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MORNINGSTAR®

Taking Stock of Morningstar's Alternative Mutual Fund Categories

A period of growth and challenge has altered the landscape for our alts categories.

by
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Alternative mutual funds went through a massive growth spurt in 2013. Like any child going through such a phase, the results are exciting, awkward, and at times alarming. As liquid alternatives go through this maturing phase, much about the ultimate results—for investors and the industry—remains in question. Can alternative mutual funds fulfill their promise of delivering hedge-fund-like performance characteristics to the portfolios or retail portfolios? Or will the hobgoblins of product proliferation and asset growth—among them high fees, fuzzy strategies and objectives, and excessive risk-taking—derail the industry's growth trajectory?

With 2008 firmly in the rearview mirror—and, in the opinion of many, another possible market correction on the horizon—now seems like an appropriate time to take stock of performance and trends across Morningstar's alternative mutual fund categories. Several of those categories only came into being in 2011, as alternative funds began their current wave of expansion. The increased number of offerings provides a stronger sample by which to assess performance, but given the relatively short track records for many funds, it's worth reading the data cautiously.

Launches, Flows, and Asset Growth

Whether tracked by number of fund launches, net flows, or overall asset growth, 2013 was a banner year for alternative mutual funds. Excluding the Morningstar Category of nontraditional bond, there were 70 distinct new fund launches, $40.3 billion in net inflows, and year-end net assets of $139.3 billion—all new records (see Exhibit 1). (And in the first quarter of 2014, 17 additional new funds came to market.) If one includes the non-traditional-bond category, those numbers rise to 89 fund launches and $95.6 billion in net inflows. (Later in this article, we discuss the nuances of how Morningstar classifies nontraditional bonds.) Since the end of 2007, the number of alternative mutual fund vehicles available to investors has more than doubled.

Exhibit 2 presents another perspective on the success of alternative mutual funds. Looking at organic growth rates across broad asset classes as defined by Morningstar, we see that from 2009–13, alternatives averaged 30% annual organic growth, never going below 18%. Only commodities, a smaller and far more volatile asset class, averaged a higher organic growth rate, but that number is skewed by the 2009 and 2010 growth. The next highest growth rate was 12.99% for taxable bonds. If this calculation were performed with nontraditional bonds within the alternative category, the figures would lean even more heavily in alternatives' favor.

Causes of this movement to alternatives have been discussed previously in this publication as well as by others, but the highlights bear repeating. Among the key reasons are a desire by investors and advisors for greater diversification and downside protection away from traditional stocks and bonds; a growing trepidation among high-net-worth investors after 2008 toward the high fees, liquidity constraints, and potential for fraud among hedge funds; significantly reduced asset flows to hedge funds, leading many hedge fund managers to seek new opportunities in the registered-fund space; and, finally, the growth of fee-based advisors, who tend to be more open to the volatility-reducing role of alternatives within a portfolio-solution context. (See *The World is Flat* in *Alternative Investments Observer*, Volume 5, Number 1, for more details on these trends.) More recently, the low-yield environment and fears over future rising rates have spurred flows into nontraditional bonds, as well as market-neutral and other arbitrage strategies that could be viewed as fixed-income alternatives. In general, there's a virtuous cycle at work, in which acceptance of retail alternatives by investors (that is, dollars flowing into

Exhibit 1 Alternative Category Flows and Growth In New Funds

	Year	Distinct New Funds	Annual Net Flows ($)
Multicurrency	2008	2	384,770,758
	2009	2	-330,864,590
	2010	3	1,995,438,579
	2011	2	4,181,830,048
	2012	2	29,707,820
	2013	2	-482,366,207
Long-Short Equity	2008	11	2,227,103,796
	2009	11	1,594,660,802
	2010	16	2,507,066,333
	2011	20	1,649,003,436
	2012	15	5,694,327,536
	2013	22	20,578,843,254
Multialternative	2008	13	-625,424,743
	2009	11	1,394,408,197
	2010	10	3,385,009,281
	2011	19	3,658,790,673
	2012	18	4,080,837,042
	2013	28	9,650,359,246
Managed Futures	2008	0	969,480,558
	2009	3	1,240,132,329
	2010	8	1,652,620,263
	2011	15	4,375,355,200
	2012	20	815,224,683
	2013	10	2,495,091,705
Market Neutral	2008	2	764,559,986
	2009	3	5,748,376,338
	2010	6	6,448,981,880
	2011	10	-789,279,608
	2012	8	910,791,167
	2013	8	4,540,211,920
Bear Market	2008	1	-1,361,573,769
	2009	0	1,918,826,621
	2010	0	2,253,968,404
	2011	0	-240,094,975
	2012	1	3,454,690,930
	2013	0	2,690,304,342
Nontraditional Bond	2008	6	-2,377,579,571
	2009	4	12,825,730,166
	2010	12	31,188,370,187
	2011	13	8,802,554,364
	2012	9	5,164,713,906
	2013	19	55,349,612,981

funds) has prompted fund companies to turn out new products—at times innovatively, and at times in copycat fashion.

Homing in on 2013 flows, Exhibit 3 shows that the lion's share of assets went to nontraditional bonds and long-short equity, but even struggling categories like bear market and managed futures had healthy growth rates. Only the multicurrency category saw small net outflows. The top-line numbers can be deceiving, though. In some categories, growth has been top-heavy. MainStay Marketfield **MFADX** took in roughly two thirds of the $20 billion that entered the long-short category last year, for instance. AQR Managed Futures Strategy **AQMIX** dominated flows in the managed-futures category. Growth has been more dispersed in nontraditional bonds, but several large vehicles (J.P. Morgan, Goldman, and BlackRock) have swallowed a big chunk of the assets. Asset bloat and capacity constraints are likely to become bigger concerns with many of these strategies. But investors have more choice than ever in every alternative category, which will ultimately be beneficial as heightened competition leads to lower fees, more innovative strategies, and the weeding out of weaker entrants.

Yet more choice also requires more care. It's crucial for investors and advisors to understand the purpose and characteristics of Morningstar's alternative categories and their constituents in order to more effectively use them within investment portfolios.

Long-Short Equity

Funds that fall into the long-short equity category buy stocks long but then hedge some of the downside by shorting individual stocks or hedging a basket of stocks more broadly. Many consider equity long-short to be the original hedge fund strategy. Typically, investors in these funds want to participate in a fair share of the market's upside while protecting meaning-fully on the downside. Beta, a measure of a fund's sensitivity to the equity markets, is a primary metric by which Morningstar assesses

Exhibit 2 Morningstar Broad Category Organic Growth Rates

	Organic Growth Rate %				
Morningstar Broad Category	2009	2010	2011	2012	2013
Allocation	0.96	2.57	2.33	2.72	5.63
Alternative	33.90	36.82	18.38	19.17	43.26
Commodities	115.64	56.61	17.42	2.92	-7.04
International Equity	3.84	4.95	0.65	1.24	11.01
Municipal Bond	23.28	3.27	-2.08	10.34	-9.77
Sector Equity	3.91	3.79	2.31	1.37	8.94
Taxable Bond	28.49	14.52	7.81	13.19	0.93
US Equity	-1.08	-1.69	-2.32	-3.07	1.84

Exhibit 3 2013 Morningstar Alternative Category Flows and Organic Growth

Morningstar Category	2013 Estimated Net Flow ($)	2013 Organic Growth Rate (%)
Long-Short Equity	20,624,967,875	80.96
Multialternative	9,841,500,717	57.43
Market Neutral	4,590,846,550	20.33
Bear Market	2,690,304,342	39.57
Managed Futures	2,654,739,560	31.71
Nontraditional Bond	53,706,899,757	79.43

whether a fund belongs in this category. The average beta for the category is around 0.5, meaning the typical long-short fund will move about half as much as the S&P 500 Index. Thus, the category's 14.6% average return in 2013 versus the benchmark's 32.3% return was in line with expectations (perhaps a shade lower). Some investors may have been disappointed by such lagging performance, but such results are part and parcel of the strategy. Conversely, the average long-short fund lost 18.6% in 2008, roughly half the S&P's losses.

The long-short category experienced some of the strongest growth among alternatives in 2013, with net inflows of $20.6 billion, translating to organic growth of 81%, and 22 new fund launches. With the stock market now in its fifth year of a bull market, it seems likely that many investors and advisors are anticipating the next correction or downturn. Much of the category's growth, it should be noted, resulted from the supernova-like expansion of MainStay Marketfield, whose $21 billion in assets under management at year-end accounted for roughly 40% market share in the category. Still, many other funds have seen appreciable growth as well, and the appetite for hedged-equity strategies does not seem to be waning anytime soon.

Within long-short equity, managers take a range of approaches, from the purely fundamental approach of Diamond Hill Long/Short **DIAMX**, which has a Morningstar Analyst Rating of Neutral, to the thematic, macro process of Bronze-rated MainStay Marketfield. Still others use fundamentally driven quant models, like the management team at Robeco (which oversees two Morningstar Medalist funds), but bring in macro views to adjust the timing of their short bets. Given the difficulties of successfully executing shorting strategies, Morningstar analysts tend to favor managers with proven expertise and methods for managing risk in the short book.

Long-Short Equity Morningstar Medalists

Gateway	Silver
Robeco Boston Partners L/S Research	Silver
Wasatch Long/Short	Silver
Gotham Absolute Return	Bronze
MainStay Marketfield	Bronze
Robeco Boston Partners L/S Equity	Bronze
Schooner	Bronze
Swan Defined Risk	Bronze

Market Neutral

There are a number of distinct substrategies within the market-neutral category, but the common thread is that all market-neutral managers aim to eliminate systematic market risk by matching up long and short positions. The returns that the funds produce should be solely (or primarily) the result of alpha, or manager skill. For a fund to qualify for the market-neutral category, it must typically have short exposure of at least 20% and a beta of between 0.20 and negative 0.20; ideally, beta should be as close as possible to zero.

Among the more common market-neutral strategies are equity market-neutral, convertible arbitrage (which usually involves taking a long position in a firm's convertible security while shorting the equity), or merger arbitrage (which takes advantage of the spread in a company's price between the announcement of a merger and the closing of the deal). Another well-established alternative strategy, market neutral has seen a slower and steadier rate of growth than its long-short category cousin. It's added between eight and 10 new strategies in each of the past three years to reach 46 distinct strategies at the end of 2013; $4.5 billion in net inflows entered the category in 2013, its highest total since 2010.

Slow and steady are terms than can also be used to characterize the types of returns investors should expect from market-neutral funds. In 2013, the average fund in the category returned 2.90%. For the three years from 2011 through 2013, the category averaged a very modest 1.00% annualized return (barely beating cash), with a beta to the S&P 500 of only 0.11 and a standard deviation of 1.63% (less than the Barclays U.S. Aggregate Bond Index over that period). The low volatility and low correlations of market-neutral approaches are a plus, and the category's mild loss of 0.33% in 2008 points to its downside robustness. Certainly, though, most investors are seeking higher return potential. Indeed, there are funds in the category that have beaten the averages with proven processes, such as two merger-arbitrage funds, Bronze-rated Arbitrage **ARBFX** and Silver-rated Merger **MERFX**, as have the broader approaches of Silver-rated AQR Diversified Arbitrage **ADAIX** and Gold-rated (and recently reopened) TFS Market Neutral **TFSMX**.

