



Creating an Effective Hedge Fund Alternative by Leveraging the Style Component of Hedge Fund Returns

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Abstract

There is a general perception that active professional management of investment capital is preferable to passive exposure. However, the performance of mutual funds relative to passive investments indicates otherwise. This performance is consistent with the Random Walk Hypothesis, which posits that it is impossible to deliberately beat the market.

There are also significant limitations to this thesis, however. First, the theory does not account for the benefits of diversity in investment style. Second, on an empirical level, there are many strategies and managers that have outperformed passive investments on a stand-alone or combined basis over extended periods. The former consideration is particularly significant because, unlike mutual funds, hedge funds have yielded significant performance improvements over passive equity investments.

That said, the existence of strategies that add value does not guarantee superior performance. Once the style component of manager returns is isolated, many of these investment strategies tend to underperform because the fees they charge exceed the incremental benefits of the methods they use to generate alpha above the beta of their specific investment style.

Consequently, the same factors that cause mutual funds to lag behind passive equity investments cause most hedge funds to lag behind a beta strategy that mimics the exposures of the hedge fund investment style. Such a benchmark allows investors to identify managers that truly create alpha and replace lagging managers with the beta strategy. This combination has shown to improve overall portfolio performance.

I. Active Management: Mutual Funds vs. Hedge Funds

The mutual fund is a staple of global investment practice. Retirement plans, pensions, and individual investors allocate their capital to professional money managers in lieu of managing individual positions, and the asset management business is an integral part of the financial services industry. As of 2010, approximately \$25 trillion was allocated to mutual funds, with roughly \$13 trillion in the United States.¹ In terms of penetration, investment companies held approximately 27% of all U.S. corporate equities in 2010.²

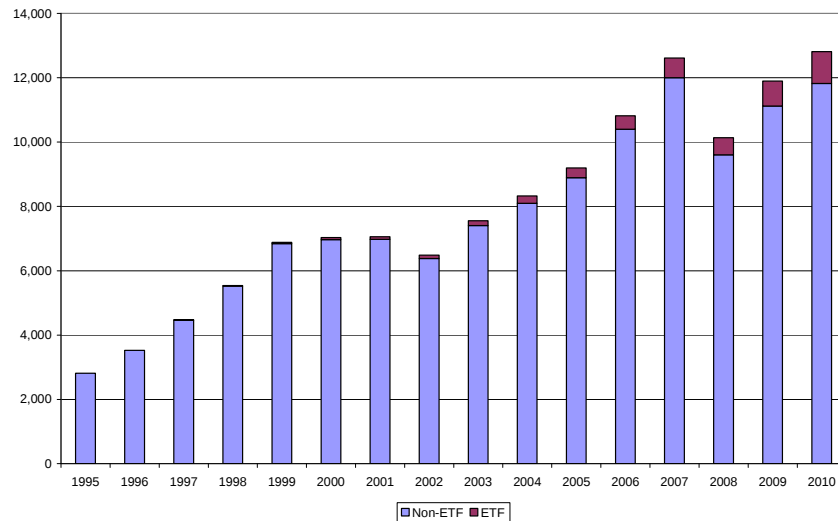
Even though mutual fund assets declined in 2008, the level of investment has continued to rise. With equities having recovered a significant portion of these losses through 2010, this base has grown to exceed its 2007 highs. However, although the aggregate capital allocated to domestic mutual funds has climbed back above the 2007 level, the capital allocated to non-exchange-traded funds has not yet eclipsed its peak.

¹ Investment Company Institute, 2011 Investment Company Fact Book, p. ii

² Investment Company Institute, 2011 Investment Company Fact Book, p. 6



Figure 1: Domestic Mutual Fund Assets Have Grown, but ETFs are Becoming More Prevalent



Source: ICI Factbook, p. 9

This shift to exchange-traded funds (ETFs) is not surprising given that ETFs represent passive asset allocations and typically offer significantly lower fees than mutual funds. Although it would be expected that active managers would produce an edge over passive investments, the results indicate otherwise. Over the past ten years, roughly 56% of the domestic equity mutual funds have underperformed the S&P Composite each year on average. Over the past five years, the average percentage has been closer to 60%.³

This poor performance extends across the various style boxes that the mutual fund industry uses to categorize their strategies, with each type of manager underperforming its benchmark stock index between 55% and 70% of the time.⁴ This performance applies to bond funds to an even greater extent, with an overwhelming majority underperforming their benchmark Barclays indices.

Even within the actively managed space, mutual funds do not provide value commensurate with their perception as Giffen goods. A Morningstar Research study showed that the cheapest quintile of domestic equity mutual funds of 2005 outperformed the most expensive quintile by 1.33% per year over the next five years, with the cheap funds outperforming the S&P Composite 1500 Index by about 65 BP and the expensive funds underperforming by a comparable margin. Similarly, the cheapest taxable bond funds yielded annualized returns that were 1.29% higher than those of their more expensive counterparts.⁵

This performance discrepancy suggests that any benefits realized by an active management style in mutual funds are often consumed by the incremental fees of active management. While the results

³ Standard and Poor's, SPIVA Scorecard 2011

⁴ Standard and Poor's, SPIVA Scorecard 2011

⁵ Morningstar Research,

<http://news.morningstar.com/articlenet/article.aspx?id=347327&part=1#.T3DIxnScSRg.link>



indicate that, even absent fees, the benefits of many mutual funds are nominal, the analysis is much more conclusive once fees are applied: mutual funds underperform passive investments. Given the broad availability and high liquidity of ETFs and the high transaction costs of mutual funds, passive investments have proven to be a feasible and superior alternative to mutual funds.

Hedge Funds as a Substitute for Mutual Funds

Although mutual funds do not fulfill the promise of offering superior performance via active management, alternative investment strategies such as hedge funds have yielded far more promising results. Table 1 compares the returns of passive investments, both individually and as a blended portfolio, to those of the HFRI Composite Index, an amalgamation of the returns of the hedge funds in the Hedge Fund Research database, and the returns of the HFRI Fund of Funds Composite Index, which consists of the actively managed pools of hedge fund investments. When compared to equities and commodities, hedge funds have delivered superior absolute and risk-adjusted returns. They have outperformed real estate on a risk-adjusted basis, and have generated superior gains to passive fixed-income investments.

Table 1: Performance of Hedge Funds Relative to Passive Investments

	HFRI Composite Index	HFRI Fund of Funds Composite Index	S&P 500	Russell 2000	DJ REIT Index	DJ-UBS Commodity Index	Lehman US Aggregate Index	Blend of Assets
Annualized Return	7.05%	3.98%	2.59%	5.01%	8.15%	5.53%	6.02%	6.72%
Annualized Volatility	7.61%	6.29%	16.69%	22.20%	22.40%	17.75%	3.61%	7.83%
Sharpe Ratio (2.50%)	0.60	0.24	0.01	0.11	0.25	0.17	0.97	0.54
Maximum Drawdown	(21.42%)	(22.20%)	(50.95%)	(52.89%)	(68.15%)	(54.26%)	(3.83%)	(25.16%)
Excess Return/Max Drawdown (2.50%)	0.21	0.07	0.00	0.05	0.08	0.06	0.92	0.17
Maximum Drawdown/Volatility	2.81	3.53	3.05	2.38	3.04	3.06	1.06	3.21
Average Month when S&P 500 Up	1.78%	1.11%		4.48%	3.63%	1.60%	0.41%	1.73%
Average Month when S&P 500 Down	(1.09%)	(0.74%)		(4.87%)	(3.04%)	(0.86%)	0.61%	(1.07%)
HFRI Composite Correlation		94%	76%	82%	45%	51%	(5%)	76%
HFRI Fund-of-Funds Correlation	94%		58%	66%	34%	51%	(5%)	64%
Blend Allocation			0%	20%	10%	15%	55%	
Percentage of Risk			0%	39%	20%	24%	18%	

Analysis conducted from July 1998, the inception of the Dow Jones Composite REIT Total Return Index, to December 2011.

Most significantly, however, they have outperformed risk assets by a significant margin while exhibiting a high correlation to a diversified portfolio of these assets. This commonality indicates that hedge funds would best serve as a substitute for other risk assets, most notably equities. The data support this thesis, as swapping in hedge funds for equities yields tangible improvements, increasing absolute returns, and reducing volatility and drawdowns.

Table 2: Benefits of Substituting Hedge Funds for Equities

	HFRI Composite Index	HFRI Fund of Funds Composite Index	S&P 500	Russell 2000	DJ REIT Index	DJ-UBS Commodity Index	Lehman US Aggregate Index	Blend of Assets	Blend Substituting Hedge Funds for Equities
Annualized Return	7.05%	3.98%	2.59%	5.01%	8.15%	5.53%	6.02%	6.72%	6.83%
Annualized Volatility	7.61%	6.29%	16.69%	22.20%	22.40%	17.75%	3.61%	7.83%	5.53%
Sharpe Ratio (2.50%)	0.60	0.24	0.01	0.11	0.25	0.17	0.97	0.54	0.78
Maximum Drawdown	(21.42%)	(22.20%)	(50.95%)	(52.89%)	(68.15%)	(54.26%)	(3.83%)	(25.16%)	(18.99%)
Excess Return/Max Drawdown (2.50%)	0.21	0.07	0.00	0.05	0.08	0.06	0.92	0.17	0.23
Maximum Drawdown/Volatility	2.81	3.53	3.05	2.38	3.04	3.06	1.06	3.21	3.43
Average Month when S&P 500 Up	1.78%	1.11%		4.48%	3.63%	1.60%	0.41%	1.73%	1.19%
Average Month when S&P 500 Down	(1.09%)	(0.74%)		(4.87%)	(3.04%)	(0.86%)	0.61%	(1.07%)	(0.32%)
HFRI Composite Correlation		94%	76%	82%	45%	51%	(5%)	76%	68%
HFRI Fund-of-Funds Correlation	94%		58%	66%	34%	51%	(5%)	64%	63%
Blend Allocation			0%	20%	10%	15%	55%		
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Analysis conducted from July 1998, the inception of the Dow Jones Composite REIT Total Return Index, to December 2011.



