The Case for Long/Short Equity as a Tool in Traditional Asset Class Construction

"Intuition is often crucial in combat, and survivors learn not to ignore it."

— Col. F.F. Parry, USMC (Ret.)

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"I am not an advocate for frequent changes in laws and constitutions, but laws and institutions must go hand in hand with the progress of the human mind. As that becomes more developed, more enlightened, as new discoveries are made, new truths are discovered and manners and opinions change. With the change of circumstances, institutions must advance also to keep pace with the times."

— Thomas Jefferson

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Introduction

As the hedge fund industry matures, it is inevitable that a more formal process of categorizing these products will emerge. To date, research firms have done their best to separate products into logical categories, but the breadth of offerings makes the buckets themselves only marginally helpful. This paper examines the long/short equity strategy and how it fits into the grand scheme of a portfolio. Specifically, the issue of whether long/short should be separated from the more general hedge fund category will be explored.

The long/short equity approach should be taken out of the general hedge fund category and used more appropriately as a building block of specific asset class strategies.

Discussions within the industry as to whether the long/short strategy still belongs in the general hedge fund category have yet to move beyond the theoretical realm. In an informal survey of over 30 pension and investment consultants conducted in the summer of 2002, VERITABLE found that practically all of these firms still categorize the long/short strategy with all other hedge fund styles.

One reason the long/short strategy deserves deeper examination is its correlation to the broader equity indexes. Whereas styles such as convertible arbitrage and merger arbitrage exhibit only modest correlation to the major equity indexes, long/short strategies post a correlation figure of greater than 0.60 (Source: Morgan Stanley, Tremont Research). To be sure, this is not entirely in lockstep with the broader market, but it is high enough to exhibit fluctuations akin to equities at large.

VERITABLE will argue that the long/short equity approach should be taken out of the general hedge fund category and used more appropriately as a building block of specific asset class strategies, taking its place beside long-only and tracking error-constrained strategies. The anticipated result is a more efficient asset class experience: lower deviations and higher returns.

The Basics of Asset Class Construction

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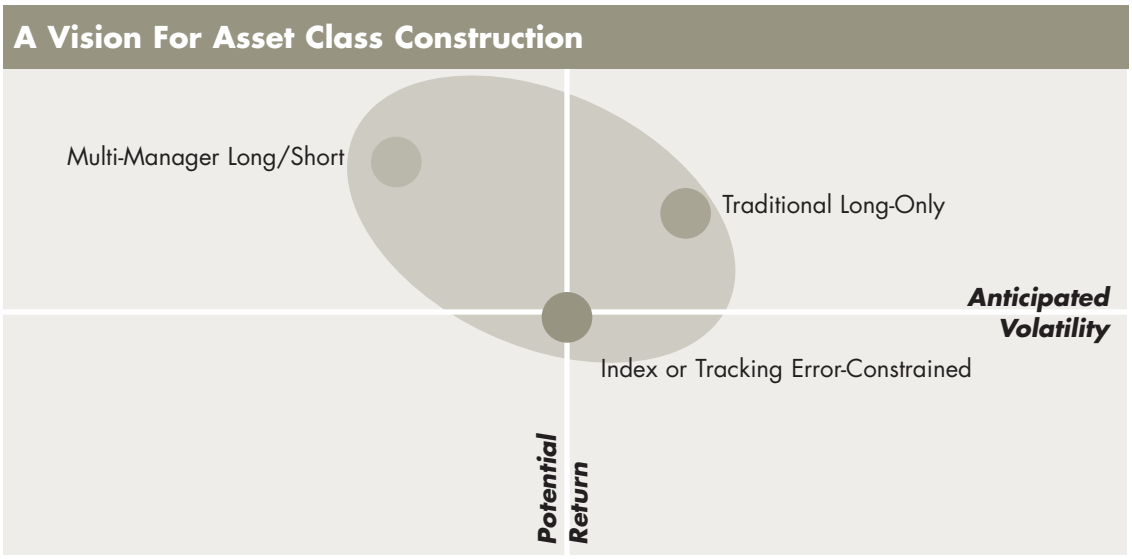
After an investment policy statement is completed, investors set about selecting managers that can support the broader asset allocation policy. The objective is to meet or exceed each of the sub-asset class performance goals while exhibiting a reasonable amount of deviation from the index. Success at this level ensures the attainment of plan-level goals.