Market-Neutral Medalists

TFS Market Neutral	Gold
AQR Diversified Arbitrage	Silver
Merger	Silver
Arbitrage	Bronze
Calamos Market Neutral Income	Bronze
Touchstone Merger Arbitrage	Bronze

Managed Futures

The managed-futures category has been going through something of an identity crisis. Managed-futures portfolio managers seek to latch on to momentum in the major futures markets (stocks, bonds, commodities, and currencies), most frequently using systematic quantitative models to identify and follow those trends, taking both long and short positions. (A smaller portion of managed-futures strategists uses countertrend or mean-reversion models.) Historically, managed futures have provided among the lowest correlations to traditional asset classes of any alternative strategy. In 2008, managed-futures hedge funds captured widespread attention after the strategy provided a bright spot amid market's misery; the Newedge Trend Index returned 21% that year. Only a few managed-futures mutual funds existed at that point, but during the subsequent few years, fund companies rolled out many new offerings. In 2011, $4.4 billion poured into the category, and by the end of 2012, the category counted 48 distinct funds, up from five in 2009.

Category performance was another story during that period. Since the financial crisis, managed futures have for the most part been severe laggards. Three-year returns for the category through the end of 2013 averaged an unsightly negative 4.55% annually, while the Newedge Trend Index returned a similar negative 5.00% annualized. The typical managed-futures fund dropped 0.90% in 2013, on the heels of a 7.40% decline in 2012. Even so, the category saw net inflows of $2.5 billion in 2013, much of it into the Silver-rated AQR Managed Futures Strategy. Clearly, investors think there is something worthwhile here.

While there is considerable debate over the causes of this underperformance, many experts agree that considerable short-term volatility in global markets has played havoc with the longer-term trend models embedded in most managed-futures strategies. Funds with more diversified approaches, especially those with exposure to equities, such as Natixis ASG Managed Futures Strategy **AMFAX**, have done relatively better, as have funds like AQR Managed Futures Strategy that put greater weight on short-term trends. Another concern with this category is high fees. A number of managed-futures funds contain performance fees as part of their off-shore structures, often with very poor disclosure. Investors should stick to the category's cheaper options.

The category's travails should also serve as a reminder that managed futures are best used as a strategic component within a broader alternatives allocation. It's very hard to time when these funds will rise up, but there's a good chance that they'll be quite valuable portfolio enhancers when the chips are down for other asset classes.

Managed-Futures Medalist

AQR Managed Futures Strategy	Silver

Multicurrency

The multicurrency category remains something of a niche, with only 21 distinct strategies and $10.8 billion in assets at the end of 2013. The category has been in net outflows in 2013 and the first part of 2014, something of a dry spell after seeing significant inflows in 2010 and 2011. It should be noted, though, that many managed-futures funds trade in currencies and many multialternative funds include a currency allocation, so investors in alternatives are accessing currencies by other means as well.

Managers in this mutual fund category typically invest in multiple currencies using forward contracts or swaps. Most funds take a short-U.S. dollar stance, expecting to benefit from depreciation of the dollar, explaining the category's growth in 2010 and 2011 as concerns about the U.S. deficit and inflation spiked, and its subsequent difficulties as the dollar has stabilized. Taking a short-dollar stance as a pure hedge does lend itself to passive approaches, and a number of exchange-traded fund options exist for investors. The majority of managers in the multicurrency category take an active approach, seeking to capitalize on some combination of carry, momentum, and value components of currency return.

While currency funds have continued to exhibit favorable correlation characteristics (0.59 to the S&P 500 and 0.02 to the Aggregate Index), the general tailwinds facing short-dollar strategies has led to poor returns and unfavorable Sharpe ratios. From the start of 2008 through 2013, the category as a whole lost 0.91% annualized. Still, some managers have exceeded the averages and earned positive returns through active management. Bronze-rated Eaton Vance Diversified Currency Income's **EAIIX** 4.61% return during that six-year period was the category's best, aided by management's decision several years ago to make a strategic allocation to frontier currencies. Silver-rated Merk Hard Currency **MERKX** sticks to developed economies but has shown a knack for tactical adjustments based on management's macroeconomic views, even earning positive gains during periods of a rising dollar. Both funds also offer relatively attractive expense ratios.

Multicurrency Medalists

Franklin Templeton Hard Currency	Silver
Merk Hard Currency	Silver
PIMCO Emerging Markets Currency	Silver
Eaton Vance Diversified Currency Income	Bronze

Multialternative

The multialternative category has been booming, and for some good reasons. There's been a great deal of innovation in this category, as various iterations of multistrategy fund-of-funds products have been coming to market. The multialternative category saw more new fund launches, at 28, than any other alternative category in 2013, bringing its total number to 109 at year-end. Nearly $10 billion in new flows entered the category as well. For a fund to qualify for the multialternative category, Morningstar looks for at least 50% of the underlying assets to be placed in a single-strategy alternative category, along with an average net short exposure of 20% over time.

The chief attraction of multialternative funds is the ability to access a range of alternative strategies in one fell swoop, eliminating the need for an advisor or investor to undertake the arduous task of selecting, monitoring, and rebalancing or actively allocating among the range of managers needed to create a sufficiently diversified allocation to alternatives. A further attraction of some multialternative funds may be access to hedge fund managers not typically accessible for the retail investor, particularly as the trend toward convergence has led an increasing number of hedge fund managers to enter the retail space, either in a subadvisory capacity or by launching their own funds.

Multialternative is an extremely heterogeneous category, making it challenging to compare meaningfully across the category as well as to find an appropriate benchmark. Some funds use third-party subadvisors in separate-account structures, some use a traditional fund-of-funds approach, while others may allocate across managers within their firm. For outside investors, transparency into the distinct performances of the underlying investors varies in quality. A small subset of funds in the category pursues hedge fund replication, in which managers attempt through quantitative processes to imitate the factors found to underlie hedge fund index returns.

Fees are another concern with multialternative funds. The separate layering of fees, along with relatively high managed fees often negotiated by the underlying managers, has led to relatively high prices in this category. The average multialternative fund has a net prospectus expense ratio of 2%. (Though by comparison to the performance-laden incentive structures of hedge funds, these fees can look like relative bargains; the mutual fund world is a much tougher universe when it comes to fee comparisons.) Those fees cut into the potential alpha offered by the underlying strategy managers. As funds grow in size and competition escalates, however, fees should continue to decline.

Given the range of strategies in the category, it is hard to generalize about performance characteristics. Three-year betas relative to the S&P 500 for funds in the category range from slightly negative to close to 1.0. The category's average beta during that period is a relatively low 0.29, and returns have been commensurately modest, averaging 1.59% annually, well below the returns of stocks and moderately below the returns of bonds during that period. As with other alternative categories, the benefits of multialternatives likely will be better highlighted during periods of market stress and within the overall risk-adjusted profile of a portfolio.

Only a few funds currently earn medals from Morningstar in this category, but we will be on the lookout for future potential Medalists in this quickly evolving area.

Multialternative Medalists

Absolute Strategies	Bronze
Arden Alternative Strategies	Bronze
IQ Alpha Hedge Strategy	Bronze

Bear Market

If multialternative funds represent the wave of the future, bear-market funds are a vestige of times past. Market bears have been around since time immemorial. The bear-market category consists of managers who take a perennially pessimistic view of the market and bet on an anticipated decline by shorting either individual stocks or an entire equity index. Although a few bear-market managers employ active strategies, most funds in the category have passive implementations, using either ETFs or mutual fund indexes. Short positions typically account for 60% to 100% of fund assets.

There's no foolproof way to successfully make use of a bear-market fund. Investors can attempt to time the market by purchasing one in advance of an expected market decline, but both professional and individual investors have historically shown very little ability to accurately time large market movements. Taking a strategic long-term position in a bear-market fund avoids the timing problem and offers some portfolio insurance against a market drop, but for the typical investor who believes that equity markets move upward over the long haul, a permanent bet against the stock market is a losing proposition. Managers who dynamically adjust their short positions offer some prospect of reducing losses, assuming their timing decisions are accurate.

Exhibit 4 6-Year Category Returns and Correlations to S&P 500

Morningstar Category	Average Category Return	Correlation
Bear Market	-18.72	-0.96
Long-Short Equity	1.12	0.95
Managed Futures	-0.76	-0.22
Market Neutral	-0.24	0.24
Multialternative	0.18	0.93
Multicurrency	-0.91	0.51
Nontraditional Bond	2.33	0.71

Exhibit 5 6-Year Category Returns and Correlations to Barclays U.S. Aggregate Bond Index

Morningstar Category	Average Category Return	Correlation
Bear Market	-18.72	-0.17
Long-Short Equity	1.12	0.07
Managed Futures	-0.76	-0.25
Market Neutral	-0.24	0.01
Multialternative	0.18	0.23
Multicurrency	-0.91	0.08
Nontraditional Bond	2.33	0.27

Unsurprisingly, bear-market funds have endured punishing losses over most trailing periods, even when 2008 is included, a year in which the average bear-market fund gained 30%. For the six years from 2008 through 2013, the average bear-market vehicle lost 18.7% annually. Morningstar analysts currently award no bear-market funds a positive Analyst Rating.

Nontraditional Bond

We conclude with the non-traditional-bond category because it comes with an asterisk. Morningstar does not technically count nontraditional bond as an alternative category when it releases category asset flow data, primarily because a majority of funds use long-only strategies that don't meet Morningstar's usual criteria for alternative status. Nevertheless, many industry participants do consider the non-traditional-bond category to be alternative, primarily because so many of its constituents aim to provide low correlations to the traditional bond indexes and often feature absolute-return mandates. Moreover, there is a substantial minority of strategies within the category that do meet Morningstar's shorting criteria, primarily long-short credit managers, so we continue to cast a sidelong glance at non-traditional-bond funds beneath our alternative research lens.

Of all the alternative categories, nontraditional bond experienced the most sensational growth in 2013, lapping up $55 billion in new flows for a 79% organic growth rate. Predictably, 19 new funds entered the market in 2013 (and another dozen have come along so far in 2014). With investors seeking both higher yields and diversification from a core bond market that most investors expect to suffer when interest rates rise over the coming years, unconstrained bond funds from J.P. Morgan, Goldman Sachs, PIMCO, BlackRock, and others have seen torrential inflows. While returns have been decent, many of these funds have significant long credit exposure and may behave similarly to high-yield bond funds. Some do reserve the flexibility to take short duration positions, but that's been relatively rare to this point in the category's history. On the other hand, long-short credit funds like Bronze-rated (and closed to new investors) Driehaus Active Income **LCMAX** do shy away from taking directional exposure to the bond market, instead generating alpha from fundamental credit research. Such strategies are closer to the spirit of Morningstar's alternative designation.

The category's correlation to the Barclays U.S. Aggregate Bond Index has indeed been modest, at 0.18 during the five-year period through 2013, confirming the diversification benefits of non-traditional-bond funds relative to core bonds. The category's annualized return of 2.3% from 2008 through 2013 trails the Aggregate Index, but it exceeds every other alternative category during that period and also garners the highest category Sharpe ratio. As with other fast-growing categories, Morningstar expects to keep a close eye on developments within nontraditional bond, seeking to identify emergent trends and exceptional practitioners of alternative bond strategies.

Non-Traditional-Bond Medalists

FPA New Income	Silver
Driehaus Active Income	Bronze

The Future May Not Resemble the Past

Exhibits 4 and 5 sum up much of the performance data discussed above. They show that over the six years from 2008 through 2013, while Morningstar's alternative categories have largely executed on their promises of diversification and volatility reduction, returns have significantly lagged the benchmark equity and fixed-income markets. That's not particularly surprising; part of the calculation in choosing an alternatives allocation is that returns will tend to trail the indexes during upward-trending periods. That differential has been exacerbated, however, by a spell of unusually low volatility and bull-market level returns for both stocks and bonds since the March 2009 market nadir. Alert investors will avoid anchoring in the unusually placid environment of the past five years. We certainly have no pretensions that we can predict the direction of global markets, but the overall risk-adjusted results of alternatives may look quite different six years hence, and more in line with longer-term performance seen in hedge fund results.