These results suggest that a significant allocation to alternative investment strategies is indeed beneficial to an investment portfolio, a conclusion that has been affirmed by asset flows. Even though hedge funds are generally only available to high net worth and institutional investors, they are growing at a rapid rate. BarclayHedge estimates that nearly \$2.5 trillion was allocated between hedge funds (including commodity trading advisors) and funds-of-funds at the end of 2011.⁶ These flows are indicative of the superior performance of hedge funds relative to that of mutual funds and passive investments.

II. Limitations of Hedge Funds

Although hedge funds have historically yielded superior performance to passive investments, the view that the alternative investment space is a panacea of alpha has proven unwarranted. Despite the possibilities available from the diversity of investment techniques and assets at their disposal, hedge funds exhibit characteristics that prevent the fulfillment of this promise of broader investment diversity.

First, the common sensitivity of most hedge funds to market risk appetite reduces the diversification benefit of allocating across hedge fund strategies. Although blending different trading styles has reduced volatility, this reduction has not translated into shallower drawdowns during market shocks. This relationship to risk appetite and high correlations between strategies reveals an exotic beta inherent in hedge fund investments.

Second, whereas active managers outperformed passive investments significantly prior to 2007, they have exhibited tangible performance decay over the past five years. This decline in returns is attributable to the unprecedented cross-asset correlations that have occurred over this recent period. These elevated correlations have further reduced the value of asset selection, as the market environment has become significantly more binary.

Hedge Funds Exhibit the Same Sensitivities as Passive Investments

Hedge funds often boast of both superior performance relative to passive investments and reduced exposure to the typical factors that drive equity returns. While they have effectively delivered on the first proposal, hedge fund performance in 2008 dispelled the validity of the second, just as happened during the Asian debt crisis in 1998. During this adverse year for most traditional investments, hedge funds not only incurred losses, but actually realized significantly larger downside relative to their historical risk.

Table 3: Hedge Funds Incurred Larger Relative Losses than Passive Investments in 2008

	2008 Return	Annualized Volatility	2008 Return/ Annualized Volatility
HFRI Composite Index	(19.03)%	7.61%	(2.50)
HFRI Fund of Funds Index	(21.37)%	6.29%	(3.40)
S&P 500 Index	(37.00)%	16.69%	(2.22)
Russell 2000	(33.79)%	22.20%	(1.52)
Lehman US Aggregate Index	5.24%	3.61%	1.45
DJ REIT Index	(38.07)%	22.40%	(1.70)
DJ-UBS Commodity Index	(35.65)%	17.75%	(2.01)

Analysis conducted from July 1998, the inception of the Dow Jones REIT Index, to December 2011.

⁶ http://www.barclayhedge.com/research/indices/ghs/mum/HF_Money_Under_Management.html,
http://www.barclayhedge.com/research/indices/cta/Money_Under_Management.html



The magnitude of these losses suggests that hedge funds have similar return drivers to other investments. Table 4 confirms this relationship, showing that there is not only a high degree of correlation between hedge funds and most passive investments, but also a high degree of coincidence in their losses. This coincidence manifests itself in the large drawdowns relative to volatility that hedge funds exhibit. This relationship implies that the diversification benefit does not translate into reduced downside exposure even if diversification reduces volatility. This relationship also applies to our passive proxy portfolio, which also incurred a larger loss relative to its volatility than any of its individual components.

Table 4: Performance of Hedge Funds Relative to Passive Investments

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Sharpe Ratio (2.50%)	0.60	0.24	0.01	0.11	0.25	0.17	0.97	0.54
Maximum Drawdown	(21.42%)	(22.20%)	(50.95%)	(52.89%)	(68.15%)	(54.26%)	(3.83%)	(25.16%)
Excess Return/Max Drawdown (2.50%)	0.21	0.07	0.00	0.05	0.08	0.06	0.92	0.17
Maximum Drawdown/Volatility	2.81	3.53	3.05	2.38	3.04	3.06	1.06	3.21
Average Month when S&P 500 Up	1.78%	1.11%	0.00%	4.48%	3.63%	1.60%	0.41%	1.73%
Average Month when S&P 500 Down	(1.09%)	(0.74%)	0.00%	(4.87%)	(3.04%)	(0.86%)	0.61%	(1.07%)
HFRI Composite Correlation		94%	76%	82%	45%	51%	(5%)	76%
HFRI Fund-of-Funds Correlation	94%		58%	66%	34%	51%	(5%)	64%
Blend Allocation			0%	20%	10%	15%	55%	
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Analysis conducted from July 1998, the inception of the Dow Jones Composite REIT Total Return Index, to December 2011.

Furthermore, hedge funds and non-fixed-income passive investments perform significantly better when equity markets rise, with the best performers averaging flat returns during negative months for equities. It thus follows that hedge funds exhibit a significant bias toward techniques that capture asset appreciation. This bias translates into high correlations across hedge fund strategies. Table 5 presents the cross-correlations of the major components of the HFRI Composite Index. Among these groups, the only pair that exhibits a correlation below 50% is the pairing of Global Macro and Relative Value, while the least correlated strategy class to hedge funds as a whole is Global Macro, with a correlation of 55%.

Table 5: Correlations of Major Sub-Components of the HFRI Composite Index

Table 3: Correlations of Major Sub-Components of the HFRI Composite Index									
Average Correlation to Other Sub-Indices	Average Month When S&P 500 Up	Average Month When S&P 500 Down	HFRI Fund of Funds Composite Index	HFRI Emerging Markets (Total) Index	HFRI Equity Hedge (Total) Index	HFRI Event-Driven (Total) Index	HFRI Macro (Total) Index	HFRI Relative Value (Total) Index	
	1.78%	(1.10)%	HFRI Fund Weighted Composite Index	93%	89%	97%	92%	66%	75%
82%	1.18%	(0.75)%	HFRI Fund of Funds Composite Index		87%	89%	87%	72%	77%
75%	2.64%	(2.15)%	HFRI Emerging Markets (Total) Index		81%	82%	57%	68%	
78%	2.22%	(1.52)%	HFRI Equity Hedge (Total) Index			89%	60%	72%	
78%	1.77%	(0.89)%	HFRI Event-Driven (Total) Index				52%	82%	
55%	1.14%	(0.06)%	HFRI Macro (Total) Index						32%
66%	1.11%	(0.10)%	HFRI Relative Value (Total) Index						

Analysis conducted from January 1997 until December 2011.

These high correlations and consistent relationship to equity market returns imply two conclusions:

1. Hedge funds have the same return driver as other assets, performing better when market risk appetite rises and incurring losses when risk appetite declines
2. Most hedge fund strategies share this driver



These relationships are consistent with the conclusions of prior Conquest research. In the 2005 paper, "Does a change in Risk Regime Spell Trouble for Hedge Funds," we illustrated this sensitivity by constructing an index that captures changes in market risk appetite using the prices of a basket of instruments, specifically option prices and credit spreads.⁷ The indicators were selected by reviewing the symptoms of flights-to-quality. The common characteristic implied by these factors was that market risk appetite can be measured by the amount of compensation required to assume incremental risk.

We originally released our analysis of the relationship between market risk appetite and hedge fund performance in October 2005. At the time, our statistical and fundamental research indicated that risk had become oversold. Our thesis was that a rise in risk aversion would prove unfavorable for hedge funds.

The uniformity of losses across hedge fund strategies during 2008 and the rebound in 2009 provided anecdotal support for the conclusion of our original study: that most hedge fund strategies are extremely sensitive to rising risk aversion and systemic risk. The empirical results confirm this view. We present the in-sample and out-of-sample results in Table 6.

Table 6: Comparison of In-Sample and Out-of-Sample Results of the Conquest Risk Aversion Index