One common method of constructing an asset class for success is to adopt a core/satellite approach. This involves selecting a tracking error-constrained or even an index tracking strategy as the base, or core, for the mini-portfolio. Layered on top of this core is a combination of satellite managers (or a single manager). These "roving" managers have broader management mandates and typically target sub-styles or special opportunities within that asset class.

The idea is to combine an index that has zero or close to zero tracking error with a manager that is free to select the best opportunities possible but operates at a tracking error of perhaps 400 basis points annually. Such an approach provides the mini-portfolio with a combined tracking error that is reasonable and also offers potential alpha through the use of the satellite manager(s). The core portion provides an anchor; if the satellite manager is struggling, at least a portion of the asset class will match its target.



The bear market of the early 2000s highlights the risk of relying on constrained tracking error and long-only strategies.

The addition of long/short managers within an asset class takes the core/satellite strategy to its next logical level of development. The bear market of the early 2000s highlights the risk of relying on constrained tracking error and long-only strategies. For example, in the five years ending June 30, 2002, an average annual return of 1.70% by a core non-U.S. equity manager was sufficient to place that manager in the top half of the corresponding Russell/Mellon universe. Unfortunately, that return was likely far less than the projected annual return from non-U.S. equities that tied into most investment policy statements. Thus, landing in the top half of this universe was a Pyrrhic victory, achieving one metric but falling short of the ultimate goal. In this instance, the addition of a long/short strategy likely would have mitigated the loss, and perhaps even kept the plan on course by delivering the required alpha.

Methodology

Our goal in this research was to determine the feasibility of implementing the long/short approach within various sub-asset classes.

We began with a simple question:

What upside and downside performance capture ratios need to be attained to place a long/short strategy in the upper echelon of a performance universe?

Upside capture refers to the percentage of upside performance attained by a manager relative to an index in periods of positive index performance. Downside capture refers to the percentage of downside performance attained by a manager in periods of negative index performance. It follows that a manager prefers a high upside capture and a low downside capture relative to an index.

Our findings are important because they reveal the degree to which a manager may be able to post compelling performance. If the capture ratios relative to an index are unreasonable, then the vision of combining long-only with long/short may not make sense. For the performance uni-

verses, we utilized the Russell/Mellon database, one of the most widely accepted in the institutional arena. We concentrated on a handful of the Russell/Mellon universes:

- Small Cap U.S. Equity Universe with the Russell 2000 Index as the corresponding benchmark.
- Mid Cap U.S. Equity Universe with the Russell Mid Cap Index as the corresponding benchmark.
- Market Oriented Equity Universe with the S&P 500 Index as the corresponding benchmark.
- Non-U.S. Equity Universe with the MSCI EAFE Index as the corresponding benchmark.

The following matrices highlight our research findings. If a long/short manager's performance falls into the top third of a universe, it is quite likely to lift the performance of the portfolio as a whole.

KEY

Represents the average downside and upside capture ratios required to place a manager in the top quartile of the Russell/Mellon universe for the five years ending June 30, 2002.

Represents the top 26th through 33rd percentiles of the universe.

Represents performance below the top third of the universe.