It's likely that the categories themselves will continue to evolve as well. As more traditional hedge fund managers move into the registered-fund space, they will continue to transport strategies less frequently used in mutual funds. To the extent that those strategies build credibility and attract imitators, they have the potential to turn into distinct categories, or carve-outs of existing categories. Morningstar will continue to monitor developments so that our category system provides investors the most helpful road map to navigating the quick-changing alternatives world.

Quant Corner: Where It Pays to Be an Active Fund-Picker

by
Lee Davidson
Quantitative Analyst

If you've had your finger on the fund industry pulse recently, you are well aware that the active-versus-passive investing debate is alive and well. Unfortunately, it seems that many on both sides of the aisle tend to advocate an all-or-nothing approach—either all passive or all active. However, a rational investor should take a more nuanced view, where fees are weighed against the potential for outperformance in a category-by-category consideration.

In what follows, I will provide a decision framework for the trade-off between the potential for outperformance offered by active management with the cost savings offered by passive management. In addition, I will discuss one method for determining which active-fund industry segments may be worth considering for an active allocation.

Are the Costs Worth It?

When faced with the choice of investing in an active or passive fund, an investor must weigh the potential for outperformance against the assuredness of incurred costs resulting from the higher fees charged by actively managed funds. Costs will, by construction, negate performance regardless of whether or not we realized any outperformance in the process of investing actively. Given this adversarial nature between costs and performance, therefore, we need to get a handle on the expense-ratio premium of active funds versus their passive counterparts. This premium is essentially an investor's entry fee for the opportunity to outperform the passive fund. Quantifying the expense-ratio premium of an active fund over a passive fund is relatively straightforward and can be done by simply comparing expense ratios of the two products.

Once investors have an idea of what cost will be incurred, they next should form a realistic expectation for the outperformance that the active fund can achieve over the passive fund for a given time horizon. And, perhaps more importantly, investors must estimate their confidence in their ability to choose an outperforming active fund.

There are a variety of ways to do this. For example, the majority of research firms have focused on comparing simple returns historically (for example, the U.S. large-blend index returned 10%, and 80% of large-blend funds returned less than 10%). However, this analysis fails to capture the different risk exposures of these funds. Some funds may be designed to deliver lower returns with a lower risk profile in the same category and are thus unduly discriminated against in a simple returns-based analysis.

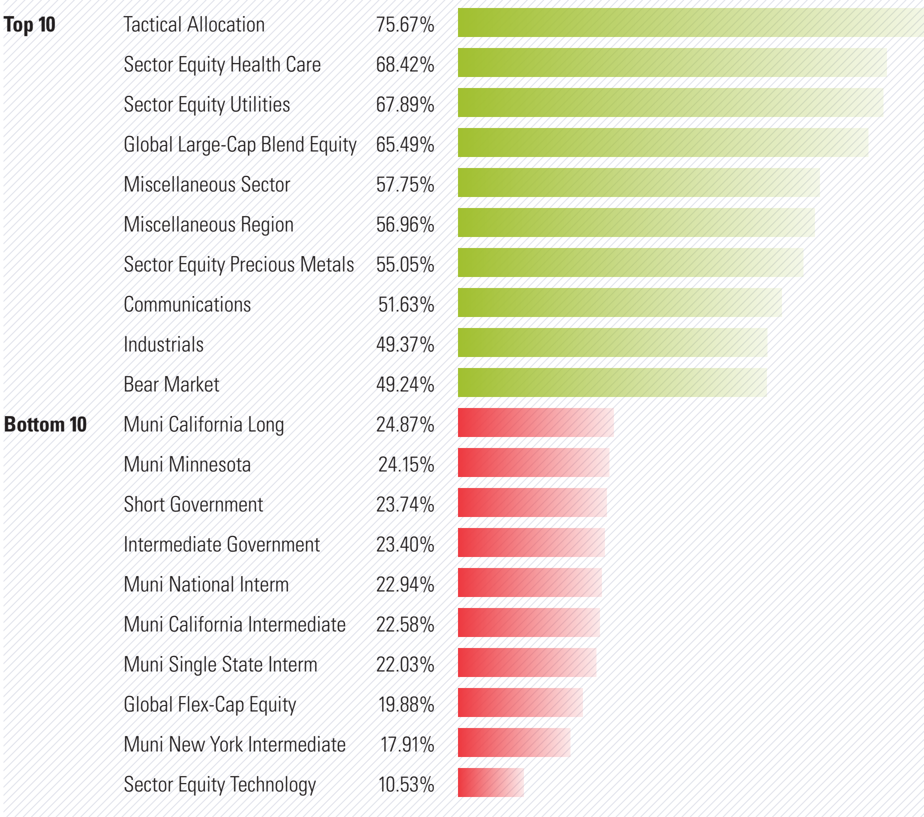
Using a method of comparison that focuses on risk-adjusted returns, however, avoids this bias and concentrates on the manager's skill at trading risk for reward. One of the preferred measures for doing risk-adjusted return comparisons is alpha, which provides a fund's estimated return after controlling for its risk profile. By definition, an index fund's alpha will be zero whereas an active fund's alpha can be either positive or negative.

Using Alpha

Unlike the expense-ratio premium of active funds over passive funds, which is known with certainty, any estimate of an active fund's future alpha will be prone to error. Therefore, we need to account for this lack of certainty when we compare the expense-ratio premium with the expected alpha of the active fund. In order to do so, we estimate the probability distribution of alpha by Morningstar Category and see where 0% lies in this distribution. If the bulk of the distribution lies above 0%, that should signify that not only are active funds performing well as a whole, but that investors should have higher confidence in their ability to identify those top-tier funds. Conversely, if the bulk of distribution falls below the 0%

Exhibit 1: Probability of Positive Alpha Net of Fees Varies by Category

Percent probability that an alpha of greater than 0 is achievable.



Source: Morningstar. Data as of Dec. 10, 2013

threshold, then managers are not adding value for their investors, who should then be more wary of their ability to identify an outperforming active fund.

Using the probability distribution of alpha has several distinct advantages. First, as a risk-adjusted return measure, the distribution of alpha reflects the expectations for a manager's skill. We should hope that in the long run, alpha exceeds the manager's fees. To estimate a manager's value proposition, therefore, it is wise to use alpha estimated net of fees and judge it relative to 0%.

Second, as opposed to simply estimating averages, estimating a probability distribution will give us the entire range of outcomes for alpha by category historically. These historical ranges, or spreads, in alpha can be used to indicate which categories possess the largest differences in the skill of active managers. For example, a category with a range of alpha from negative 1% to 1% would indicate that there is little difference in skill between the best and worst managers compared with a category where alpha ranged from negative 5% to 5%. Using probability distributions in this way allows for comment on not only the potential for alpha but also enables us to identify the categories where manager skill is feasible and rewarded.

If we are equating alpha with manager skill, how do we arrive at estimates of alpha? Alpha can be estimated against any benchmark, but in order to compare like-with-like, I chose to estimate each fund's alpha by regressing each fund's net-of-fees return against its Morningstar Category average return. Using net-of-fee returns will account for any effect of costs. Rather than estimating one alpha per fund, I chose to estimate alpha for 12-month periods on a rolling monthly basis for each fund since 2003. Effectively, therefore, we are left with a time series of alpha for each fund, which will form the basis of the probability distribution. Essentially, this would answer the question, "What is my expected 12-month alpha for any given fund at any given time in a certain category?" Category by category, we then look to see where 0% falls in the distribution and identify which categories have the greatest density above this threshold. The higher the density, the higher the probability that an investor will choose a fund that can outperform the category on both a fee- and risk-adjusted basis.

In the exhibit, I plotted the Morningstar Categories with the highest and lowest probabilities of funds achieving an alpha greater than 0%. By construction, I used all share classes and only looked at U.S. funds. These represent the categories with the greatest and least potential for an active manager to deliver excess returns to clients, respectively.

Where to Be Confident

Given the data, it is quite apparent that investors should have greater confidence finding out-performing active funds on a risk-adjusted basis in certain categories but not others. For example, in the sector equity health-care category, active fund managers have consistently delivered higher alpha, and rarely would we expect them to deliver negative alpha. On the other hand, active fund managers belonging to most municipal-bond fund categories have tended to exhibit negative alpha, signaling that funds in this category charge fees that are typically in excess of their skill.

Of the 160 or more categories, I am only showing the top and bottom 10 in the chart, so there are many omissions that may be puzzling. For example, many investors are familiar with the fact that small-cap stock funds have been able to provide alpha historically, and yet they do not show up in this analysis. Therefore, it is worth noting that in my study, small-cap stock funds tended to exhibit positive alpha relative to a market-cap-weighted index (which skews toward large-cap companies). However, because my analysis uses the category average return, the small-stock premium is accounted for, such that no small-stock funds had a systematic advantage over other funds.

Another question that might be asked is why are so many muni funds showing up in the bottom rung of the analysis? In my opinion, there is no theoretical reason why such a paradigm must hold. It certainly seems to be the case that there is a wide skill differential in the municipal-bond categories—with many funds exhibiting significantly negative alpha and only a relative few occurrences of positive alpha. While the analysis suggests that these are the facts over the past 10 years, there does not seem to be any structural reasons for why this has to hold, especially if fees come down.

In this study, we have shown the probability of alpha being greater than 0% by category, but one could imagine that if we ranked categories by magnitude of alpha, we might arrive at different conclusions. The question could be framed like this: Is it possible that the probability of generating alpha in a certain category is extremely high, but the actual positive alpha is tiny? This is certainly possible, though in practice what I have found is that the correlation between these ranks is quite high. Overall, if anyone plans to replicate this analysis for true investment selection, then the entire probability distribution should be examined in order to account for these subtle differences.

While we have estimated alpha here against the category average and found some categories performing well and others not, that is not to say the distribution of alpha in these categories could change relative to a different benchmark. For example, if we were to use the S&P 500 Index for all U.S. equity categories, odds are the distribution of alpha would change dramatically. Ultimately, this is a method that should be applied in a context that makes sense for an investor's unique situation. Here, this analysis simply helps manage investors' expectations in their ability to pick a top-tier active fund in a specific category relative to its peer set. The data show that investors should be most confident when picking top-tier funds in categories that focus on niche areas of the market—sector stock funds, single-country funds, and alternatives categories, for example. Overall, these categories tend to produce more reliable, positive alpha net of fees. Conversely, categories that seem to have a broader mandate—large-cap U.S. equities, broad-basket commodities, U.S. government bonds—tend to have a tougher time justifying their expense ratios as they consistently have had lower, more negative alpha net of fees. As such, investors should feel less confident selecting winning active funds in these categories.

Portfolio Context

What does this mean for portfolio construction? I am not advocating that investors build their portfolios solely out of funds where alpha can be reliably found—replacing broad U.S. equity funds with sector stock funds. On the contrary, this analysis should merely aid the investor in deciding where it may be advantageous to scour for an active rather than passive fund to fit an already predetermined allocation. Have an allocation decision to make for a U.S. large-blend category? Odds are it will be hard to pick out a top-tier active fund, so better go passive. Looking for some diversification and potential to outperform in the "explore" part of a core-and-explore portfolio allocation? You might want to consider an active fund in the precious metals or single-country categories because these funds often reward their investors with high alpha.

A fund investor who is cognizant of these facts will be better equipped to identify the segments of the asset-management space where it pays to be active. Certain fund categories that focus on very niche market sectors are quite ripe for a skilled active manager, and investors should have much higher confidence that they will choose a fund with higher risk-adjusted returns within these categories. That said, the case for passive investing is certainly strong, as the majority of fund categories fail as a whole to deliver reliable consistent alpha net of fees.

This article originally appeared in Morningstar magazine. To learn more about Morningstar magazine, please visit our corporate website.