Index	In-Sample			Out-of-Sample			Relationship to Risk Aversion	Wider?
	April 2003 to September 2005			October 2005 to December 2011				
	Risk-Seeking Daily Return	Risk-Averse Daily Return	Spread	Risk-Seeking Daily Return	Risk-Averse Daily Return	Spread		
HFRI Indices								
Global Hedge Fund	0.033%	(0.096%)	0.129%	0.041%	(0.119%)	0.160%	SAME	YES
Equal Weighted Strategies	0.027%	(0.075%)	0.101%	0.035%	(0.099%)	0.134%	SAME	YES
Convertible Arbitrage	0.005%	(0.122%)	0.126%	0.043%	(0.203%)	0.245%	SAME	YES
Distressed Securities	0.048%	(0.080%)	0.129%	0.011%	(0.098%)	0.109%	SAME	
Equity Hedge	0.039%	(0.115%)	0.153%	0.045%	(0.157%)	0.203%	SAME	YES
Equity Market Neutral	(0.006%)	(0.010%)	0.004%	0.008%	(0.016%)	0.024%	SAME	YES
Event Driven	0.049%	(0.074%)	0.122%	0.045%	(0.113%)	0.158%	SAME	YES
Macro	0.036%	(0.129%)	0.165%	0.029%	(0.070%)	0.098%	SAME	
Merger Arbitrage	0.019%	(0.004%)	0.023%	0.039%	(0.035%)	0.074%	SAME	YES
Relative Value Arbitrage	0.020%	(0.068%)	0.088%	0.052%	(0.130%)	0.181%	SAME	YES
July 2004 to September 2005				October 2005 to December 2011				
Absolute Return	0.017%	(0.074%)	0.092%	0.011%	(0.049%)	0.061%	SAME	
Market Directional	0.035%	(0.101%)	0.136%	0.064%	(0.181%)	0.245%	SAME	YES
January 1997 to September 2005				October 2005 to December 2011				
	Risk-Seeking Monthly Return	Risk-Averse Monthly Return	Spread	Risk-Seeking Monthly Return	Risk-Averse Monthly Return	Spread		
Dow Jones Credit Suisse Indices								
Hedge Fund Index	1.15%	0.06%	1.08%	1.03%	(1.26%)	2.29%	SAME	YES
Convertible Arbitrage	0.85%	0.43%	0.42%	1.34%	(1.97%)	3.31%	SAME	YES
Dedicated Short Bias	(0.94%)	2.03%	(2.97%)	1.60%	2.90%	(4.50%)	SAME	YES
Emerging Markets	1.60%	(1.23%)	2.83%	1.39%	(1.95%)	3.34%	SAME	YES
Equity Market Neutral	0.77%	1.01%	(0.24%)	(0.14%)	(0.12%)	(0.02%)	SAME	
Event Driven	1.30%	(0.16%)	1.47%	1.10%	(1.46%)	2.56%	SAME	YES
Distressed	1.44%	(0.15%)	1.59%	0.91%	(1.07%)	1.98%	SAME	YES
ED: Multi-Strategy	1.25%	(0.20%)	1.46%	1.23%	(1.73%)	2.97%	SAME	YES
Risk Arbitrage	0.77%	0.09%	0.68%	0.68%	(0.40%)	1.09%	SAME	YES
Fixed Income Arbitrage	0.62%	0.01%	0.61%	0.92%	(1.47%)	2.39%	SAME	YES
Global Macro	1.25%	0.60%	0.65%	1.05%	(0.03%)	1.08%	SAME	YES
Long/Short Equity	1.46%	0.03%	1.43%	1.21%	(1.89%)	3.09%	SAME	YES
Multi-Strategy	0.89%	0.53%	0.36%	1.06%	(1.27%)	2.33%	SAME	YES
Managed Futures	0.25%	1.59%	(1.34%)	0.76%	(0.38%)	1.14%		
Other								
Barclay CTA Index	0.29%	0.95%	(0.66%)	0.48%	0.22%	0.26%		
BTOP50 Index	0.36%	1.38%	(1.03%)	0.43%	0.09%	0.34%		
Newedge CTA Index	0.38%	1.41%	(1.03%)	0.61%	(0.21%)	0.81%		

⁷ Conquest Capital Group, "Does a Change in Risk Regime Spell Trouble for Hedge Funds?" October 2005.



The table shows that, with the exception of managed futures, each of the analyzed hedge fund strategies exhibit the same relationship to market risk appetite in the “live” period as they did in the pre-publication period. In fact, the disparity between risk-averse and risk-seeking returns is actually larger in the out-of-sample period for the majority of these indices. These results reinforce the validity of the index.

Consequently, although hedge funds offer the possibility of avoiding the negative drivers that dictate equity performance, their returns indicate otherwise. Hedge funds as a group are compensated for capturing risk premia and assuming liquidity risk. This relationship exists not only among equity-driven hedge funds but persists across the majority of hedge fund strategies, as most alternative investment styles exhibit the same sensitivities to market risk appetite and high correlations to each other. This common exposure reduces the efficacy of diversification among hedge fund strategies, as they tend to incur contemporaneous losses, therein eliminating much of the expected downside protection.

Active Manager Performance Deterioration in a High Correlation Environment

The effect of contemporaneous downside performance does not just apply across investment strategies. Elevated cross-asset correlations can be equally toxic for a portfolio. Whereas investors have historically been able to derive significant benefits by investing in a blend of assets, the underlying correlation assumption across assets has become much more precarious over the past five years.

The consistent rising correlations appeared first in the equity markets after the Dot Com Crash in 2000-2001 but have now propagated to other assets. Table 7 examines the average pair-wise correlations of S&P 500 sectors since 1990, highlighting that the average yearly pair-wise correlation over the past five years is roughly equal to the highest observed correlation over the prior seventeen.

Table 7: S&P 500 Sector Correlations Have Risen

Year	Average Cross Sector Correlation	Year	Average Cross Sector Correlation
1990	73%	2003	67%
1991	70%	2004	56%
1992	49%	2005	60%
1993	37%	2006	53%
1994	54%	Average 1990-2006	52%
1995	35%	Peak 1990-2006	73%
1996	54%	2007	75%
1997	70%	2008	80%
1998	56%	2009	72%
1999	42%	2010	80%
2000	30%	2011	85%
2001	38%	Average 2007-2011	78%
2002	63%	Minimum 2007-2011	72%

Source: Bloomberg

Excessive correlation among stocks eroded the benefits of stock selection, reducing equity strategy performance to beta factors. This beta dependence now has translated to other assets, further abasing the effects of portfolio diversification.

Consider the equity index correlations of a few heavily-traded instruments over the past three decades. From 1983 to 2006, these assets were essentially uncorrelated to equities. However, this relationship has been quite different over the past five years, with average correlations around 50%. Furthermore, with the exception of fixed-income yields, the average correlation over the past five years has exceeded the peak correlation observed over the prior twenty years.

Table 8: Cross-Correlations are at Unprecedented Levels over Past Five Years

Daily Correlation to S&P 500 Return					
Year	Average	AUD/USD	EUR/JPY (and DEM/JPY)	Spot Crude Oil	US 10-Year Generic Yield
1983	3%	15%	20%	8%	(32%)
1984	(2%)	13%	(1%)	14%	(34%)
1985	(4%)	1%	2%	4%	(22%)
1986	(12%)	(1%)	(1%)	(8%)	(39%)
1987	(3%)	(19%)	(2%)	9%	(1%)
1988	(2%)	9%	27%	(2%)	(41%)
1989	(9%)	(7%)	(4%)	(4%)	(22%)
1990	(24%)	1%	(20%)	(28%)	(47%)
1991	(13%)	(10%)	14%	(18%)	(39%)
1992	(2%)	5%	(2%)	5%	(15%)
1993	(9%)	(6%)	6%	(3%)	(33%)
1994	(18%)	5%	1%	(17%)	(61%)
1995	(10%)	3%	3%	2%	(48%)
1996	(20%)	(4%)	(14%)	1%	(64%)
1997	(10%)	7%	(20%)	(12%)	(16%)
1998	5%	8%	(14%)	1%	27%
1999	(4%)	6%	(1%)	(2%)	(20%)
2000	0%	(1%)	(3%)	(7%)	12%
2001	6%	12%	(21%)	5%	28%
2002	19%	13%	(15%)	15%	65%
2003	(8%)	(14%)	(30%)	(24%)	35%
2004	1%	21%	(13%)	(12%)	9%
2005	(1%)	3%	(6%)	(6%)	7%
2006	(1%)	20%	(17%)	1%	(10%)
1983-2006 Average	(5%)	3%	(5%)	(3%)	(15%)
Peak Pre-2007	19%	21%	27%	15%	65%
2007	45%	58%	67%	5%	49%
2008	51%	60%	68%	26%	50%
2009	54%	74%	65%	45%	30%
2010	65%	80%	67%	63%	50%
2011	61%	78%	52%	44%	71%
Post-2007 Average	55%	70%	64%	36%	50%

Source: Bloomberg

While it could be argued that technical considerations skew the data, particularly with regard to post-Volcker interest rate easing, the pre-2007 data reflect the more traditional relationships between asset prices. Specifically, elevated energy prices have historically been viewed as a tax on consumption, as the costs of transit and heat cannibalize discretionary expenditures, while exchange rates have been dictated by capital flows.

These relationships have been disrupted over the past five years. Oil prices have begun to move in concert with equity prices. We see the same situation in currency exchange rates, wherein speculative interest in carry trades and the flows surrounding the implementation of these trades has rendered the Australian Dollar practically fungible with equities. Similarly, the low interest rates in Japan created an opportunity to borrow cheaply and capture spreads simply by holding virtually any currency against the



Japanese Yen. Benchmark debt yields have seen a polarized, directional relationship take hold, with investors substituting the highest-quality sovereign debt for risk positions during risk aversion.

These elevated correlations point to a binary world in which assets can be divided into two buckets: risk-off and risk-on. While there are exceptions such as gold and agricultural commodities, investable assets generally fit this taxonomy:

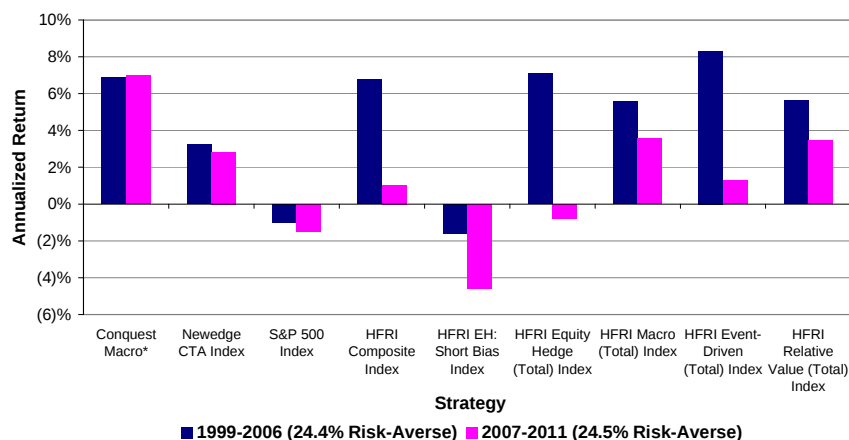
Table 9: The Current Taxonomy of Investments

Risk-Positive Investments	Risk-Negative Investments
Any Currency except the three to the right	Benchmark Sovereign Debt
Base Metals	Japanese Yen
Emerging Markets	Short Sellers
Energies	Short-Term Fixed-Income
Equities	Swiss Franc
Hedge Funds (except Short Sellers)	Tail Hedging Strategies
High-Yield Credit	Ultra-High-Grade Credit
Real Estate	US Dollar

This binary viewpoint has placed a greater premium on investment style. Investment managers that are highly correlated to individual assets are less likely to exhibit significant differentiation from passive investments. Consequently, the same negative beta factors are likely to create drag on returns. In fact, these circumstances actually penalize an active investment style, as the relative merits of each investment are de-emphasized.