U.S. Small Cap Equity
Russell 2000 Index Capture Ratio Analysis (7/97 – 6/02)

Downside Capture	Upside Capture				
	75%	70%	65%	60%	55%
20%	14.78%	13.53%	12.28%	11.04%	9.80%
25%	13.76%	12.52%	11.28%	10.05%	8.82%
30%	12.74%	11.50%	10.28%	9.06%	7.84%
35%	11.72%	10.50%	9.28%	8.07%	6.87%
40%	10.70%	9.49%	8.29%	7.09%	5.89%

The size of the Russell/Mellon small cap universe is 187 portfolios. The performance cutoff for the top quartile is 12.38%. The performance cutoff for the top third is 11.29%. Allocations within five basis points of the performance cutoff number are included within that category.

As an example, a small cap U.S. manager that was able to capture 70% of every upside movement in the Russell 2000 Index while capturing just 30% of every downside movement returned 11.50% annually for the five years ending June 30, 2002, placing in the top third of the Russell/Mellon small cap universe.

U.S. Mid Cap Equity
Russell Mid Cap Index Capture Ratio Analysis (7/97 – 6/02)

KEY

Represents the average downside and upside capture ratios required to place a manager in the top quartile of the Russell/Mellon universe for the five years ending June 30, 2002.

Represents the top 26th through 33rd percentiles of the universe.

Represents performance below the top third of the universe.

Downside Capture	Upside Capture				
	75%	70%	65%	60%	55%
20%	15.27%	14.02%	12.77%	11.44%	10.22%
25%	14.43%	13.18%	11.95%	10.63%	9.42%
30%	13.58%	12.35%	11.13%	9.83%	8.63%
35%	12.74%	11.52%	10.30%	9.03%	7.84%
40%	11.90%	10.69%	9.48%	8.23%	7.05%

The size of the Russell/Mellon mid cap universe is 90 portfolios. The performance cutoff for the top quartile is 12.37%. The performance cutoff for the top third is 11.24%. Allocations within five basis points of the performance cutoff number are included within that category.

U.S. Large Cap Equity
S&P 500 Index Capture Ratio Analysis (7/97 – 6/02)

KEY

Represents the average downside and upside capture ratios required to place a manager in the top quartile of the Russell/Mellon universe for the five years ending June 30, 2002.

Represents the top 26th through 33rd percentiles of the universe.

Represents performance below the top third of the universe.

Downside Capture	Upside Capture				
	75%	70%	65%	60%	55%
20%	11.42%	10.45%	9.49%	8.54%	7.59%
25%	10.65%	9.69%	8.74%	7.79%	6.84%
30%	9.88%	8.93%	7.99%	7.04%	6.10%
35%	9.11%	8.17%	7.23%	6.30%	5.36%
40%	8.35%	7.41%	6.48%	5.55%	4.63%

The size of the Russell/Mellon market-oriented universe is 151 portfolios. The performance cutoff for the top quartile is 6.94%. The performance cutoff for the top third is 6.23%. Allocations within five basis points of the performance cutoff number are included within that category.

KEY

Represents the average downside and upside capture ratios required to place a manager in the top quartile of the Russell/Mellon universe for the five years ending June 30, 2002.

Represents the top 26th through 33rd percentiles of the universe.

Represents performance below the top third of the universe.

Non-U.S. Equity
MSCI EAFE Index Capture Ratio Analysis (7/97 – 6/02)

Downside Capture	Upside Capture				
	75%	70%	65%	60%	55%
20%	7.48%	6.80%	6.12%	5.45%	4.77%
25%	6.74%	6.07%	5.39%	4.72%	4.05%
30%	6.00%	5.33%	4.66%	3.99%	3.32%
35%	5.26%	4.59%	3.93%	3.27%	2.60%
40%	4.52%	3.86%	3.20%	2.54%	1.88%

The size of the Russell/Mellon non-U.S. equity universe is 90 portfolios. The performance cutoff for the top quartile is 4.45%. The performance cutoff for the top third is 3.26%. Allocations within five basis points of the performance cutoff number are included within that category.

In general, a downside capture of 30% and an upside capture of 70% would be enough to place long/short managers in the top quartile of their respective Russell/Mellon databases.