Industry Trends: Alternative Mutual Funds

Non-traditional-bond funds led a record year for alternative mutual funds.

by
Jason Kephart
Alternative Investments Analyst

Any lingering doubts that alternative mutual funds have gone mainstream were put to rest last year. In 2013, net sales of alternative mutual funds exploded to more than $95 billion, up from $18.5 billion in 2012 and $26 billion in 2011. Not bad for a fund category with just $187 billion in total fund assets. For comparison, traditional U.S equity and sector funds, with just under $5 trillion in total fund assets, took in approximately $73 billion combined last year, and taxable-bond funds, which have more than $2 trillion in total fund assets, had net outflows of more than $30 billion.

Alternatives benefited most from the stampede out of intermediate-term bond funds, which started in May 2013 when interest rates began to rise and finished with almost $100 billion of net withdrawals during the next seven months.

Bond prices move inversely to interest rates, and with intermediate-term bond funds typically mandated to keep duration (a measure of interest-rate risk) within sight of the Barclays U.S. Aggregate Bond Index's four- to five-year average, many investors feared a steep drop in bond prices.

That opened the door for non-traditional-bond funds to capture a chunk of the money exiting those strategies, as non-traditional-bond funds have the ability to hedge or short interest-rate or credit risk. In total, non-traditional-bond funds experienced record net inflows of $55 billion last year, or more than half of the total net inflows into alternative mutual funds, up from just $5.9 million of total inflows in 2012.

Non-traditional-bond funds from Goldman Sachs Asset Management and J.P. Morgan Investment Management were the two biggest winners in the category. Goldman Sachs Strategic Income **GSZIX** and JPMorgan Strategic Income Opportunities **JSOSX** had net inflows of $11.5 billion and $10.0 billion, respectively.

Both funds flashed the potential of a non-traditional-bond fund in a rising interest-rate environment by handily outperforming the Aggregate Index's 2.00% loss. Goldman Sachs Strategic Income delivered a 6.43% return for the year, tops in the category, while JPMorgan Strategic Income Opportunities delivered a 3.00% return. Not all the funds in the category performed as well; the average fund delivered a 0.29% average return for the year. Still, for risk-averse investors, that result is better than the 1.42% loss the average intermediate-term bond fund suffered.

Of course, where there are record mutual fund sales there are sure to be record fund launches as well, and mutual fund companies looking to capitalize on the growing popularity of bond alternatives didn't disappoint. Fund firms launched 22 non-traditional-bond funds last year, surpassing the 12 launches in 2011 as the most bountiful year for the category.

Pioneer Investment Management was among the most active. It launched two non-traditional-bond funds in December (Pioneer Long/Short Global Bond **LSGYX** and Pioneer Long/Short Opportunistic Credit **LRCAX**) and another in January (Pioneer Absolute Return Bond **ARBYX**).

The non-traditional-bond category should get even more interesting in 2014 as the last bond-giant holdout appears likely to make its entry to the space. DoubleLine Capital, which was founded by Jeffrey Gundlach, Morningstar's Fixed-Income Manager of the Year in 2006 and a finalist for bond manager of the decade, has launched its first fund in the category—the DoubleLine Flexible Income Fund **DFLEX**.

If DoubleLine's non-traditional-bond fund is as popular as its flagship DoubleLine Total Return Bond Fund **DBLTX**, which grew to more than $40 billion in assets in three years, 2014 could be another record-setting year for the non-traditional-bond category and alternative mutual funds in general.

Of course, success in traditional bond strategies doesn't guarantee success in a non-traditional-bond strategy. Just ask DoubleLine rival Pacific Investment Management Company. PIMCO Unconstrained Bond **PFIUX** lost 2.21% in 2013, worse than the Aggregate Index and the benchmark-constrained PIMCO Total Return **PTTRX**, which lost 1.92%.

Fund Reports

BlackRock Global Long/Short Equity

by **Jason Kephart**

Advisor
BlackRock

Advisor Location
New York, New York

Assets Under Management
$1.2 billion

Inception Date
Dec. 20, 2012

Investment Type
Mutual fund

Morningstar Category
Market neutral

Management
The fund is run by portfolio managers Paul Ebner, Kevin Franklin, and Raffaele Savi. The three are members of BlackRock's Scientific Active Equity Investment Group. Ebner is a senior portfolio manager for global-equity market-neutral strategies within the group. He joined Barclays Global Investors in 2004, which was acquired by BlackRock in 2009. Prior to that, he worked as a fixed-income trader at Salomon Smith Barney. Franklin is the lead portfolio manager for global-equity hedge fund strategies in the group. He rejoined BlackRock in 2010 after a year as head of automated trading at Marble Bar Asset Management in London. He had previously been with Barclays for five years. Savi is head of BlackRock's North American, European, and developed-market equity strategies. He has been with the firm since 2006.

Strategy
This fund uses a combination of fundamental bottom-up research and quantitative screens to construct a global market-neutral portfolio. The fund attempts to identify attractive long and short opportunities based on valuation, earnings quality, investor sentiment, and macro themes. This approach is similar to its sibling, BlackRock Emerging Markets Long/Short Equity **BLSIX**, which is run by the same group at BlackRock. The fund targets a net long exposure of 20%, but that can go as high as 40% or as low as 10%, depending on market conditions. Its gross long exposure can range from 100% to 120%, and its gross short exposure can range between 80% and 100%. To maintain a global exposure, the fund will also typically allocate at least 40% of assets to developed markets outside of the United States, including Europe and Japan. Since it launched on Dec. 20, 2012, the fund has a beta of 0.29 to the S&P 500 and 0.23 to the MSCI All Country World Index (using monthly data through Jan. 31, 2014). Its correlation to those indexes has been 0.56 and 0.54, respectively, during the same time period.

Process
BlackRock Global Long/Short Equity uses swap contracts and other derivatives to gain long exposure to 300 to 600 stocks and short exposure to 300 to 600 companies across a universe of 2,500 potential stocks in developed-nation stock markets. Management uses 40 to 50 metrics, depending on the country or industry, to look for stocks to buy that are undervalued, have high earnings quality, have positive investor sentiment, and fit well with management's broader macro views. The managers look for the opposite qualities in the companies they short. The metrics are individually tailored to a company's specific country or industry. In Asia, for example, the fund relies more heavily on price/book ratio as part of valuation than for companies in the U.S. In addition to using traditional metrics, the managers also look at untraditional sources of information, like conference-call transcripts. The managers use a sophisticated algorithm to mine text and detect remarks that could be deemed bullish or bearish. The managers can also make specific industry, sector, or country bets based on their top-down fundamental research.

Risk Management
Management uses a portfolio optimizer tool to manage the daily risk that the fund is taking, measured by volatility, factors to which it's exposed, and correlations between the fund's holdings. The tool is also used to make sure the fund is reaching its targeted level of risk. The portfolio's targeted level of risk is a function of expected market volatility and the fund's size. With less than $5 billion in assets, management is targeting a volatility of around 8%. If the fund grows to $5 billion or more in assets, management expects the target volatility to be lower, because of owning fewer small companies. The bigger the fund is, the fewer opportunities it can find among smaller companies, which are generally more volatile than large companies. The fund has grown from $649 million in assets as of Jan. 31, 2014, to $1.2 billion as of May 27, 2014. Portfolio positions are capped at 3%, and the fund will typically hold a more diversified portfolio of short positions than long positions, both to reduce the risk on the short side and to rein in the overall costs of borrowing, since some companies' shares are more expensive to short than others. It also hedges out all currency risk in the portfolio through its swap agreements. Management meets with BlackRock's separate risk and quantitative analytics group weekly to review portfolio stress tests.

BlackRock Global Long/Short Equity Inv A (USD)

Standard Index	Category Index	Morningstar Cat
Barclays US Agg Bond TR USD	USTREAS T-Bill Auction Ave 3 Mon	US OE Market Neutral

Performance 05-31-2014

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2012	—	—	—	—	—
2013	5.09	5.13	2.17	4.98	18.51
2014	-2.30	—	—	—	-2.05

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-0.27	—	—	—	6.89
Std 03-31-2014	4.38	—	—	—	7.61
Total Return	5.25	—	—	—	10.97
+/- Std Index	2.55	—	—	—	—
+/- Cat Index	5.20	—	—	—	—
% Rank Cat	23	—	—	—	
No. in Cat	160	—	—	—	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield	—	—

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when sold or redeemed, may be worth more or less than their original cost.

Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-441-7762 or visit www.blackrock.com.

Fees and Expenses

Sales Charges

Front-End Load %	**5.25**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	1.50
12b1 Expense %	0.25
Net Expense Ratio %	**2.18**
Gross Expense Ratio %	**2.54**

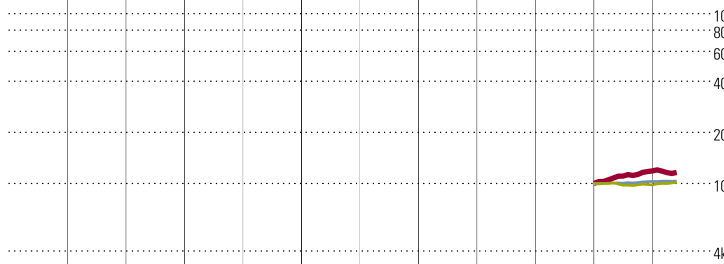
Risk and Return Profile

	3 Yr 97 funds	5 Yr 56 funds	10 Yr 24 funds
Morningstar Rating™	—	—	—
Morningstar Risk	—	—	—
Morningstar Return	—	—	—

	3 Yr	5 Yr	10 Yr
Standard Deviation	—	—	—
Mean	—	—	—
Sharpe Ratio	—	—	—

MPT Statistics	Standard Index	Best Fit Index
Alpha	—	—
Beta	—	—
R-Squared	—	—

12-Month Yield	—
Potential Cap Gains Exp	1.46%



Investment Style
Equity
Stock %

Growth of $10,000
- BlackRock Global Long/Short Equity Inv A 11,608
- Category Average 10,331
- Standard Index 10,177

Performance Quartile (within category)

History	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	05-14
Equity Stock %	—	—	—	—	—	—	—	—	—	—	44	46
NAV/Price	—	—	—	—	—	—	—	—	—	*10.01*	11.72	11.48
Total Return %	—	—	—	—	—	—	—	—	—	—	18.51	-2.05
+/- Standard Index	—	—	—	—	—	—	—	—	—	—	20.53	-5.92
+/- Category Index	—	—	—	—	—	—	—	—	—	—	18.45	-2.07
% Rank Cat	—	—	—	—	—	—	—	—	—	—	1	—
No. of Funds in Cat	—	—	—	—	—	—	—	—	—	—	132	190

Portfolio Analysis 04-30-2014

Asset Allocation %	Net %	Long %	Short %
Cash	99.68	115.31	15.64
US Stocks	1.65	49.95	48.29
Non-US Stocks	-1.36	49.31	50.67
Bonds	0.00	0.00	0.00
Other/Not Clsfd	0.03	0.04	0.01
Total	100.00	214.61	114.61

Equity Style (Value Blend Growth; Large Mid Small)

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	17.0	—	0.99
P/C Ratio TTM	8.4	—	0.83
P/B Ratio TTM	2.0	—	0.91
Geo Avg Mkt Cap $mil	7487	—	0.44

Fixed-Income Style (Ltd Mod Ext; High Med Low)

Avg Eff Maturity	—
Avg Eff Duration	—
Avg Wtd Coupon	—
Avg Wtd Price	—

Credit Quality Breakdown —	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure	Stock %	Rel Std Index
Americas	56.4	—
Greater Europe	20.4	—
Greater Asia	23.2	—