In the context of these considerations it is not surprising that most hedge fund strategies, including short selling, have seen their relative performance wilt as these correlations have risen. Although the recent period encompasses the 2008 correction, the risk environment has little to do with the change in performance: the distribution of risk-seeking and risk-averse days for the Conquest Risk Aversion Index was essentially identical over these periods.

Figure 2: Excess Annualized Returns over Low Correlation and High Correlation Periods



*Analysis shown from May 1999 Conquest Macro Inception to December 2011

Please see "End Notes" for important disclosures.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.

In contrast, CTA strategies have seen significantly less performance degradation. CTA strategies tend to be directional in nature, with the majority of assets concentrated in long-term trend-following programs. Other CTA strategies, such as Conquest Macro, employ short-term momentum techniques to achieve a conditional relationship to volatility. These strategies offer different sensitivities and exposures to passive investments, therein creating opportunities for real diversification benefits.

Momentum strategies are also by their nature less dependent on the relative strength of assets. Because these strategies are largely uncorrelated to their underlying passive investments, they actually extract a different return profile from a basket of investable assets, much in the way put options behave markedly differently than the underlying securities. This ability to transform the returns of the underlying assets creates a new axis of diversification, which translates into more robust returns on both an individual and portfolio basis.

For other strategies, the lack of diversification among the underlying investments has yielded both a increase in downside participation and a reduction in upside participation. Highly correlated assets lead to contemporaneous losses, which exacerbate drawdowns. These drawdowns naturally lead to position reductions, as managers reduce exposure in response to losses. When markets recover after these snapbacks, hedge funds as a group have not participated in rallies. The performance of hedge funds relative to passive investments confirms this effect. Consider the performance differential between hedge funds and passive investments over the two periods in question, shown in Table 10.

Table 10: Performance of Hedge Funds Relative to Passive Investments

	HFRI Composite Index	HFRI Fund of Funds Composite Index	S&P 500	Russell 2000	DJ REIT Index	DJ-UBS Commodity Index	Lehman US Aggregate Index	Blend of Assets
All Months								
Annualized Return	7.05%	3.98%	2.59%	5.01%	8.15%	5.53%	6.02%	6.72%
Annualized Volatility	7.61%	6.29%	16.69%	22.20%	22.40%	17.75%	3.61%	7.83%
Sharpe Ratio (2.50%)	0.60	0.24	0.01	0.11	0.25	0.17	0.97	0.54
Sharpe Ratio Spread to Hedge Funds		(0.36)	(0.59)	(0.49)	(0.35)	(0.43)	0.38	(0.06)
Average Up Month	1.74%	1.32%	3.47%	4.89%	4.41%	3.93%	1.02%	1.69%
Average Down Month	(1.76%)	(1.40%)	(4.12%)	(5.45%)	(5.14%)	(4.16%)	(0.69%)	(1.80%)
Pre-2007								
Annualized Return	10.01%	6.87%	4.30%	7.97%	14.85%	10.28%	5.74%	8.35%
Annualized Volatility	7.40%	5.92%	15.34%	20.84%	14.65%	15.03%	3.64%	6.08%
Sharpe Ratio (3.50%)	0.88	0.57	0.05	0.21	0.78	0.45	0.62	0.80
Sharpe Ratio Spread to Hedge Funds		(0.31)	(0.83)	(0.66)	(0.10)	(0.43)	(0.26)	(0.08)
Average Up Month	1.81%	1.39%	3.25%	4.82%	3.64%	3.94%	1.04%	1.54%
Average Down Month	(1.55%)	(1.07%)	(3.72%)	(4.88%)	(3.53%)	(3.24%)	(0.72%)	(1.28%)
2007-Present								
Annualized Return	2.22%	(0.75%)	(0.25%)	0.15%	(2.35%)	(2.07%)	6.50%	4.01%
Annualized Volatility	7.85%	6.72%	18.88%	24.47%	31.53%	21.62%	3.60%	10.16%
Sharpe Ratio (1.00%)	0.15	(0.26)	(0.07)	(0.03)	(0.11)	(0.14)	1.53	0.30
Sharpe Ratio Spread to Hedge Funds		(0.42)	(0.22)	(0.19)	(0.26)	(0.30)	1.37	0.14
Average Up Month	1.60%	1.18%	3.85%	5.02%	5.94%	3.91%	0.99%	1.96%
Average Down Month	(2.04%)	(1.88%)	(4.74%)	(6.40%)	(7.24%)	(5.81%)	(0.64%)	(2.57%)
Change in Sharpe Ratio Spread		(0.11)	0.61	0.48	(0.16)	0.13	1.64	0.22
Change in Upside Performance	(0.20%)	(0.21%)	0.60%	0.20%	2.30%	(0.03%)	(0.05%)	0.41%
Change in Downside Performance	(0.49%)	(0.81%)	(1.01%)	(1.51%)	(3.71%)	(2.56%)	0.08%	(1.30%)
Blend Allocation			20%	10%	15%	55%		
Percentage of Risk			39%	20%	24%	18%		

Analysis conducted from July 1998, the inception of the Dow Jones Composite REIT Total Return Index, to December 2011.

This deterioration is indicative of the diminishing benefits of asset selection. The binary nature of the markets has also had a similar effect on managers, as the reduced differentiation between managers and strategies has widened the performance gap between funds-of-funds and hedge funds as a whole. The correlation pattern between hedge fund strategies further supports this conclusion, as a number of them



have become virtually indistinguishable. Consider the cross-strategy correlations of the HFRI Composite sub-indices before and after overall cross-asset correlations rose.

Table 11: Correlations of Major Sub-Components of the HFRI Composite Index

Table 11: Correlations of major sub-components of the HFRI Composite Index										
Average Correlation to Other Sub-Indices	Average Correlation to Other Sub-Indices ex-Macro	Average Month When S&P 500 Up	Average Month When S&P 500 Down	HFRI Fund of Funds Composite Index	HFRI Emerging Markets (Total) Index	HFRI Equity Hedge (Total) Index	HFRI Event-Driven (Total) Index	HFRI Macro (Total) Index	HFRI Relative Value (Total) Index	
1997-2006										
	1.30%	(0.54)%		HFRI Fund Weighted Composite Index	92%	86%	96%	90%	72%	68%
80%	80%	0.89%	(0.27)%	HFRI Fund of Funds Composite Index		84%	86%	82%	80%	69%
70%	72%	1.94%	(1.22)%	HFRI Emerging Markets (Total) Index		72%	76%	62%	57%	
74%	75%	1.61%	(0.65)%	HFRI Equity Hedge (Total) Index			84%	67%	59%	
75%	79%	1.27%	(0.30)%	HFRI Event-Driven (Total) Index				62%	72%	
63%		0.91%	(0.05)%	HFRI Macro (Total) Index						45%
60%	64%	0.71%	0.19%	HFRI Relative Value (Total) Index						
2007-Present										
	0.48%	(0.56)%		HFRI Fund Weighted Composite Index	96%	96%	99%	96%	52%	89%
84%	92%	0.29%	(0.48)%	HFRI Fund of Funds Composite Index	92%	93%	93%	54%	90%	
82%	92%	0.70%	(0.93)%	HFRI Emerging Markets (Total) Index		96%	92%	44%	88%	
83%	93%	0.61%	(0.87)%	HFRI Equity Hedge (Total) Index			95%	44%	88%	
81%	93%	0.51%	(0.59)%	HFRI Event-Driven (Total) Index				34%	94%	
40%		0.23%	(0.02)%	HFRI Macro (Total) Index						23%
77%	90%	0.41%	(0.29)%	HFRI Relative Value (Total) Index						
Difference										
	(0.83)%	(0.02)%		HFRI Fund Weighted Composite Index	4%	11%	3%	6%	(20%)	22%
4%	12%	(0.60)%	(0.22)%	HFRI Fund of Funds Composite Index	8%	7%	11%	(26%)	21%	
12%	20%	(1.24)%	0.30%	HFRI Emerging Markets (Total) Index		24%	16%	(18%)	31%	
10%	18%	(1.00)%	(0.21)%	HFRI Equity Hedge (Total) Index			12%	(24%)	29%	
6%	15%	(0.76)%	(0.28)%	HFRI Event-Driven (Total) Index				(28%)	21%	
(23%)		(0.68)%	0.03%	HFRI Macro (Total) Index						(21%)
16%	26%	(0.30)%	(0.48)%	HFRI Relative Value (Total) Index						

Analysis conducted from January 1997 until December 2011.

The comparison illustrates that even though Global Macro strategies have become even more differentiated from the other major hedge fund strategy types, the other four main sub-strategies have become almost perfectly correlated, realizing gains and incurring losses in lockstep. This lack of dispersion among strategies further affirms the notion that the benefits of selection have filtered up from the equity markets across asset classes and now into the majority of investment management styles. The data also reveal that these elevated correlations have specifically hindered performance on the topside, as managers have become constrained in their ability to assume notional risk.

Taken in tandem with the common sensitivities of managers, this performance decay suggests that a "passive" hedge fund investment style would likely outperform most aggregate manager portfolios. In order to construct such a product, it is necessary to isolate the enhanced performance that comes from the investment style in a consistent, replicable manner.