In general, a downside capture of 30% and an upside capture of 70% would be enough to place long/short managers in the top quartile of their respective Russell/Mellon databases. Understanding whether long/short managers can consistently deliver this type of performance poses further challenges. The key question becomes:

Are the capture ratios we calculated a realistic goal?

Real World Returns

To find out, we combed through the Altvest hedge fund database to uncover those managers that could be believed to be reasonably benchmark-cognizant. Altvest tracks the monthly net performance of over 2,600 hedge funds. We concentrated on the Equity Hedge universe of managers, excluding the market-neutral subset of this group. Our target group included directional long/short managers with a long bias, throwing out those managers that didn't fit in any of the categories.

From this subset of managers, we attempted to create an equal-weighted portfolio of long/short managers for each of the areas of interest. We calculated the average percentage downside and upside capture ratios for these sample portfolios against the relevant indexes. Unfortunately, the non-U.S. equity category did not produce enough managers with five-year track records to generate even a cursory observation about the viability of the strategy within this segment. This left us with three areas of study: U.S. small cap equity, U.S. mid cap equity, and U.S. large cap equity.

It is probable that survivorship bias exists within the Altvest database. Various academics have estimated that survivorship bias in the Equity Hedge category may account for an additional 2% to 3% per year in return against what was truly "available" during the period studied. To adjust for this, we recalculated the returns of the equal-weighted long/short sample portfolios, subtracting 300 basis points in annual performance evenly over the 60-month period. The Adjusted Russell Percentile Rankings below reflect this performance reduction. The results are as follows:

U.S. Small Cap Managers	
Average Upside Capture (7/97 – 6/02)	69%
Average Downside Capture (7/97 – 6/02)	24%
Corresponding Russell Percentile Ranking	3rd
Adjusted Russell Percentile Ranking	9th
Size of Sample Universe	36

U.S. Mid Cap Managers	
Average Upside Capture (7/97 – 6/02)	67%
Average Downside Capture (7/97 – 6/02)	6%
Corresponding Russell Percentile Ranking	3rd
Adjusted Russell Percentile Ranking	3rd
Size of Sample Universe	28

U.S. Large Cap Managers	
Average Upside Capture (7/97 – 6/02)	101%
Average Downside Capture (7/97 – 6/02)	27%
Corresponding Russell Percentile Ranking	1st
Adjusted Russell Percentile Ranking	1st
Size of Sample Universe	20

Source: Altvest Database

The equal-weighted portfolio of U.S. small cap long/short managers presented interesting findings. While the average capture ratios calculated would have placed these managers in the top quartile of their universe, the calculated average annual return was high enough to push this group into the top decile. The difference can be attributed to the impressive capture exhibited by these small cap managers during months of significant performance (both positive and negative) by the Russell 2000 Index and their modest capture during months where the Index recorded smaller movements. This had the effect of lifting the portfolio's universe ranking beyond what would have been anticipated by the "average" capture ratios.

The performance of the average long/short managers easily would have placed them within the top decile of their respective Russell/Mellon universes.

Interim Conclusions

The upside and downside capture ratios exhibited by the long/short managers were impressive for the five years ending June 30, 2002. The performance of the average long/short managers easily would have placed them within the top decile of their respective Russell/Mellon universes.

We then used this performance and deviation data to determine the efficient portfolios for each of the three remaining sub-asset classes. To simplify matters, we concentrated on the most efficient mix between the relevant index and an equal weighting of those long/short managers with five years of history within the asset class. The results of this analysis are as follows:

Asset Class	Most Efficient Mix
U.S. Small Cap	0% Russell 2000 Index/100% Long/Short
U.S. Mid Cap	0% Russell Mid Cap Index/100% Long/Short
U.S. Large Cap	20% S&P 500 Index/80% Long/Short

The evidence suggests that the addition of diversified long/short strategies to an index position can indeed create a more efficient portfolio. This research confirms our suspicions that the most talented equity managers have been gravitating toward the long/short area in the past ten years.