Share Chg since 03-2014	Share Amount	Holdings: 1,276 Total Stocks , 26 Total Fixed-Income, — Turnover Ratio	% Net Assets
⊖	818,246	Telenor ASA	1.56
⊕	353,000	KDDI Corp	1.54
⊕	305,676	Joy Global Inc	-1.51
⊖	394,866	Campbell Soup Co	-1.47
⊕	1 mil	NTT DoCoMo Inc	-1.41
⊖	158,644	Vornado Realty Trust	-1.33
⊖	254,397	Andritz AG	-1.29
⊕	361,068	ProSiebenSat 1 Media AG	1.29
⊕	363,524	CIT Group Inc	1.28
⊕	275,600	Nippon Telegraph & Telephone Corp	1.25
⊕	424,734	Air Lease Corp Class A	1.24
⊕	419,129	Kate Spade & Co	-1.19
⊖	184,739	Rockwell Collins Inc	-1.17
⊕	225,006	Empire Co Ltd Class A	-1.16
⊖	413,644	Erste Bank der oesterreichischen S	-1.13

Sector Weightings	Stocks %	Rel Std Index
Cyclical	**36.7**	**—**
Basic Materials	6.5	—
Consumer Cyclical	18.7	—
Financial Services	7.5	—
Real Estate	4.0	—
Sensitive	**52.3**	**—**
Communication Services	8.7	—
Energy	15.2	—
Industrials	15.0	—
Technology	13.5	—
Defensive	**11.0**	**—**
Consumer Defensive	5.1	—
Healthcare	5.1	—
Utilities	0.8	—

Operations

Family:	BlackRock	Ticker:	BDMAX	Incept:	12-20-2012
Manager:	Multiple	Minimum Initial Purchase:	$1,000	Type:	MF
Tenure:	1.5 Years	Min Auto Investment Plan:	$50	Total Assets:	$1,272.59 mil
Objective:	World Stock	Minimum IRA Purchase:	$100		
Base Currency:	USD	Purchase Constraints:	—		

Fund Reports

Robeco Boston Partners Global Long/Short

by **Jason Kephart**

Advisor
Robeco Investment Management

Advisor Location
New York, New York

Assets Under Management
$18.5 Million

Inception Date
Dec. 31, 2013

Investment Type
Mutual fund

Morningstar Category
Long-short equity

Management
Co-portfolio managers Christopher Hart, Joshua Jones, and Joseph Feeney run the fund. Hart is the lead portfolio manager and a member of Robeco's global and international equity team. He also manages the Robeco Boston Partners Global Equity **BPGIX** and the Robeco Boston Partners International Equity **BPQIX**. Jones is the associate portfolio manager. He specializes in the energy, metals, and mining sectors and is an international generalist. Feeney serves as Robeco Boston Partner's chief investment officer. In 2003, Robeco Investment Management acquired Boston Partners, a value equity manager started in 1995. Feeney joined Boston Partners in 1995 and today oversees the firm's fundamental and quantitative research groups. The trio is supported by Joshua White, a global generalist, and Robeco's team of 17 fundamental analysts and seven quantitative analysts.

Strategy

This global long-short equity fund is intended to deliver exposure to the MSCI World Index with a focus on downside protection. Management uses a combination of quantitative screens and fundamental bottom-up research to find long and short opportunities in global equity markets. The strategy is similar to the firm's flagship fund Robeco Boston Partners Long/Short Equity **BPLSX**, which focuses primarily on U.S. stocks. The main difference with this fund is the expanded universe of stocks available to management. The global fund has a universe of around 8,500 investable stocks. Management intends for the fund to always be fully invested long, but with a varying degree of short exposure. The fund's overall net exposure can vary between 30% and 70%. Short positions, in management's view, are opportunities to make a profit, not a portfolio hedge. As of Jan. 31, 2014, the fund was 97% gross long and 53% gross short, for a net long exposure of 44%. Management expects at least half the fund's gross exposure, both long and short, to be outside of the U.S., and up to about 20% can be in emerging markets. Management has no limitations on how much it can invest in a particular country or industry.

Process

Management begins its search for long and short opportunities with a quantitative screen to narrow down the global universe of stocks with a market capitalization of more than $250 million. The screen separates the top and bottom quintile of stocks based on a composite score that incorporates Robeco's measures of a stock's valuation, fundamentals, and momentum. From there, the team's 28 analysts take about 100 stocks each, depending on their specialty, and perform fundamental research to decide which stocks to take to management as candidates for the portfolio. The bottom-up research includes company visits and internal valuation models. Long candidates are companies with attractive valuations (using measures like price/earnings and price/book ratios relative to competitors), good business fundamentals (like growing sales and earnings), and positive momentum (such as rising profit margins). Short candidates are companies that have rich valuations, deteriorating fundamentals, and negative momentum (like consecutive quarters of falling earnings).

The portfolio will typically hold between 100 and 125 stocks long and approximately 150 stocks short. Every position in the portfolio has a price target. The analysts set target prices on all the portfolio holdings. The targets are revisited quarterly or more frequently if the company undergoes any significant events, such as a management change. The price target is based on management's three investment metrics: valuation, fundamentals, and momentum. Stocks are sold, or shorts are covered, when a company either hits its price target or one of the three metrics no longer supports the original investment thesis. The portfolio managers and analysts meet twice a week to go over any changes. Management expects to hold long positions for an average of two years and short positions for an average of one year.

Risk Management

Management believes that diversification and a disciplined sell process are its best risk-management tools. Management doesn't employ strict stop-losses but diversifies broadly across approximately 230 names in the portfolio. Management also caps its individual long and short holdings at 5% and 3%, respectively, and has maximum sector limits of 30%.

Robeco Boston Partners Global L/S Instl (USD)

Standard Index	Category Index	Morningstar Cat
S&P 500 TR USD	S&P 500 TR USD	US OE Long/Short Equity

Performance 05-31-2014

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2012	—	—	—	—	—
2013	—	—	—	—	—
2014	0.20	—	—	—	1.00

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	—	—	—	—	1.00
Std 03-31-2014	—	—	—	—	0.20
Total Return	—	—	—	—	1.00
+/- Std Index	—	—	—	—	—
+/- Cat Index	—	—	—	—	—
% Rank Cat	—	—	—	—	
No. in Cat	—	—	—	—	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield	—	—

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when sold or redeemed, may be worth more or less than their original cost.

Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 888-261-4073 or visit www.robecoinvest.com.

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	1.50
12b1 Expense %	NA
Net Expense Ratio %	**2.00**
Gross Expense Ratio %	**5.44**

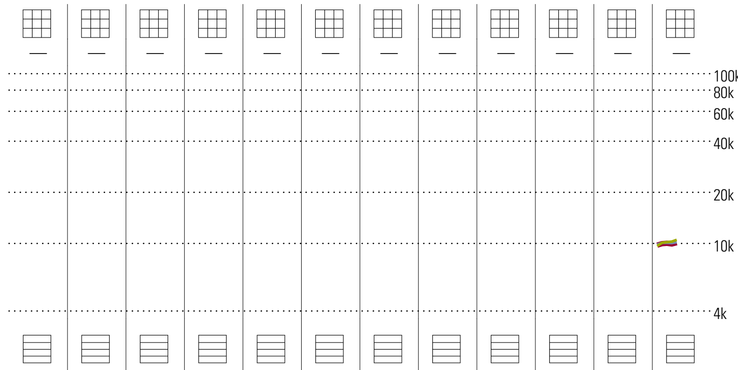
Risk and Return Profile

	3 Yr 145 funds	5 Yr 75 funds	10 Yr 33 funds
Morningstar Rating™	—	—	—
Morningstar Risk	—	—	—
Morningstar Return	—	—	—

	3 Yr	5 Yr	10 Yr
Standard Deviation	—	—	—
Mean	—	—	—
Sharpe Ratio	—	—	—

MPT Statistics	Standard Index	Best Fit Index
Alpha	—	—
Beta	—	—
R-Squared	—	—

12-Month Yield	—
Potential Cap Gains Exp	—



Investment Style
Fixed-Income
Bond %

Growth of $10,000
- Robeco Boston Partners Global L/S Instl 10,100
- Category Average 10,176
- Standard Index 10,497

Performance Quartile (within category)

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	05-14	History
—	—	—	—	—	—	—	—	—	—	*10.00*	10.10	NAV/Price
—	—	—	—	—	—	—	—	—	—	—	1.00	Total Return %
—	—	—	—	—	—	—	—	—	—	—	-3.97	+/- Standard Index
—	—	—	—	—	—	—	—	—	—	—	-3.97	+/- Category Index
—	—	—	—	—	—	—	—	—	—	—	—	% Rank Cat
—	—	—	—	—	—	—	—	—	—	—	323	No. of Funds in Cat

Portfolio Analysis

Asset Allocation %	Net %	Long %	Short %
Cash	—	—	—
US Stocks	—	—	—
Non-US Stocks	—	—	—
Bonds	—	—	—
Other/Not Clsfd	—	—	—
Total	—	—	—

Share Chg since	Share Amount	Holdings:	% Net Assets
—		0 Total Stocks , 0 Total Fixed-Income, — Turnover Ratio	

Equity Style (Value Blend Growth; Large Mid Small)

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	—	—	—
P/C Ratio TTM	—	—	—
P/B Ratio TTM	—	—	—
Geo Avg Mkt Cap $mil	—	—	—

Fixed-Income Style (Ltd Mod Ext; High Med Low)

Avg Eff Maturity	—
Avg Eff Duration	—
Avg Wtd Coupon	—
Avg Wtd Price	—

Credit Quality Breakdown —	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure	Stock %	Rel Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

Sector Weightings	Stocks %	Rel Std Index
Cyclical	**—**	**—**
Basic Materials	—	—
Consumer Cyclical	—	—
Financial Services	—	—
Real Estate	—	—
Sensitive	**—**	**—**
Communication Services	—	—
Energy	—	—
Industrials	—	—
Technology	—	—
Defensive	**—**	**—**
Consumer Defensive	—	—
Healthcare	—	—
Utilities	—	—

Operations

Family:	Robeco Investment Funds	Ticker:	BGLSX	Incept:	12-31-2013
Manager:	Multiple	Minimum Initial Purchase:	$100,000	Type:	MF
Tenure:	0.5 Year	Min Auto Investment Plan:	$100,000	Total Assets:	$22.70 mil
Objective:	World Stock	Minimum IRA Purchase:	$100,000		
Base Currency:	USD	Purchase Constraints:	A		

Fund Reports

PIMCO Trends Managed Futures Strategy

by **Jason Kephart**

Advisor
Pacific Investment Management Company LLC

Advisor Location
Newport Beach, California

Assets Under Management
$293 million

Inception Date
Dec. 31, 2013

Investment Type
Mutual fund

Morningstar Category
Managed futures

Management
The fund is managed by Vineer Bhansali, Matthew Dorsten, and Graham Rennison. The three managers are supported by PIMCO's asset-class-specific trading desks and a 10-person research advisory group. Bhansali oversees PIMCO's quantitative investment portfolios. He joined the firm in 2000 and was previously a proprietary fixed-income trader at Credit Suisse First Boston. Dorsten joined in 2006 and is a senior vice president in the quantitative portfolio group. He is also a co-portfolio manager on PIMCO's Multi-Asset Volatility Strategy hedge fund. Rennison is also a senior vice president in the quantitative portfolio group. His focus is on systematic strategies. Prior to joining PIMCO in 2011, he was the head of systematic strategies research at Barclays Capital.

Strategy

This managed-futures fund attempts to capture momentum in the equity, interest-rate, currency, and commodities markets using futures contracts. It is benchmarked to the Newedge Trend Index, a composite of the 10 largest trend-following hedge funds. The benchmark has a 30% risk-weighting to equities, interest rates, and currencies and a 10% risk weighting to commodities. Management looks for short-term trends, typically one to three months, and can go both long and short, depending on the direction of the underlying futures market. In total, management looks at approximately 80 different futures markets across the four major asset classes and will invest in roughly 30 at any given time. Management also looks to generate excess returns from its cash collateral. The cash portfolio is managed by PIMCO's short-term fixed-income group. The group actively manages the collateral pool to target a yield of between 50 and 150 basis points. Management targets duration of one year for the cash collateral, and the average credit quality is AA, but the group can also invest in below-investment-grade bonds. Management has an annual volatility target of 10%, as measured by standard deviation.