III. Building a Hedge Fund Replication Strategy Using Exotic Beta Analysis

As we have seen, hedge funds have historically exhibited high correlations not only to passive investments but also to each other. These elevated correlations and common sensitivities among hedge



fund strategies imply that the investment style of hedge funds dictates performance more so than the specific markets traded. This dependence on investment style is referred to as exotic beta.

The presence of hedge fund beta suggests that managers can be compared to a benchmark much in the same way that individual equities are compared to an index return in the Capital Asset Pricing Model. A common solution for this benchmark investment has been to aggregate manager returns into a hedge fund index. *However, using an index derived from hedge fund returns has a major limitation: the index reflects the returns from investing in hedge funds rather than the returns of the hedge fund investment style. Since hedge fund indices consolidate net returns, the effect of fees on returns is eliminated from the comparison unless a specific manager has a different fee structure from the standard for the industry or strategy.* Consequently, the ideal benchmark should be one that is free of fees.

In that vein, the commonality of exposure among hedge fund strategies implies that the returns of hedge fund investing can be replicated without actual hedge fund investment. This mandate has been the crux of hedge fund replication strategies, of which various flavors have been discussed and proposed over the past ten years. These replication techniques have achieved differing degrees of effectiveness. In a 2007 paper, Conquest discussed some of the most common methods of attempting to replicate hedge fund returns.⁸

The paper concluded that the most effective way to capture the hedge fund investing style is implementing similar trades to those done by hedge funds. As an example, we cited the performance of Conquest MFS, which has been trading live since 2004 and now has a track record of nearly eight years. Over this period, Conquest MFS has maintained a high correlation and exhibited comparable performance to the major CTA indices. In that vein, the process by which we developed Conquest MFS is instructive.

Conquest Managed Futures Select: Isolating Exotic Beta in Trend-Following CTAs

Hedge fund managers cultivate the perception that they employ their own unique set of techniques that differentiate them from their peers. While the specific trades or areas of emphasis may vary, most hedge funds still have unifying threads, specifically market approach and risk management methodology. These two factors tend to overwhelm other considerations and dictate the return profile of the manager.

One example of a strategy where the investment style leads to highly-commoditized returns is trend-following, one of the oldest hedge fund strategies. This commoditization is readily apparent in the returns of these managers, as they are highly correlated. Table 12 presents the correlations of a number of major trend-followers to both each other and the major CTA indices.

⁸ Conquest Capital Group, "Conquest Replication Commentary," June 2007.



Table 12: Correlations of Major Trend-Following CTA Managers

	Average Manager Correlation	Aspect Diversified	BlueTrend	Chesapeake Diversified	Dunn WMA	Graham K4D-15	Millburn Diversified	Sunrise Davco	Transtrend Diversified	Winton Diversified
Aspect Diversified	76%		79%	71%	80%	74%	83%	73%	75%	78%
BlueTrend	72%	79%		62%	68%	69%	76%	73%	72%	78%
Chesapeake Diversified	65%	71%	62%		68%	57%	79%	72%	65%	59%
Dunn WMA	69%	80%	68%	68%		69%	73%	72%	60%	66%
Graham K4D-15	69%	74%	69%	57%	69%		78%	66%	76%	60%
Millburn Diversified	75%	83%	76%	79%	73%	78%		74%	80%	65%
Sunrise Davco	69%	73%	73%	72%	72%	66%	74%		69%	56%
Transtrend Diversified	70%	75%	72%	65%	60%	76%	80%	69%		68%
Winton Diversified	66%	78%	78%	59%	66%	60%	65%	56%	68%	
Newedge CTA Index	81%	89%	81%	73%	80%	83%	87%	80%	84%	74%
BTOP50 Index	82%	88%	81%	74%	80%	84%	89%	81%	84%	76%
Barclay CTA Index	77%	81%	81%	72%	77%	78%	77%	78%	76%	76%
DJ Managed Futures Index	82%	88%	84%	75%	82%	82%	88%	78%	83%	80%

Analysis conducted since MFS inception in June 2004 through December 2011.

Source: HedgeFund.net

Among these managers, the average correlation tends to range between 65% and 75%, indicating a significant relationship. Given that CTAs tend to trade a similar set of markets, correlations of this magnitude indicate that there must be a large overlap in trades across the space. This overlap suggested that a mechanical beta strategy would likely produce similar returns.

In the 2003 paper, "The Beta of Managed Futures," Conquest principals demonstrated that it is possible to create a tradable trend-following beta strategy using a series of simple breakout models.⁹ These strategies, distributed across timeframes ranging from five days to 200 days, became the basis for Conquest MFS.

Since the strategy launched in June 2004, Conquest Managed Futures Select has exhibited comparable performance to the major CTA indices while maintaining a 70% correlation to them. The long-term component of MFS has been even more consistent relative to CTAs, with an average correlation near 80% and superior absolute and risk-adjusted returns.

Table 13: Correlation and Performance of CTA Indices and Conquest Managed Futures Select

	CTA Indices				MFS	MFS Sub-Strategies		
	Newedge CTA Index	BTOP50 Index	Barclay CTA Index	Dow Jones Managed Futures Index	Conquest MFS	MFS Short- Term Systems*	MFS Medium- Term Systems*	MFS Long- Term Systems*
ROR	4.22%	3.72%	4.36%	5.05%	5.69%	0.38%	3.02%	9.45%
Vol	7.46%	6.42%	5.92%	11.11%	15.63%	15.65%	15.62%	15.63%
Sharpe (2.00%)	0.30	0.27	0.40	0.27	0.24	(0.10)	0.06	0.48
Max Drawdown	(7.34%)	(6.84%)	(5.63%)	(10.14%)	(17.08%)	(33.72%)	(25.24%)	(17.32%)
Excess Return/Max Drawdown (2.00%)	0.30	0.25	0.42	0.30	0.22	(0.05)	0.04	0.43
Newedge CTA Index Correlation		97%	90%	95%	71%	32%	61%	78%
BTOP 50 Correlation	97%		92%	95%	72%	35%	61%	79%
Barclay CTA Index Correlation	90%	92%		90%	74%	40%	66%	76%
DJ Managed Futures Index Correlation	95%	95%	90%		66%	27%	55%	76%
Average CTA Index Correlation	94%	95%	91%	93%	70%	33%	61%	77%

Analysis conducted since MFS inception in June 2004 through December 2011.

*MFS system group returns are estimated by taking estimated gross returns, adjusting leverage to equal the MFS gross monthly volatility, and then applying interest and fees as realized in the MFS Composite return. Please see "End Notes" for important disclosures.

⁹ Lee, Timothy C., and Marc H. Malek, Jeffrey T. Nash, Jeffrey M. Rose, "The Beta of Managed Futures," 2003.



Extending the Exotic Beta Analysis to Other Hedge Fund Strategies

The success of the MFS methodology in providing transparent access to the performance of CTAs confirms that there is a well-defined style beta for trend-following strategies. Using similar tools, we were able to construct proxies that have exhibited high fidelity to individual hedge fund strategies.

One example is a simple strategy that we first introduced at investor conferences in early 2007. The goal of the exercise was to demonstrate the extent to which beta dictates equity long/short manager returns by replicating their returns using a static risk allocation that reflects the types of trades they implement. Long/short managers derive their profits by selecting equities expected to outperform either their respective sectors or the market as a whole. These managers often weight their portfolios toward growth stocks and tend to emphasize long positions over short positions.

With these tendencies in mind, constructing the strategy became straightforward. To replicate the long component of the portfolio we selected small cap equities, represented by the Russell 2000 Index. For the short component, we selected the S&P 500, which is used as a proxy for the market. We gave the long portion a larger weight to reflect the bias toward long positions.

We then implement the strategy as follows:

1. Hold a 1.5X long position in Russell 2000 Futures
2. Hold a 1X short position in S&P 500 Futures
3. Collect interest on cash posted as collateral or held in reserve

The statistics presented at the time were compelling inasmuch as they illustrated that the HFRI Equity Hedge Index returns could be generated with high fidelity using a simple static managed futures portfolio. The conference slide is shown in Figure 3.



Figure 3: Simple Alternative for the HFRI Equity Hedge Index Using Managed Futures



**Net Long -- Long 1.5X Russell, Short 1X S&P 500
(6.35% Annualized Volatility)**

	Long 1.5X Russell/ Short 1X S&P 500	CSFB/ Tremont Investable Long-Short Equity Index	HFRI Equity Hedge Index	Russell 2000 Index
Compounded Annual Return	6.96%	3.92%	7.40%	8.47%
Sharpe Ratio (2.5%)	0.70	0.23	0.77	0.33
Annualized Volatility	6.35%	6.18%	6.35%	18.26%
Maximum Drawdown	(8.36%)	(15.54%)	(8.89%)	(29.67%)
Monthly Alpha of Long Russell/Short S&P Strategy to Index		0.29%	0.05%	0.18%
Correlation of Long Russell/Short S&P Strategy to Index		58.80%	78.52%	89.66%

Results presented are from January, 2001 to December, 2006.

In the five years since that presentation, this relationship has held, with the simple strategy exhibiting an index correlation of approximately 65% since January 2007. However, the simple managed futures proxy has outperformed the indices by a significant margin. The vanilla strategy also incurred a much smaller drawdown during the 2008 market correction. Although this shallower drawdown is partially attributable to proxy composition, it also reflects consistent risk as opposed to increased leverage based on unstable correlations. Table 14 presents the performance of this proxy since 2007.