For our areas of study, the most efficient portfolio included no less than 80% in a long/short component. We were a little surprised by the level of preference for long/short portfolios indicated by the efficient frontier analysis. Only the U.S. large-cap category became more efficient through the addition of an index component. It should be noted that an analysis using average manager returns in each category yielded exactly the same results.

While it is understandable that readers may not be able immediately to adopt this portfolio weighting, the evidence suggests that the addition of diversified long/short strategies to an index position can indeed create a more efficient portfolio. Certainly, intuition alone could lead an investor to allocate 15% to 20% of the overall equity weighting to long/short strategies. We would also highlight that this research confirms VERITABLE's suspicions that the most talented equity managers have been gravitating toward the long/short area in the past ten years.

As with all research, there are caveats to be considered. The five-year time frame is a less than optimal length, reflecting the nascent nature of the hedge fund industry. This is, however, an extraordinary period of study. The five years ending June 30, 2002, included an incredible escalation of equity prices for the first three years as well as a corresponding bear market that began in the spring of 2000.

The difficulty is, as always, uncovering quality managers before the anticipated size and age effects impact their portfolios.

The size and age effects on the long/short manager universe may make this performance advantage unsustainable going forward, although the wave of new entrants into the business could mitigate this issue somewhat. Research has shown that hedge fund managers tend to perform best in the earlier years of operation, when assets are lower. The difficulty is, as always, uncovering quality managers before the anticipated size and age effects impact their portfolios. The same argument applies to the size of some of the long/short hedge universes, which are growing on a daily basis.

The sample sizes were somewhat small, with two bordering on statistical significance and one subasset class (U.S. small cap) comfortably in this zone. Added to this is the fact that the Altvest database is of a self-reporting nature. This paper does not claim that the performance numbers are unimpeachable. They are, however, at the very least directional.

Practical Applications of the Long/Short Strategy as a Traditional Asset Class Component

1. Long/short strategies are not a panacea for portfolio construction but rather a useful element in the process. The application of a long/short strategy serves as a complement to an overall portfolio. From an intuitive perspective, if a talented money manager believes a stock is overvalued, it follows that there should be a mechanism to tap into this potential source of return.

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2. Endowment managers and high net worth investors often say, "you can't spend relative return," meaning that spending often is tightly linked to the portfolio's total return. Thus, they would expect long/short managers to post positive performance over all periods. This is a logical view when including long/short in with all other hedge fund styles. Indeed, the very point of a dedicated hedge fund allocation is to generate absolute return. In the context within which we are recommending long/short strategies, however, it is reasonable to judge the strategy on both its absolute and its relative performance.

   In a harsh bear market like the one that started in 2000 and continues as of the writing of this document, a mild negative performance number might be a welcome return when the corresponding index is down more than 20%. Still, there should probably be some threshold of perhaps 7% to 10% that would be deemed a worst-case absolute return figure for a long/short strategy. Conversely, in a year when the index shoots upward, it would be disappointing to post an upside capture ratio of only 50%.

3. The areas most amenable to a long/short strategy are non-U.S. equity, mid cap equity, and small cap U.S. equity. While the capture ratios needed to post above-average returns in U.S. large-cap equities appear attainable, this may be a less attractive asset class in which to employ a long/short strategy for a number of reasons. First, the information advantage needed to derive excess returns from larger-cap names is difficult to exploit. Second, the bulk of long/short managers tend to concentrate in sectors or capitalizations that are not exclusively large cap. While the situation may change going forward, there are currently fewer pure large cap managers employing long/short strategies.

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   Though the non-U.S. equity style did not produce enough long/short managers with five-year track records, we still believe it is an excellent asset class in which to employ this approach. A supporting data point is the fact that the median manager easily outperformed the MSCI EAFE Index within the institutional databases for the five years ending June 30, 2002, evidence that excess returns are available in this asset class.