Process

Management starts with a portfolio that's equally risk-weighted across equity, interest-rate, currency, and commodities futures contracts. The fund's investable universe consists of approximately 80 futures markets. To determine whether there's enough momentum to invest in a market, management looks at several indicators, including moving averages and price momentum, over a one- to three-month time period, which is shorter than the typical managed-futures fund. The managers set a target price range on each trade and, if a trend is working as intended, management will increase its bet as long as the contract is trading within that range. The average holding time of a trade ranges from about one month to six months. The managers rely on PIMCO's specialist desks, which focus on trading in particular markets, to determine the best individual contracts to use and where on the futures curve to find the best value. Those traders also actively manage when to roll the contracts over. Management will also use top-down macro views to overweight or underweight a particular asset class, on a risk-measured basis.

Risk Management

Management views diversification and its strict trading policy as its top risk-management tools. The fund will be invested in approximately 30 futures markets at all times. Each trade has a target price range attached to it. If the trade breaks above or below the target range, the managers will close out the position. The trading algorithms used by the fund are reviewed periodically by an independent advisory group at PIMCO. Ideas for improving the algorithms submitted by the quantitative portfolio team are vetted by the 10-member advisory group. Management also uses trailing stop-losses to protect against spikes in volatility. PIMCO's separate risk-management team also monitors the fund's position limits and stop-losses. No single trade can account for more than 10% of the portfolio's total risk, based on its expected volatility.

PIMCO TRENDS Managed Futures Strat Instl (USD)

Standard Index	Category Index	Morningstar Cat
Credit Suisse Mgd Futures Liquid TR USD	Credit Suisse Mgd Futures Liquid TR USD	US OE Managed Futures

Performance 05-31-2014

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2012	—	—	—	—	—
2013	—	—	—	—	—
2014	1.60	—	—	—	6.50

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	—	—	—	—	6.50
Std 03-31-2014	—	—	—	—	1.60
Total Return	—	—	—	—	6.50
+/- Std Index	—	—	—	—	—
+/- Cat Index	—	—	—	—	—
% Rank Cat	—	—	—	—	
No. in Cat	—	—	—	—	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield	-0.43 [1]	-0.70

1. Contractual waiver; Expires 07-31-2015

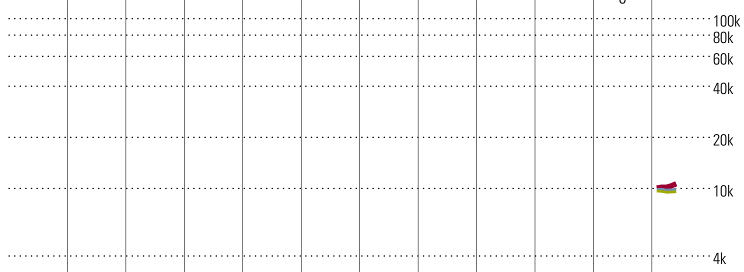
Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when sold or redeemed, may be worth more or less than their original cost.

Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 888-877-4626 or visit www.pimco.com/investments.

Investment Style	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	05-14
Equity Stock %	—	—	—	—	—	—	—	—	—	—	0	—



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	05-14	History
	—	—	—	—	—	—	—	—	—	—	*10.00*	10.65	NAV/Price
	—	—	—	—	—	—	—	—	—	—	—	6.50	Total Return %
	—	—	—	—	—	—	—	—	—	—	—	10.90	+/- Standard Index
	—	—	—	—	—	—	—	—	—	—	—	10.90	+/- Category Index
	—	—	—	—	—	—	—	—	—	—	—	—	% Rank Cat
	—	—	—	—	—	—	—	—	—	—	—	161	No. of Funds in Cat

Portfolio Analysis 12-31-2013

Asset Allocation %	Net %	Long %	Short %
Cash	99.67	100.00	0.33
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	0.00	0.00	0.00
Other/Not Clsfd	0.33	0.33	0.00
Total	100.00	100.33	0.33

Share Chg since	Share Amount	Holdings: 0 Total Stocks , 0 Total Fixed-Income, 69% Turnover Ratio	% Net Assets
—			
☼	1,000	Pimco Cayman Commodity Fund Viii L	0.33

Equity Style (Value, Blend, Growth; Large, Mid, Small)

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	—	—	—
P/C Ratio TTM	—	—	—
P/B Ratio TTM	—	—	—
Geo Avg Mkt Cap $mil	—	—	—

Fixed-Income Style (Ltd, Mod, Ext; High, Med, Low)

Avg Eff Maturity	—
Avg Eff Duration	—
Avg Wtd Coupon	—
Avg Wtd Price	—

Credit Quality Breakdown —	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure	Stock %	Rel Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

Sector Weightings	Stocks %	Rel Std Index
Cyclical	—	—
Basic Materials	—	—
Consumer Cyclical	—	—
Financial Services	—	—
Real Estate	—	—
Sensitive	—	—
Communication Services	—	—
Energy	—	—
Industrials	—	—
Technology	—	—
Defensive	—	—
Consumer Defensive	—	—
Healthcare	—	—
Utilities	—	—

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	1.40
12b1 Expense %	NA
Net Expense Ratio %	**1.15**
Gross Expense Ratio %	**1.68**

Risk and Return Profile

	3 Yr	5 Yr	10 Yr
	45 funds	*8 funds*	—
Morningstar Rating™	—	—	—
Morningstar Risk	—	—	—
Morningstar Return	—	—	—

	3 Yr	5 Yr	10 Yr
Standard Deviation	—	—	—
Mean	—	—	—
Sharpe Ratio	—	—	—

MPT Statistics	Standard Index	Best Fit Index
Alpha	—	—
Beta	—	—
R-Squared	—	—

12-Month Yield	—
Potential Cap Gains Exp	5.25%

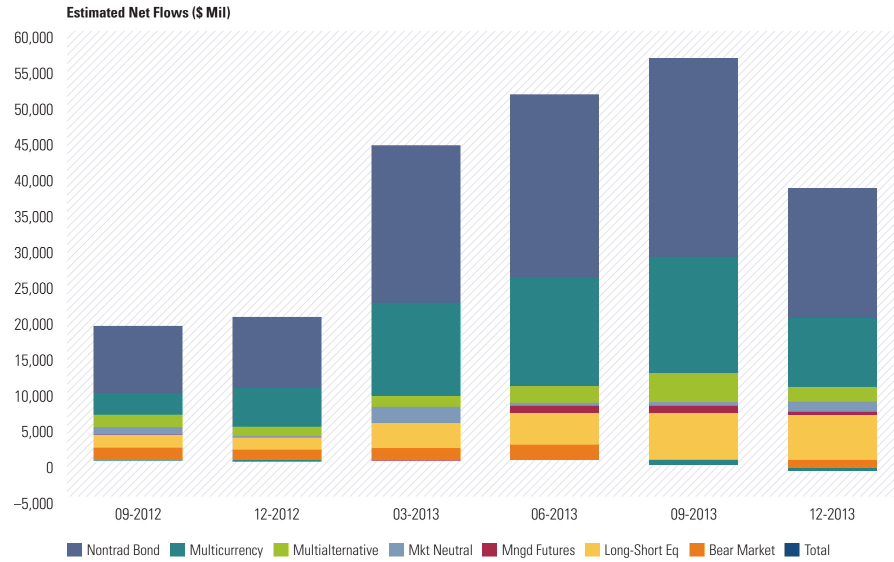
Operations

Family:	PIMCO	Base Currency:	USD	Incept:	12-31-2013
Manager:	Multiple	Ticker:	PQTIX	Type:	MF
Tenure:	0.5 Year	Minimum Initial Purchase:	$1 mil	Total Assets:	$302.46 mil
Objective:	Income	Purchase Constraints:	—		

Flows and Assets Under Management: Alternative Mutual Funds

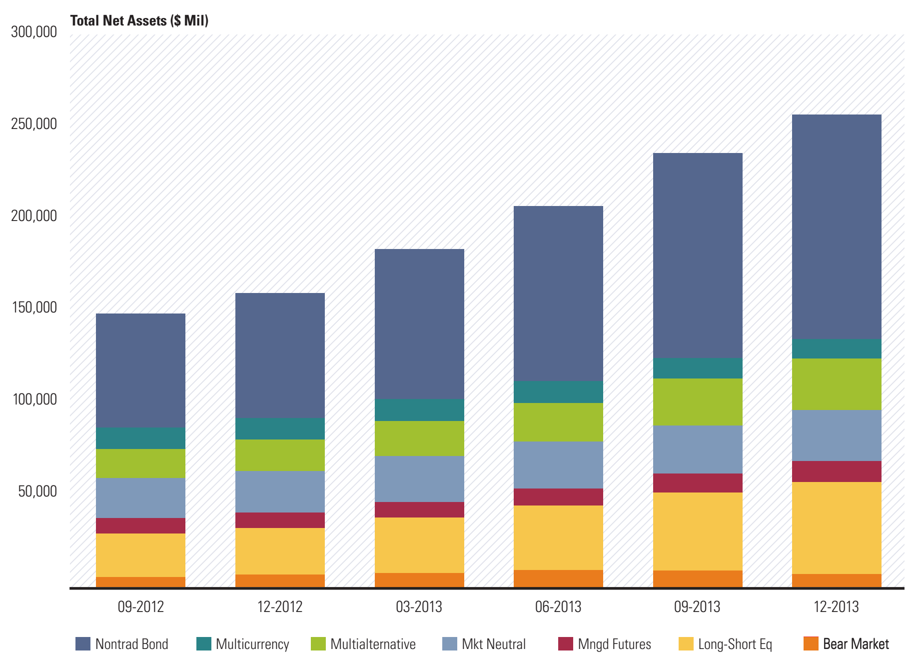
Quarterly Alternative Mutual Fund Flows

During the fourth quarter of 2013, alternative mutual funds' net inflows amounted to nearly $18.2 billion, a decrease from last quarter's roughly $27.7 billion. The non-traditional-bond category led with the largest inflows ($9.5 billion), consistent with the previous three quarters. The long-short equity category was also a substantial contributor with net inflows equal to about $6.2 billion, followed by the multialternative category with smaller but still significant net inflows of slightly more than $2.0 billion. More inflows were captured among market-neutral ($1.3 billion) and managed-futures ($515 million) funds, while the bear-market category declined substantially, with net outflows totaling $1.1 billion. The multicurrency category continued its decline for a second consecutive quarter, with outflows of $410 million.