Table 14: Comparison of Managed Futures Proxy to Hedge Fund Indices since 2007

	Long 1.5X Russell/ Short 1X S&P	CSFB/ Tremont Investable Long- Short Equity Index	HFRI Equity Hedge Index	Russell 2000 Index
Annualized Return	2.26%	(3.47%)	0.45%	0.15%
Annualized Volatility	7.10%	11.50%	10.72%	24.47%
Sharpe Ratio (1.5%)	0.11	(0.43)	(0.10)	(0.06)
Maximum Drawdown	(12.59%)	(36.35%)	(30.59%)	(52.89%)
Excess Return/Maximum Drawdown (1.5%)	0.06	(0.14)	(0.03)	(0.03)
Russell/S&P Strategy Correlation		69.19%	70.61%	95.11%

Analysis conducted from January 2007 to December 2011.

This technique can be extended to other strategies. In 2004, Bridgewater Associates published a market letter wherein they identified a number of simple methods of replicating the exposures of hedge fund strategies by simply selecting the core trades of the strategy.



From 1994 through 2003, Bridgewater found that¹⁰:

- Emerging market hedge funds “are over 79% correlated to a simple 50/50 mix of emerging market equities and bonds and are failing to outperform this basic combo.”
- “Distressed securities hedge funds match up well to a basic mix of junk bonds and high-yielding emerging market debt.” (79% correlation)
- Merger arbitrage funds “do no better than simply buying the top 10 announced acquirees and selling the top 10 acquirers.” (56% correlation)
- Managed futures hedge funds, “a different type of animal”, were replicated with 71% correlation, “with a basic 1-month by 3-month moving average strategy applied to the major futures markets.” (The hypothetical correlation of Conquest MFS to the Newedge CTA Index over this period was 84%.)

In a follow-up study covering the period from 1994 through April 2005, Bridgewater further reported that¹¹:

- Fixed-income arbitrage strategies, “are 78% correlated to the naïve strategy of being long a simple combo of mortgages, emerging market debt, Eurodollars relative to treasuries, long- vs. short-term treasuries, long high yielding currencies, and short volatility.” (This correlation fell to 66% in the January 2007 follow-up study¹², at which time the other strategy proxies cited here had small gains in correlation.)
- Convertible arbitrage fund returns had a correlation of 50% to a “naïve” strategy of being long a basket of newly-issued convertibles (<6 months old), and a 0.3 delta hedge with the respective equities.

Applying Mechanical Replication Techniques to Hedge Funds as a Whole

Our next step was to develop a simple strategy to provide an equivalent level of fidelity to the hedge fund universe. The goal of this strategy was to produce the beta of the style of hedge fund investing absent other considerations. In producing a mechanical proxy, we leveraged the virtually uniform sensitivity to market risk aversion across hedge fund strategies as the basis for a tradable proxy for hedge funds. We also restricted the proxy to extremely liquid assets, specifically foreign exchange and listed futures. This restriction isolated the trading style of the strategies by eliminating external factors such as leverage costs, credit risk, and liquidity risk.

¹⁰ Jensen, Greg, and Jason Rotenberg, “Hedge Funds Selling Beta as Alpha,” Bridgewater Daily Observations, February 13, 2004.

¹¹ Jensen, Greg, and Noah Yechiely, Jason Rotenberg, “Hedge Funds Selling Beta as Alpha (An Update),” Bridgewater Daily Observations, May 24, 2005.

¹² Jensen, Greg, and Noah Yechiely, Amit Srivastava, “Hedge Funds Levering Betas,” Bridgewater Daily Observations, January 10, 2007.



We then used our risk aversion analysis to identify the types of trades that hedge funds employ. The sensitivity of hedge fund returns to market risk appetite indicated that hedge funds generate their returns by capturing risk premium in various markets. This summarization is consistent with their returns inasmuch as hedge funds have generated gains except when market shocks or negative shifts in sentiment cause broad-based asset divestitures.

Eventually, the hedge fund strategies were reduced to three categories:

1. Equity-driven
2. Relative value
3. Others

Within each of the three categories, we identified risk premium capture techniques. For example, we replicated equity risk premium capture using the methodology presented at conferences in 2007: holding high-beta stocks against low-beta stocks. The final result was a program derived from the following four core building blocks:

1. Equity risk premium capture
2. Interest rate spread capture
3. Fixed-income term structure risk capture
4. Long-term trend-following

Equity risk premium capture had an easily defined role in the portfolio, as correlations indicate that hedge funds are still dominated by long-biased equity strategies. The carry and fixed-income term structure strategies served as a proxy for relative value trades across credit and currency markets. The long-term trend-following component served two roles in the portfolio. First, it accounted for commodity exposure and global macro strategies. Second, using momentum to vary exposures reflected manager leverage changes based on risk management practices, recent performance, and general market sentiment.

We first introduced this strategy in our November 2008 market letter, calling it a hedge fund replication strategy.¹³ This program is now called **Conquest Long Risk**.

Performance of Conquest Long Risk Relative to Major Hedge Fund Indices

We originally created Conquest Long Risk to determine how much additional return was provided by hedge funds in exchange for assuming liquidity and credit risk. The analysis indicated that, when compared with the industry-standard 2/20 fee structure, an aggregate portfolio of hedge funds did outperform the proxy, but by only 1% per year.

Conquest Long Risk has maintained this fidelity since it was created in 2008, exhibiting an equally high correlation to hedge funds and outperforming them on an absolute basis while incurring a shallower drawdown over the three-year out-of-sample period. The results are documented in Table 15.

¹³ Conquest Capital Group, November 2008 Monthly Commentary, December 2008.

Table 15: Conquest Long Risk vs. HFRI Composite Indices

	HFRI Fund Weighted Composite Index	HFRI Fund of Funds Composite Index	Conquest Long Risk (2% Mgmt, 20% Incentive)	Conquest Long Risk (no fees)
Full Period				
January 1997 to December 2011				
Annualized Return	7.73%	4.92%	7.22%	11.25%
Annualized Volatility	7.58%	6.34%	7.60%	8.39%
Sharpe Ratio (3.00%)	0.66	0.34	0.59	1.01
Maximum Drawdown	(21.42)%	(22.20)%	(16.04)%	(14.80)%
Excess Return/Max Drawdown (3.00%)	0.23	0.10	0.28	0.57
Max Drawdown/Volatility	2.82	3.50	2.11	1.76
HFRI Composite Correlation		93%	72%	73%
HFRI Fund of Funds Correlation			68%	69%
Average Risk-Averse Month	(0.70)%	(0.65)%	(0.60)%	(0.36)%
Average Risk-Seeking Month	1.17%	0.83%	1.07%	1.41%
In Sample				
January 1997 to November 2008				
Annualized Return	7.76%	5.43%	6.75%	10.95%
Annualized Volatility	7.81%	6.70%	7.38%	8.24%
Sharpe Ratio (3.50%)	0.54	0.29	0.44	0.90
Maximum Drawdown	(20.50)%	(21.03)%	(14.85)%	(14.16)%
Excess Return/Max Drawdown (3.50%)	0.21	0.09	0.22	0.53
Max Drawdown/Volatility	2.62	3.14	2.01	1.72
HFRI Composite Correlation		93%	73%	74%
HFRI Fund of Funds Correlation			71%	72%
Average Risk-Averse Month	(0.55)%	(0.53)%	(0.49)%	(0.22)%
Average Risk-Seeking Month	1.20%	0.92%	1.05%	1.41%
Out of Sample				
December 2008 to December 2011				
Annualized Return	7.65%	2.97%	9.06%	12.40%
Annualized Volatility	6.73%	4.74%	8.46%	9.05%
Sharpe Ratio (0.25%)	1.10	0.57	1.04	1.34
Maximum Drawdown	(8.97)%	(7.68)%	(6.10)%	(6.36)%
Excess Return/Max Drawdown (0.25%)	0.82	0.35	1.45	1.91
Max Drawdown/Volatility	1.33	1.62	0.72	0.70
HFRI Composite Correlation		94%	72%	73%
HFRI Fund of Funds Correlation			58%	61%
Average Risk-Averse Month	(2.09)%	(1.74)%	(1.61)%	(1.60)%
Average Risk-Seeking Month	1.06%	0.56%	1.12%	1.42%

Analysis conducted from January 1997 through December 2011.

Creating a proxy for the style of hedge fund investment also facilitates the isolation of the benefits from the active investing style. Table 16 compares the performance of hedge funds to the passive investment proxy we introduced at the beginning of this article. The data confirm that the fee structure essentially eliminated the incremental benefit of active management, with both hedge funds and Conquest Long Risk exhibiting slightly worse risk-adjusted performance during the out-of-sample period, albeit with shallower drawdowns.

Table 16: Comparison of Active and Passive Strategies

	HFRI Fund Weighted Composite Index	Passive Investment Proxy	Conquest Long Risk (2% Mgmt, 20% Incentive)	Conquest Long Risk (no fees)
Full Period January 1997 to December 2011				
Annualized Return	7.06%	6.72%	6.54%	10.38%
Annualized Volatility	7.61%	7.83%	7.73%	8.47%
Sharpe Ratio (3.00%)	0.60	0.54	0.52	0.93
Maximum Drawdown	(21.42)%	(25.16)%	(16.04)%	(14.80)%
Excess Return/Max Drawdown (3.00%)	0.21	0.17	0.25	0.53
Max Drawdown/Volatility	2.81	3.21	2.08	1.75
HFRI Composite Correlation		76%	74%	75%
Passive Investment Correlation			75%	74%
Average Risk-Averse Month	(1.14)%	(0.82)%	(1.05)%	(0.87)%
Average Risk-Seeking Month	1.14%	1.01%	1.06%	1.40%
In Sample January 1997 to November 2008				
Annualized Return	6.88%	5.26%	5.81%	9.79%
Annualized Volatility	7.88%	7.17%	7.53%	8.33%
Sharpe Ratio (3.50%)	0.43	0.25	0.31	0.75
Maximum Drawdown	(20.50)%	(20.01)%	(14.85)%	(14.16)%
Excess Return/Max Drawdown (3.50%)	0.16	0.09	0.16	0.44
Max Drawdown/Volatility	2.60	2.79	1.97	1.70
HFRI Composite Correlation		76%	76%	76%
Passive Investment Correlation			71%	70%
Average Risk-Averse Month	(1.00)%	(0.67)%	(0.96)%	(0.76)%
Average Risk-Seeking Month	1.17%	0.87%	1.04%	1.39%
Out of Sample December 2008 to December 2011				
Annualized Return	7.65%	11.81%	9.06%	12.40%
Annualized Volatility	6.73%	9.73%	8.46%	9.05%
Sharpe Ratio (0.25%)	1.10	1.19	1.04	1.34
Maximum Drawdown	(8.97)%	(10.13)%	(6.10)%	(6.36)%
Excess Return/Max Drawdown (0.25%)	0.83	1.14	1.45	1.91
Max Drawdown/Volatility	1.33	1.04	0.72	0.70
HFRI Composite Correlation		81%	72%	73%
Passive Investment Correlation			86%	85%
Average Risk-Averse Month	(2.09)%	(1.89)%	(1.61)%	(1.60)%
Average Risk-Seeking Month	1.06%	1.42%	1.12%	1.42%

Analysis conducted from January 1997 through December 2011.

