Reaching for high levels of benchmark relative excess returns can potentially be rewarded, but only in a marginal way relative to lower tracking error managers. Also investors must be honest with themselves in their ability to exercise the patience and discipline necessary to achieve superior risk adjusted returns if that is the desired goal.
- Investors must realize there is no free lunch in active management, and outsized returns can only be achieved through outsized risk.

Strategic Considerations

- We have recently seen a precipitous fall in equity valuations and a reversal in the flight to safety seen towards the end of 2008. So active managers have done well as a result of recent market turmoil. *(See appendix for detailed active management data.)*
- Going forward there seems little reason to expect a strong resurgence in equity valuations, which bodes well for the potential value added of active managers that tend to relish stable valuations in equity markets.
- On the other hand though, equity markets have become far less concentrated (i.e., cap-weighting effect), meaning there are fewer opportunities to find mispriced stocks, which will make it more difficult to add value going forward.
- With credit spreads still above historic levels, core plus fixed income managers remain poised to outperform the Barclays Aggregate Index, but these opportunities are far less than they were just a year ago.



Appendix

» Appendix: Recent Period Universe Peer Rankings

YTD % of Active Managers Beating Benchmark (9/30/09)

Asset Class	Benchmark	eA	Morningstar
US Large Core Equity	S&P 500 Index	52	65
US Large Value Equity	Russell 1000 Value	70	62
US Large Growth Equity	Russell 1000 Growth	38	49
US Small Core Equity	Russell 2000	63	66
US Small Value Equity	Russell 2000 Value	83	78
US Small Growth Equity	Russell 2000 Growth	52	47
US Core Plus Fixed Income	BC Aggregate	99	77
International Equity	MSCI EAFE	59	42

Index Rank

Top Quartile
2nd Quartile
3rd Quartile
Bottom Quartile

2008 % of Active Managers Beating Benchmark

Asset Class	Benchmark	eA	Morningstar
US Large Core Equity	S&P 500 Index	58	48
US Large Value Equity	Russell 1000 Value	63	57
US Large Growth Equity	Russell 1000 Growth	46	48
US Small Core Equity	Russell 2000	34	49
US Small Value Equity	Russell 2000 Value	26	37
US Small Growth Equity	Russell 2000 Growth	27	64
US Core Plus Fixed Income	BC Aggregate	12	17
International Equity	MSCI EAFE	42	34

10 Year % of Active Managers Beating Benchmark (as of 9/30/09)

Asset Class	Benchmark	eA	Morningstar
US Large Core Equity	S&P 500 Index	90	66
US Large Value Equity	Russell 1000 Value	81	49
US Large Growth Equity	Russell 1000 Growth	95	77
US Small Core Equity	Russell 2000	89	59
US Small Value Equity	Russell 2000 Value	81	46
US Small Growth Equity	Russell 2000 Growth	86	79
US Core Plus Fixed Income	BC Aggregate	76	16
International Equity	MSCI EAFE	88	51

Source: Universe ranks from eVestment Alliance and Morningstar

Appendix: Periodic Table of US Large Cap Sector Returns

LEGEND

Consumer Discretionary
Consumer Staples
Energy
Financials
Health Care
Industrials

Information Technology
Materials
Telecommunication Services
Total Return
Utilities