Quarterly Alternative Mutual Fund Assets Under Management

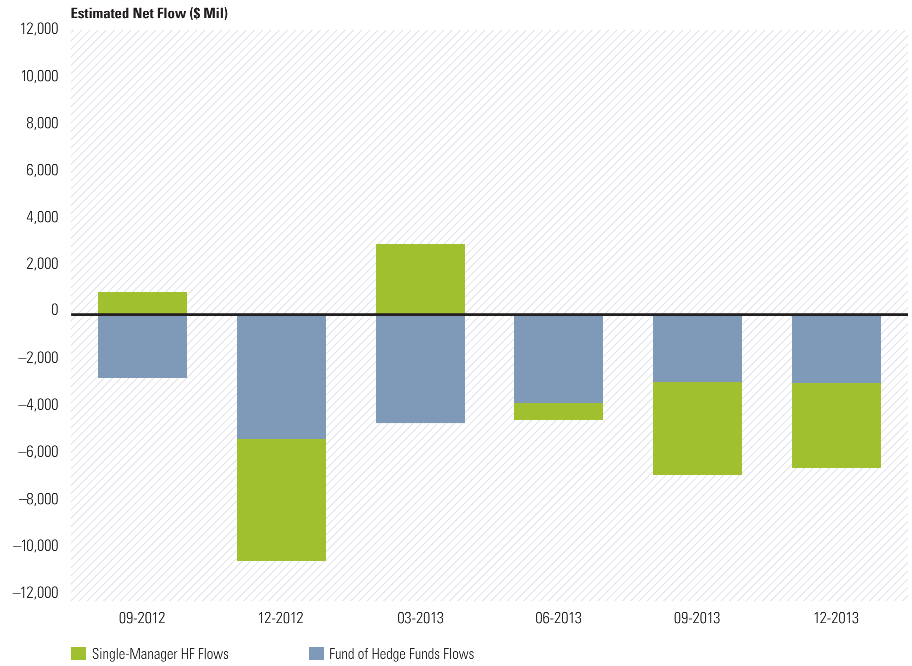
Assets under management for all alternative mutual funds increased 8.9% quarter over quarter, totaling more than $257 billion at the end of December 2013. Five of the seven alternative mutual fund categories gained assets in the fourth quarter. Long-short equity funds experienced the largest quarter-over-quarter percentage gains in assets (97.17%), followed by non-traditional-bond funds, which increased by almost 79.24%. The bear-market category remained the smallest among all the alternative mutual fund categories at $7 billion as of Dec. 31, 2013. Nontraditional bond, the largest alternative mutual fund category in terms of assets, also experienced a significant increase in total assets of nearly 18.1% for the previous three quarters. Bear-market funds lost 21.7% this quarter, and multicurrency funds experienced a loss of 7.1%.



Flows and Assets Under Management: Hedge Funds

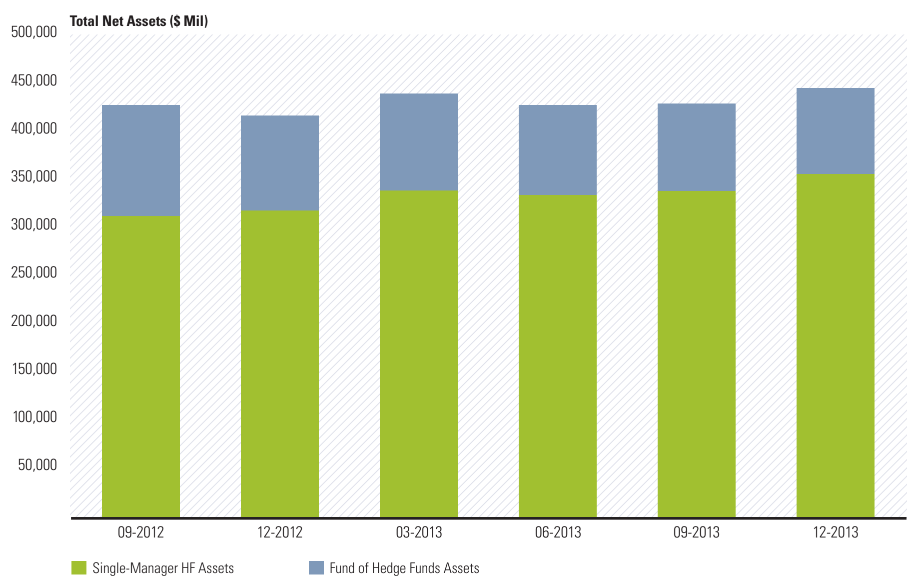
Quarterly Hedge Fund Flows

During the fourth quarter of 2013, single-manager hedge funds in Morningstar's database experienced outflows for a second consecutive quarter, totaling more than $3.6 billion, and funds of hedge funds recorded outflows of almost $2.9 billion. Interestingly, the outflows in the funds of hedge funds universe continued for a sixth consecutive quarter, marking a losing streak that has amounted to more than $22 billion in net assets since the third quarter of 2012. Emerging-markets long-only equity and event-driven (single-manager) hedge funds continued their positive flow trends since the first quarter of 2013, with $108 million and $558 million, respectively. Systematic-futures and global-macro (single-manager) hedge funds experienced the largest outflows of $2.5 billion and $795 million, respectively. For funds of hedge funds, net outflows were recorded across all categories, the smallest being among debt-focused funds ($27 million), while the multistrategy funds experienced the greatest outflows totaling almost $1.9 billion in the fourth quarter.



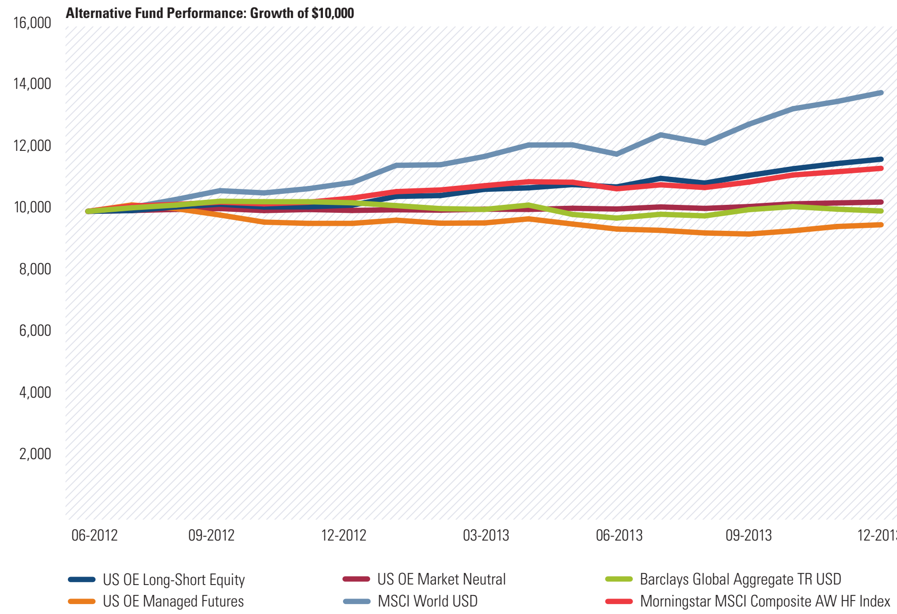
Quarterly Hedge Fund Assets Under Management

In the fourth quarter of 2013, single-manager hedge fund assets under management in Morningstar's database increased 5.29% to $356 billion. During the last year, assets under management of single-manager hedge funds increased by 12.0% despite steady outflows during the past three quarters. Funds of hedge funds in Morningstar's database managed 2.26% fewer assets than in the prior quarter, with $89 million assets recorded as of Dec. 30, 2013. Assets under management of funds of hedge funds increased 6.84% year over year (through December 2013).



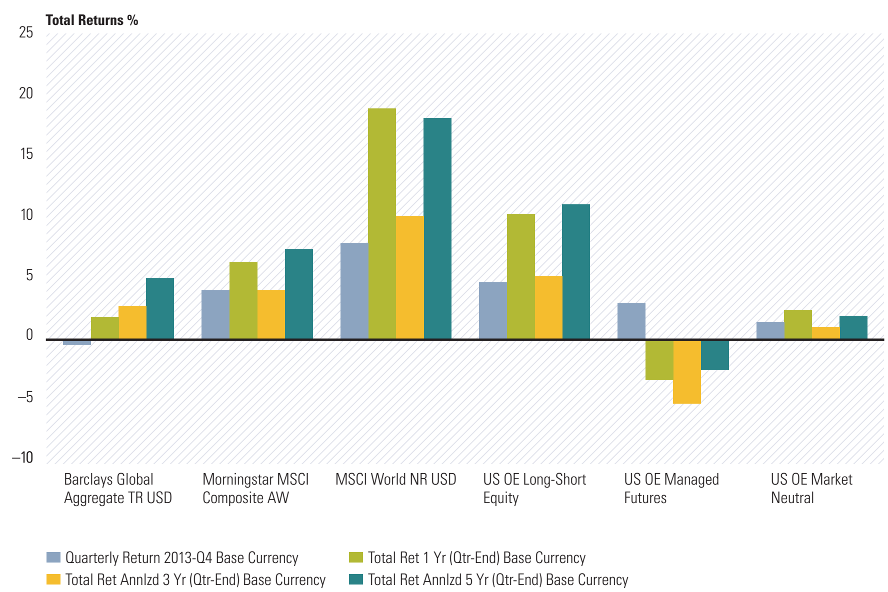
Alternative Investment Performance

Growth of a $10,000 Alternative Investment
Global stocks, as represented by the MSCI World NR Index, gained 8% in the fourth quarter, while hedge funds*, as proxied by the Morningstar MSCI Composite AW Hedge Fund Index, increased 4%. Global bonds, however, as tracked by the Barclays Global Aggregate TR USD, recorded a minor loss of 0.4%. During the 18 months ended December 2013, the MSCI World NR Index continued to outperform both global bonds and hedge funds with a 26.68% return. During the same period, the Morningstar MSCI Composite Hedge Fund Index saw an overall gain of 9.26%, while the Barclays Global Bond Index suffered a minor loss of 2.60%. In terms of mutual fund alternatives, global stocks still outperformed the long-short equity, managed-futures, and market-neutral category averages during the past 18 months, but the managed-futures category outperformed hedge funds with a 14.6% return.



*Morningstar no longer publishes proprietary hedge fund indexes. Morningstar now uses the Morningstar MSCI series of indexes, including the Morningstar MSCI Composite AW, a currency-hedged asset-weighted index of 1,000 hedge funds, or the applicable category averages.

Performance of Alternative Investments Over Time
Global stocks, as represented by the MSCI World NR Index, again outperformed global bonds (as represented by the Barclays Global Aggregate TR USD Index) as well as the long-short equity, managed-futures, and market-neutral mutual fund category averages during the past quarter, one-year, and five-year time frames (ended Dec. 31). Hedge funds, as represented by the Morningstar MSCI Composite AW Index, outperformed over a five-year time frame but were outpaced by the long-short equity category in the one- and three-year time frames. Global bonds underperformed compared with global stocks and hedge funds during the past one-, three-, and five-year periods. The average managed-futures mutual fund showed positive returns this quarter but lost money over the one-, three-, five-, and 10-year time periods (ended Dec. 31, 2013).

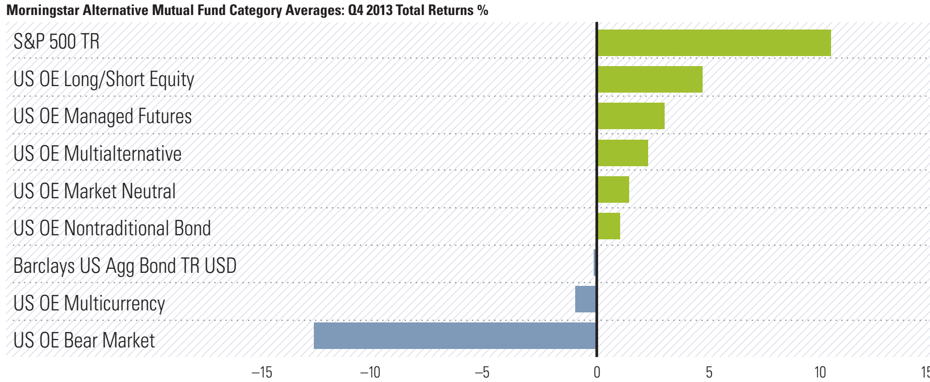


Fourth-Quarter 2013 Performance by Category

Alternative Mutual Funds

Equities managed to post solid gains during the fourth quarter of 2013. The S&P 500 gained 10.51%, and long-short equity mutual funds, which aim to protect against stock market downdrafts, gained 4.75%. The average bear-market fund, which aims to profit during weak equity markets, did not fare quite as well, with returns of negative 12.7% in the fourth quarter. Bonds recorded less consistent returns; the Barclays U.S. Aggregate Bond TR USD Index lost 0.14%, while the non-traditional-bond category average climbed 1.05%. Currency mutual funds displayed returns of negative 0.97%, while multialternative and managed futures posted gains of 2.29% and 3.05%, respectively. Market neutral also showed modest gains of 1.44% during the fourth quarter.