Does the Excess Performance of the Index Actually Imply Alpha?

Although the net results suggest that hedge funds have historically generated incremental returns over a basic beta strategy, that conclusion is muddled by the magnitude and source of the superior performance. The Conquest Long Risk strategy trades only liquid currencies and futures contracts. Consequently, it does not benefit from additional returns from investing in instruments such as distressed debt or high-yield credit. This difference in markets traded quantifies the compensation for skill, credit risk, and liquidity risk as 100 BP or less. Given that the historical spread of BBB-rated credit to Treasuries has been approximately 200 BP over the past ten years, the residual leaves little room for value-added through skill.

Even discounting this source of additional compensation, the spread is inconclusive. As noted before, index volatility is understated because indices combine a large number of managers, each of which is not perfectly correlated to the others. Consequently, the index should exhibit lower volatility than its constituents. This effect should also translate to shallower aggregate drawdowns but the empirical results indicate otherwise. Instead, the diversified hedge fund index has exhibited inferior performance relative to its worst drawdown than Conquest Long Risk since creation and equivalent performance during the testing period.



Furthermore, at any given time a sizeable number of index constituents might either not be investable or in drawdowns, so these returns may not be accessible on a forward-looking basis. Even if every manager were open to new capital, allocating to each index constituent would require a substantial capital outlay because of the sheer number of managers and size of the investment minimums. The indices are also subject to rebalancing rules that might not be feasible in light of manager liquidity. Consequently, realizing the precise index returns is an implausible proposition.

In order to eliminate these two factors, we compared Conquest Long Risk to a number of investable hedge fund indices. These indices use a smaller set of hedge funds and are more likely to represent returns that are currently available to investors. The results demonstrate that the beta strategy has outperformed the investable indices when the same fee structure is applied. In this context, the strategy demonstrates that the incremental risk of investing in less liquid assets either does not generate additional returns for most managers or merely offsets negative alpha derived from an active investment style.

Table 17: Performance of Hedge Fund Replication vs. Investable Hedge Fund Indices

January 1998 to December 2011		Conquest Long Risk (2% Mgmt, 20% Incentive)	HFRX Global Hedge Fund Index		
Annualized Return		6.94%	5.49%		
Annualized Volatility		7.65%	6.79%		
Sharpe Ratio (2.75%)		0.55	0.40		
Maximum Drawdown		(16.04%)	(25.21%)		
Excess Return/Max Drawdown (2.75%)		0.26	0.11		
Max Drawdown/Volatility		2.10	3.71		
October 2004 to December 2011		Conquest Long Risk (2% Mgmt, 20% Incentive)	HFRX Global Hedge Fund Index	DJ CS AllHedge Index	DJ CS Blue Chip Index
Annualized Return		5.26%	0.12%	2.25%	3.05%
Annualized Volatility		7.64%	6.80%	7.55%	7.78%
Sharpe Ratio (2.25%)		0.43	(0.28)	0.03	0.14
Maximum Drawdown		(16.04%)	(25.21%)	(28.41%)	(27.59%)
Excess Return/Max Drawdown (2.25%)		0.20	(0.07)	0.01	0.04
Max Drawdown/Volatility		2.10	3.71	3.76	3.55

Analysis conducted from January 1998 and October 2004, the earliest available dates for the HFRX index and the DJ CS AllHedge Index, respectively, to December 2011.

Offering Exotic Beta with a Commensurate Fee Structure

When compared to both broad-based and investable indices, Conquest Long Risk has exhibited comparable returns and high correlations. These relationships confirm that it is possible to create an investment vehicle using liquid instruments that exhibits the same exposures as hedge funds. However, thus far the analysis has assumed an alpha-level fee structure for what is an exotic beta product.

While exotic beta is more intricate than simple asset beta, it does not merit alpha-level fees. Offered with a less onerous fee structure such as 1% management fee and 10% incentive fee, Conquest Long Risk



would exhibit further performance advantages relative to full-freight hedge fund investments. Table 18 compares the performance of Conquest Long Risk to that of the major broad-based and investable hedge fund indices. It confirms that Conquest Long Risk has outperformed most hedge fund indices when the returns are compared to maximum drawdowns and yielded comparable performance to alternative investments in terms of risk-adjusted returns.

Table 18: Performance of Hedge Fund Replication vs. HFRI and HFRX Hedge Fund Indices

	Conquest Long Risk	HFRI Fund Weighted Composite Index	HFRI Fund of Funds Composite Index	HFRI Emerging Markets Index	HFRI Equity Hedge (Total) Index	HFRI Event-Driven (Total) Index	HFRI Macro (Total) Index	HFRI Relative Value (Total) Index	HFRX Global Hedge Fund Index	HFRX Equity Hedge Index	HFRX Event Driven Index	HFRX Macro Index	HFRX Relative Value Arbitrage Index
Full Period Jan 1998 to Dec 2011													
Annualized Return	8.89%	7.12%	4.16%	7.63%	7.80%	7.94%	7.37%	7.23%	5.49%	5.78%	4.88%	6.45%	4.27%
Annualized Volatility	8.03%	7.58%	6.29%	14.83%	10.00%	7.32%	5.94%	4.72%	6.79%	8.80%	6.90%	8.99%	7.42%
Sharpe Ratio (2.75%)	0.77	0.58	0.22	0.33	0.51	0.71	0.78	0.95	0.40	0.34	0.31	0.41	0.20
Maximum Drawdown	(15.43%)	(21.42%)	(22.20%)	(39.80%)	(30.59%)	(24.79%)	(7.32%)	(18.04%)	(25.21%)	(29.52%)	(25.80%)	(21.09%)	(38.74%)
Excess Return/Max Drawdown (2.75%)	0.40	0.20	0.06	0.12	0.17	0.21	0.63	0.25	0.11	0.10	0.08	0.18	0.04
Max Drawdown/Volatility	1.92	2.83	3.53	2.68	3.06	3.39	1.23	3.82	3.71	3.35	3.74	2.35	5.22
Conquest Long Risk Correlation		74%	68%	61%	74%	66%	64%	50%	64%	65%	57%	44%	40%
HFRI Composite Correlation			94%	91%	98%	93%	65%	76%	81%	88%	86%	42%	64%
In Sample Jan 1998 to Nov 2008													
Annualized Return	8.37%	6.96%	4.49%	6.98%	7.77%	7.43%	8.65%	6.04%	6.40%	7.67%	5.19%	9.62%	2.36%
Annualized Volatility	7.83%	7.83%	6.68%	15.51%	10.15%	7.46%	6.10%	4.76%	7.21%	8.92%	7.33%	9.64%	7.36%
Sharpe Ratio (3.50%)	0.62	0.44	0.15	0.22	0.42	0.53	0.84	0.53	0.40	0.47	0.23	0.64	(0.15)
Maximum Drawdown	(14.51%)	(20.50%)	(21.03%)	(37.58%)	(28.55%)	(22.84%)	(7.32%)	(17.84%)	(24.28%)	(27.28%)	(25.21%)	(11.67%)	(37.00%)
Excess Return/Max Drawdown (3.50%)	0.34	0.17	0.05	0.09	0.15	0.17	0.70	0.14	0.12	0.15	0.07	0.52	(0.03)
Max Drawdown/Volatility	1.85	2.62	3.15	2.42	2.81	3.06	1.20	3.75	3.37	3.06	3.44	1.21	5.02
Conquest Long Risk Correlation		75%	71%	59%	75%	67%	70%	53%	69%	67%	59%	54%	44%
HFRI Composite Correlation			94%	90%	97%	92%	65%	75%	80%	88%	86%	48%	62%
Out of Sample Dec 2008 to Dec 2011													
Annualized Return	10.75%	7.67%	2.98%	10.00%	7.91%	9.76%	2.95%	11.55%	2.34%	(0.64)%	3.80%	(4.04)%	11.31%
Annualized Volatility	8.78%	6.73%	4.74%	12.26%	9.59%	6.87%	5.26%	4.42%	5.05%	8.22%	5.16%	5.20%	7.39%
Sharpe Ratio (0.25%)	1.20	1.10	0.58	0.79	0.80	1.38	0.51	2.56	0.41	(0.11)	0.69	(0.83)	1.50
Maximum Drawdown	(6.22%)	(8.97%)	(7.63%)	(16.11%)	(13.17%)	(9.06%)	(5.74%)	(4.06%)	(10.03%)	(19.12%)	(8.56%)	(15.96%)	(6.18%)
Excess Return/Max Drawdown (0.25%)	1.69	0.83	0.36	0.61	0.58	1.05	0.47	2.79	0.21	(0.05)	0.41	(0.27)	1.79
Max Drawdown/Volatility	0.71	1.33	1.61	1.31	1.37	1.32	1.09	0.92	1.98	2.33	1.66	3.07	0.84
Conquest Long Risk Correlation		73%	59%	70%	75%	63%	49%	42%	54%	63%	53%	8%	26%
HFRI Composite Correlation			94%	95%	98%	95%	65%	85%	92%	91%	85%	11%	73%

Analysis conducted from January 1998, the earliest available date for the HFRX indices.