	YTD 3Q										
	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Highest Return	46.4	-15.9	33.8	33.8	31.4	31.3	46.9	-4.4	3.4	58.7	72.9
	36.8	-22.9	24.7	24.6	16.8	24.6	38.1	-7.4	1.6	36.3	26.3
	30.7	-29.1	19.2	21.2	6.6	19.6	37.3	-11.0	-5.9	26.2	24.3
	20.3	-30.6	16.6	19.4	6.5	18.1	32.1	-14.2	-6.7	14.6	22.6
	19.2	-32.3	14.1	18.6	4.9	13.4	31.1	-19.2	-8.8	5.1	21.0
	14.1	-34.3	11.9	17.3	4.3	13.2	28.7	-22.1	-10.4	4.9	17.0
	9.5	-37.0	11.2	15.8	3.4	10.9	26.3	-23.4	-11.9	-9.1	14.4
	8.9	-39.2	7.2	14.4	2.1	10.9	25.6	-25.6	-11.9	-15.2	5.7
	7.2	-43.0	5.5	12.8	0.9	8.2	14.9	-29.8	-12.3	-19.3	-6.3
	5.2	-46.9	-15.0	8.5	-5.9	2.5	12.4	-34.9	-25.6	-35.5	-8.1
Lowest Return	1.5	-55.1	-18.6	7.3	-6.2	1.6	7.1	-37.7	-31.0	-39.2	-9.1
	YTD 3Q										
	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Return Spread	44.9	39.2	52.4	26.5	37.6	29.7	39.8	33.3	34.4	97.9	82.0

Source: eVestment Alliance

Appendix: Periodic Table of Fixed Income Sector Returns

LEGEND

Core	BarCap Aggregate Bond
Treasury	BarCap US Treasury
TIPS	BarCap US TIPS
Global	BarCap Global Aggregate Hedged
Emerging	JPM EMBI+
MBS/ABS	BarCap Mortgage
CMBS	BarCap Investment Grade CMBS
Short Duration	ML US Domestic Master 1-3 Yrs
Long Duration	BarCap Long Govt/Credit
High Yield	BarCap High Yield
Bank Loans	CSFB Leveraged Loan Index
Core + Median	eA Core Plus Fixed Income

		YTD 3Q										
		2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Highest Return		49.0	13.7	11.6	11.9	11.9	11.4	29.3	16.5	9.5	16.2	26.0
		39.8	8.4	9.0	10.5	5.7	11.1	29.0	15.4	8.5	15.7	4.7
		24.3	8.3	7.0	7.3	5.3	8.6	11.0	14.8	8.4	13.9	3.4
		24.1	5.6	6.9	5.2	4.3	8.5	8.4	14.3	8.4	13.5	2.4
		13.4	5.2	6.9	5.0	2.9	5.6	7.0	11.8	8.2	13.2	2.4
		9.5	4.9	6.6	4.9	2.8	5.3	5.9	10.2	7.9	11.6	1.9
		5.7	-2.4	6.5	4.3	2.8	4.9	4.7	9.0	7.3	11.2	0.8
		5.2	-2.7	6.1	4.3	2.7	4.7	4.1	8.7	7.2	11.2	-0.1
		4.8	-9.7	5.3	3.6	2.6	4.3	3.1	8.5	6.7	10.3	-0.8
		4.7	-22.7	4.6	3.1	2.4	4.3	3.1	6.4	5.3	8.1	-1.3
		4.5	-26.2	1.9	2.7	1.9	3.5	2.2	1.1	2.6	4.9	-2.6
	Lowest Return		-2.3	-28.8	1.9	0.5	1.8	1.5	2.1	-1.4	-0.8	-5.9
		YTD 3Q										
		2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Return Dispersion		51.3	42.5	9.7	11.4	10.1	9.9	27.2	17.9	10.3	22.1	33.7

Source: eVestment Alliance

» Summary of Conclusions - Wahal & Goyal

The Cost of Market Timing Managers (hiring/firing) for Plan Sponsors

	Number of Years Before Firing			Number of Years After Firing		
	-3 to 0	-2 to 0	-1 to 0	0 to 1	0 to 2	0 to 3
Fired Firms	2.0	-1.6	-0.1	1.8	3.1	4.3
Hired Firms	11.6	7.6	4.5	1.3	2.3	3.2
Return Differential (Hired-Fired)	9.5	9.1	4.6	-0.5	-0.9	-1.0

Even institutional investors are guilty of failed market timing activities. More specifically, research indicates plan sponsors tend to chase performance, firing poor performing and hiring top performing managers. Overall this practice has cost plan sponsors money.

Source: *The Selection and Termination of Investment Management Firms by Plan Sponsors*: Amit Goyal & Sunil Wahal