4. Implementing the long/short diversification strategy is one area where wealthy families and smaller institutions have an advantage over larger entities. Consider the following: a $25-billion public plan might have 50% of its assets in equities. To maximize the value of long/short managers, the plan would need to place several billion dollars in long/short strategies. This is a huge amount of money to invest mainly with boutique asset managers. In the end, it likely would not be a feasible portfolio strategy for a larger plan. Contrast this with a wealthy family responsible for $250 million. Employing under $100 million dollars in long/short strategies is a less daunting task and worthy of consideration, given the potential benefits. The same argument holds for endowments of under $1 billion.

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5. The performance dispersion among long/short managers is well documented. Morgan Stanley Quantitative Strategies reports that the correlation among equity mutual fund managers is 0.9, while long/short managers have a correlation of only 0.2, evidence of wide dispersion. The chart below calculates the average annual performance dispersion between the best- and worst-performing long/short managers within their respective styles.

Long/Short Style	Average Annual Dispersion[1]
Small Cap U.S. Equity	116%
Mid Cap U.S. Equity	145%
Market Oriented U.S. Equity	188%

[1]Measured as the average annual performance dispersion between the best- and worst-performing manager over the five years ending 6/30/02.

By any measure, these dispersion statistics are significant. Given this aspect of long/short styles, this strategy is best attained through the use of multi-manager funds. Employing long/short diversification is risky if just a handful of managers are utilized. When the talent pool employed within an asset pool exceeds 10, however, the real risk of a long/short strategy severely underperforming begins to lessen. The case for multi-manager funds is strengthened because we are recommending the long/short strategy be viewed as an essential element of traditional asset class construction. It is imperative that traditional asset classes meet their performance goals in order to support the overall investment policy statement. That is more likely to happen through the use of multi-manager pools that diversify risk. Betting on one or two long/short managers in this context presents undue risk for the overall investment plan.

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6. It is fair to ask whether hedge fund managers will agree to manage to a benchmark. Certainly, some managers may recoil at the thought of managing a hedge fund against a performance index. The whole point behind operating a hedge fund, they might argue, is to allow managers to seek the best investment opportunities and not be constrained by style or capitalization.

   There are two responses to that. First, many managers already tend to gravitate, perhaps without intent, toward a number of sectors or a general style or capitalization bias. In short, they manage what they know. Second, the point in this exercise is for managers to become benchmark-cognizant as opposed to benchmark-constrained. Portfolio management of hedge fund entities is ultimately handled at the macro level, where the managers themselves are managed. Managers with different areas of focus can be combined to create a hedge fund pool that, in aggregate, pays homage to an index.

   Further, the major long-only investment firms are in the early stages of gearing up in the hedge fund arena. When they reach full competence, they are likely to approach this business from their benchmark-cognizant mindset. Hence, even if there is a shortage of managers willing to adopt a benchmark-cognizant management approach today, this void is likely to be short-lived.

Summary

The goal of this paper is to present an innovative approach to asset class construction using the best available data. It is VERITABLE's hope that the ideas presented herein will generate further discussion within the industry. The data clearly shows that the addition of long/short strategies to both a corresponding index and the average long-only manager would have created a richer asset class experience: higher returns and lower deviations. The evolving nature of the hedge fund industry ensures that the quality and quantity of long/short manager data will continue to improve, further refining the analysis we have begun in this report.

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About Veritable

Veritable is a multi-family office focused on the ultra wealth business. We provide investment consulting to 150 families representing $7 billion in assets and we are one of the largest privately-held investment consulting firms in America. Veritable has been managing multi-manager long/short limited partnerships for its clients since 1992, with more than $1 billion in assets in these portfolios. We employ a team of analysts dedicated to finding, evaluating and selecting talent believed to be the most attractive in the alternative asset management field.