Please see "End Notes" for important disclosures about the limitations of hypothetical returns and underlying assumptions.

These results indicate that Conquest Long Risk is a viable alternative to general hedge fund and fund of funds investments. The strategy also provides a benchmark against which individual hedge funds can be measured. Specifically, blending analysis can determine whether the incremental benefit of a hedge fund investment would improve portfolio performance more than allocating capital to Conquest Long Risk.

Table 19 provides an example of this comparison using the passive investment portfolio. Each blended portfolio consists of a 90% allocation to the reference passive portfolio and a 10% allocation to the hedge fund strategy. Although substituting hedge fund indices for the passive allocation does improve performance, the gains are nominal even when the least correlated index, the HFRI Macro Index, is used in lieu of Conquest Long Risk. This exercise also highlights the limited diversification benefit derived from combining strategies with common return drivers.



Table 19: Conquest Long Risk Produces Comparable Performance Improvements to Hedge Funds When Blended with a Passive Portfolio

		Passive Portfolio	HFRI Composite Index	Conquest Long Risk*	HFRI FOF Index	HFRI Emerging Markets	HFRI Equity Hedge	HFRI Event Driven	HFRI Macro	HFRI Relative Value
Jul 1998 to Dec 2011	Annualized Return	6.72%	7.06%	8.44%	3.98%	9.16%	7.39%	7.78%	7.05%	6.93%
	Annualized Volatility	7.83%	7.61%	8.10%	6.29%	14.59%	10.07%	7.37%	5.91%	4.76%
	Sharpe (2.50%)	0.54	0.60	0.73	0.24	0.46	0.49	0.72	0.77	0.93
	Max Drawdown	25.16%	21.42%	15.43%	22.20%	39.80%	30.59%	24.79%	7.32%	18.04%
	Excess Return/Max Drawdown (2.50%)	0.27	0.33	0.55	0.18	0.23	0.24	0.31	0.96	0.38
	Max Drawdown/Volatility	3.21	2.81	1.90	3.53	2.73	3.04	3.36	1.24	3.79
	Correlation to Passive Portfolio		76%	75%	64%	67%	77%	75%	43%	66%
			HFRI Composite Index Blend	Conquest Long Risk Blend*	HFRI FOF Index Blend	HFRI Emerging Markets Blend	HFRI Equity Hedge Blend	HFRI Event Driven Blend	HFRI Macro Blend	HFRI Relative Value Blend
Jul 1998 to Dec 2011 90% Passive Portfolio, 10% Index Blends	Annualized Return		6.77%	6.91%	6.46%	7.02%	6.81%	6.84%	6.78%	6.76%
	Annualized Volatility		7.64%	7.67%	7.46%	8.10%	7.85%	7.61%	7.32%	7.37%
	Sharpe (2.50%)		0.56	0.57	0.53	0.56	0.55	0.57	0.59	0.58
	Max Drawdown		24.63%	24.20%	24.60%	26.42%	25.41%	24.80%	22.90%	24.18%
	Excess Return/Max Drawdown (2.50%)		0.27	0.29	0.26	0.27	0.27	0.28	0.30	0.28
	Max Drawdown/Volatility		3.22	3.15	3.30	3.26	3.24	3.26	3.13	3.28
	Correlation to Passive Portfolio		100%	100%	100%	99%	100%	100%	100%	100%

Analysis conducted from July 1998, the inception of the Dow Jones Composite REIT Total Return Index, to December 2011.

**Returns of Conquest Long Risk are hypothetical and contain certain material assumptions. Please see "End Notes" for important disclosures.*

The results are similar when Conquest Long Risk is substituted for equities in the original core portfolio. Substituting Conquest Long Risk for equities improves performance, and does so by a larger margin than replacing the equity exposure with hedge fund exposure.

Table 20: Benefits of Substituting Conquest Long Risk for Equities

	HFRI Composite Index	HFRI Fund of Funds Composite Index	Conquest Long Risk	Passive Asset Blend	Blend Substituting Hedge Funds for Equities	Blend Substituting Long Risk for Equities
Annualized Return	7.05%	3.98%	8.44%	6.72%	6.83%	7.10%
Annualized Volatility	7.61%	6.29%	8.10%	7.83%	5.53%	5.74%
Sharpe Ratio (2.50%)	0.60	0.24	0.73	0.54	0.78	0.80
Maximum Drawdown	(21.42%)	(22.20%)	(15.43%)	(25.16%)	(18.99%)	(18.18%)
Excess Return/Max Drawdown (2.50%)	0.21	0.07	0.39	0.17	0.23	0.25
Maximum Drawdown/Volatility	2.81	3.53	1.90	3.21	3.43	3.17
Average Month when S&P 500 Up	1.78%	1.11%	1.74%	1.73%	1.19%	1.18%
Average Month when S&P 500 Down	(1.09%)	(0.74%)	(0.77%)	(1.07%)	(0.32%)	(0.25%)
HFRI Composite Correlation		94%	75%	76%	68%	61%
HFRI Fund-of-Funds Correlation		94%	69%	64%	63%	55%

Analysis conducted from July 1998, the inception of the Dow Jones Composite REIT Total Return Index, to December 2011.

This analysis confirms our thesis on another front. That a proxy strategy achieves similar portfolio effects as a diversified portfolio of hedge funds without assuming the credit risk dictates that the investment style of hedge funds is more dominant than the specific assets traded. Given that the tradable proxy has yielded comparable or superior results further indicates that the benefits of active management around the idiosyncratic beta of the strategy have been limited.

IV. Conclusion

Although hedge funds have outperformed both equities and mutual funds over the past 15 years, the high correlations and common sensitivities of hedge fund returns reveal a significant beta component to hedge fund performance. This beta implies that the core hedge fund exposures can be produced using proxy trades. Mechanical strategies that mimic the core trades employed by hedge funds yield a high degree of fidelity to the actual exposures of hedge funds. Comparing the returns of these strategies to those of hedge fund indices illustrates that the incremental benefit of hedge fund investment is either small or non-existent when fees are equal.



Furthermore, when fees are reduced to a more appropriate level for an exotic beta strategy, the hedge fund beta strategy has performed comparably to or better than hedge fund indices. That it is possible to not only replicate the exposures of but also outperform hedge fund indices using a transparent managed futures strategy that does not assume the credit and liquidity risk inherent in hedge fund investment suggests that hedge funds as a whole do not generate alpha beyond their investment style. It thus follows that many hedge funds charge alpha-level fees for what is essentially repackaged beta.

The implication of this analysis is a stricter set of criteria for including individual hedge fund investments in a portfolio. Specifically, a hedge fund, in light of the liquidity and credit risk it assumes and the commonality of its return sensitivities with those of the rest of the portfolio, must be more accretive than the tradable proxy in order to merit inclusion. Evaluating whether a manager improves performance on either an absolute or risk-adjusted basis relative to a simple alternative facilitates the identification of managers that merit alpha-level fees. The net result is a portfolio that is more efficient both in terms of its risk profile and fee expenditures, yielding superior absolute and risk-adjusted performance.

Absent these cases of alpha, capital should be allocated to a hedge fund beta strategy that captures the performance of the hedge fund investment style with a more mutual fund-like fee structure. Given the size of the mutual fund industry, investor fee sensitivities, and rising investor preferences for ETFs, there seems to be a well-defined role and niche for a strategy that offers access to the beta of hedge fund investing at a discounted fee structure.



Endnotes

Conquest Macro: Conquest Macro results from inception to June 2001 represent the track record of Enterprise Asset Management, LLC. of which Marc Malek was co-principal. From January 1, 2006, full funding of all accounts is assumed and all accounts are assumed to earn the same fees (2% management fee and 20% incentive fee). Rate of return for October 2002 includes one account that began trading October 1, 2002. Because this account was not fully invested on October 1, 2002, the rate of return for this account differs from the existing accounts. If this account had been excluded from the rate of return calculation, the rate of return would have been (1.60)%. Unless otherwise specified, results of Conquest Macro are shown net of a 2% management fee and 20% incentive fee.

Conquest Long Risk: The hypothetical returns of Conquest Long Risk were obtained by assuming a \$100 million initial investment (without fluctuation) and applying the current systems used by Conquest Long Risk to historic data about the markets in which Conquest Long Risk currently trades over the period for which the returns were presented. The hypothetical returns assume that all trades required by the system were executed at the prices specified by the system; in reality, execution may not be perfect which could impact returns. The hypothetical returns assume that the current sector, and therefore market, weights would have remained constant whereas they likely would have varied. Hypothetical returns also assume the earning of interest at the three month Treasury bill rate and full funding. Unless otherwise indicated, returns are shown net of a 1% management fee and 10% incentive fee.

Limitations of Hypothetical Performance and Underlying Assumptions

This material includes illustrative return information that is hypothetical. Hypothetical performance is not necessarily indicative of future results. The actual past results of an investment under the assumptions upon which the hypothetical returns are presented might well have been different.

HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS.

PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.



Comparisons to Indices, Third Party Data

Indices do not represent actively managed portfolios and no fees are paid on returns on indices. Conquest invests in instruments and strategies not represented in the HFRI Composite and does not invest in other hedge funds or commodity trading advisors. The returns of the indices and all third party data presented herein were obtained from publicly available sources which are believed to be reliable.

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