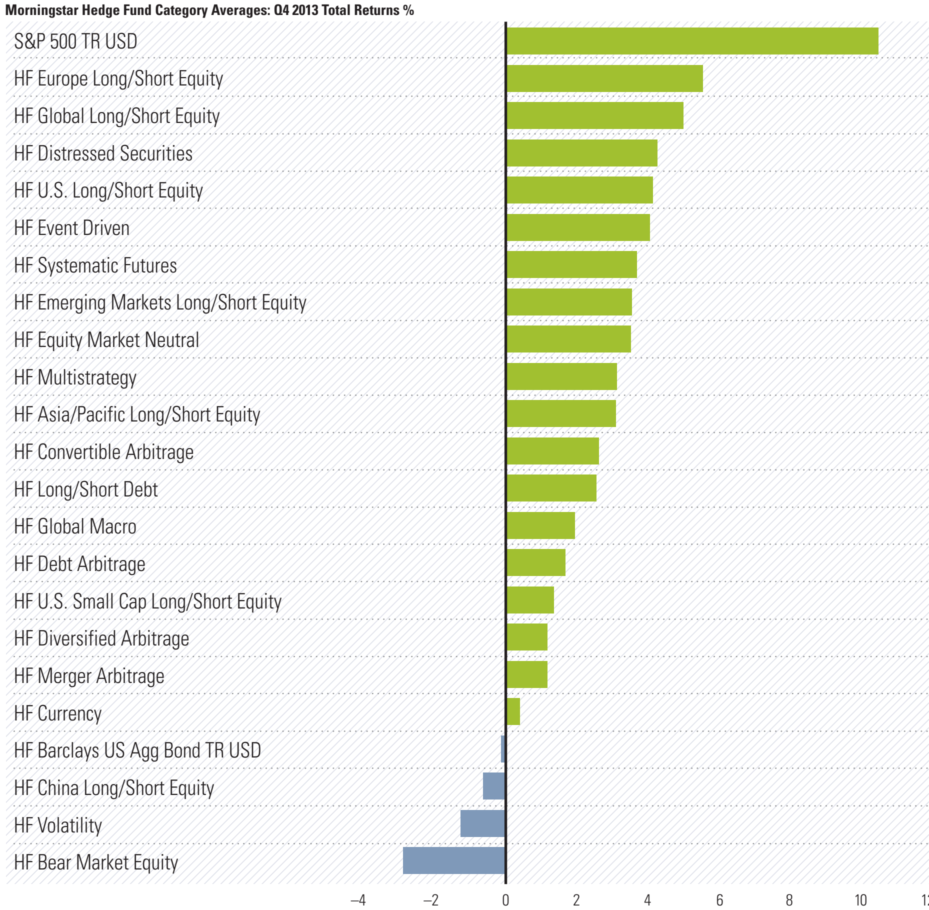
Morningstar Alternative Mutual Fund Category Averages: Q4 2013 Total Returns %



Hedge Funds

Hedge funds saw relatively consistent gains across categories in the fourth quarter of 2013. All hedge fund categories posted gains except China long-short equity, bear-market equity, and volatility. European and global long-short equity funds gained the most with the returns of 5.56% and 5.01%, respectively. U.S. bonds, as represented by the Barclays U.S. Aggregate Bond TR Index, suffered returns of negative 0.14%, underperforming the S&P 500 Index and all but three of the hedge fund categories. None of the 21 hedge fund categories beat the S&P 500, which increased 10.51% this quarter. The worst-performing hedge fund categories were China long-short equity, bear-market equity, and volatility, which decreased by 0.64%, 2.89%, and 1.27%, respectively.

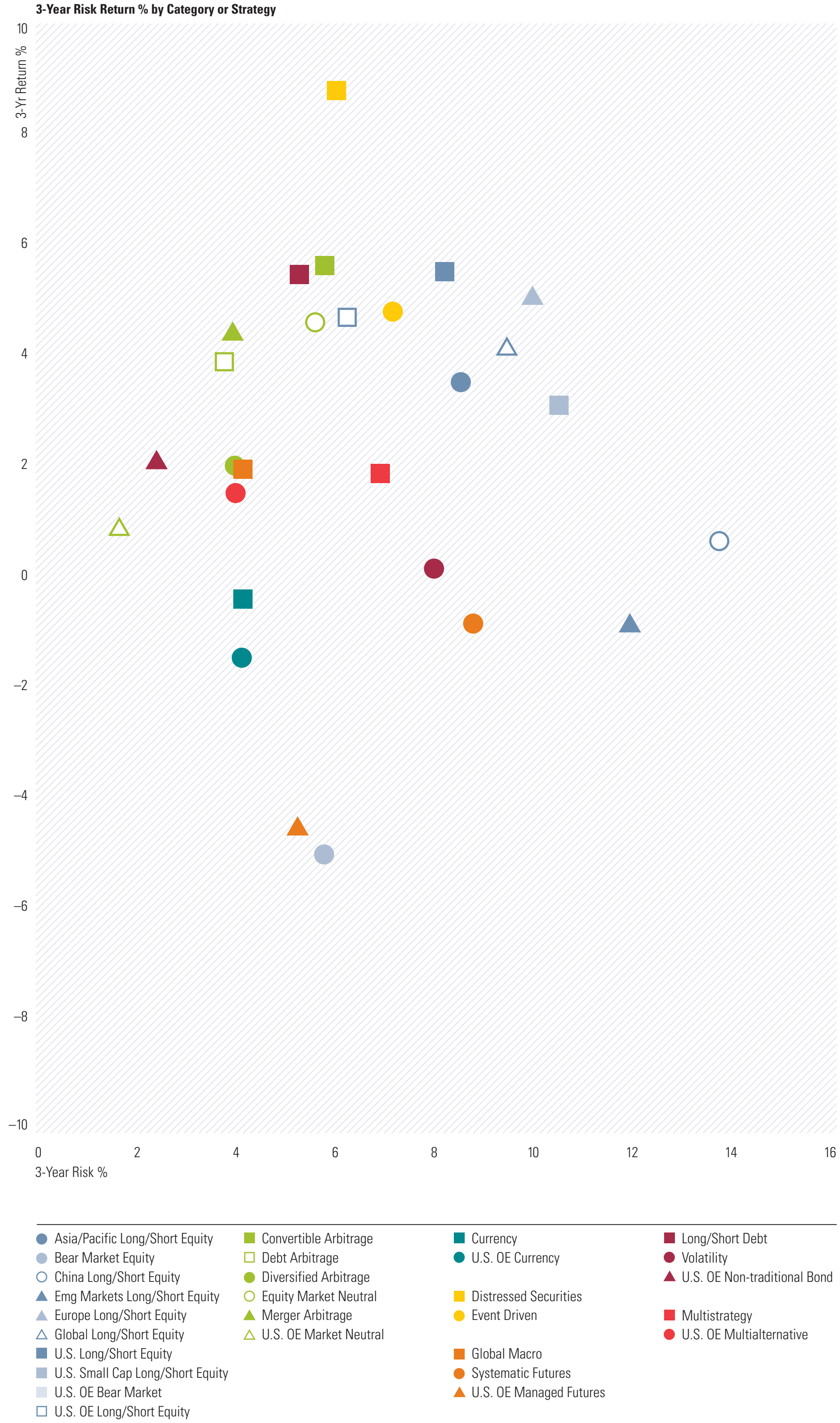
Morningstar Hedge Fund Category Averages: Q4 2013 Total Returns %



Risk Versus Return: Alternative Mutual Funds and Hedge Funds

Three-Year Standard Deviation and Return
Of the 28 alternative mutual fund and hedge fund category averages, 21 exhibited positive returns over the three years ended Dec. 31, 2013. Hedge funds in the distressed-securities and convertible-arbitrage categories and funds in the long-short equity category produced the best three-year total returns, of 8.83%, 5.66%, and 5.55%, respectively. Distressed-securities hedge funds also posted the highest risk-adjusted returns at 1.47%, followed by merger-arbitrage and debt-arbitrage hedge funds. In contrast, the U.S. bear-market mutual fund category experienced a 22.80% annualized decline over the three-year period ended December, while also exhibiting the highest (16.53% annualized) standard deviation. Bear-market hedge funds performed better, losing 5.00% on average with a 5.75% annualized standard deviation.

3-Year Risk Return % by Category or Strategy



Correlations by Alternative Fund Strategy

Three–Year Correlations: Alternative Mutual Fund Categories	1	2	3	4	5	6	7
1 US OE Bear Market	1.00						
2 US OE Long-Short Equity	–0.97	1.00					
3 US OE Managed Futures	–0.02	0.05	1.00				
4 US OE Market Neutral	–0.75	0.82	0.05	1.00			
5 US OE Multialternative	–0.88	0.89	0.32	0.74	1.00		
6 US OE Multicurrency	–0.83	0.78	0.03	0.62	0.86	1.00	
7 US OE Nontraditional Bond	–0.66	0.66	0.14	0.59	0.80	0.74	1.00

Three–Year Correlations: Hedge Fund Categories	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1 HF Asia/Pacific Long-Short Equity	1.00																				
2 HF Bear-Market Equity	–0.27	1.00																			
3 HF China Long-Short Equity	0.37	–0.36	1.00																		
4 HF Convertible Arbitrage	0.75	–0.26	0.44	1.00																	
5 HF Currency	0.37	–0.08	0.20	0.30	1.00																
6 HF Debt Arbitrage	0.79	–0.23	0.33	0.91	0.34	1.00															
7 HF Distressed Securities	0.82	–0.29	0.49	0.86	0.38	0.83	1.00														
8 HF Diversified Arbitrage	0.66	–0.18	0.45	0.70	0.16	0.73	0.70	1.00													
9 HF Emerging-Markets Long-Short Equity	0.80	–0.35	0.57	0.87	0.51	0.82	0.85	0.58	1.00												
10 HF Equity Market Neutral	0.77	–0.30	0.38	0.86	0.29	0.88	0.75	0.71	0.84	1.00											
11 HF Europe Long-Short Equity	0.82	–0.31	0.41	0.92	0.40	0.92	0.87	0.72	0.89	0.92	1.00										
12 HF Event Driven	0.79	–0.41	0.49	0.89	0.36	0.85	0.89	0.63	0.92	0.89	0.92	1.00									
13 HF Global Long-Short Equity	0.87	–0.35	0.45	0.90	0.38	0.92	0.87	0.71	0.90	0.93	0.96	0.94	1.00								
14 HF Global Macro	0.74	–0.21	0.35	0.71	0.64	0.75	0.68	0.55	0.75	0.74	0.74	0.71	0.78	1.00							
15 HF Long-Short Debt	0.84	–0.15	0.36	0.91	0.36	0.94	0.83	0.78	0.84	0.90	0.92	0.84	0.90	0.79	1.00						
16 HF Merger Arbitrage	0.69	–0.39	0.41	0.80	0.26	0.80	0.72	0.56	0.77	0.85	0.83	0.84	0.84	0.62	0.77	1.00					
17 HF Multistrategy	0.82	–0.28	0.41	0.92	0.40	0.95	0.82	0.69	0.89	0.93	0.94	0.91	0.96	0.81	0.95	0.83	1.00				
18 HF Systematic Futures	0.49	–0.07	0.21	0.33	0.53	0.38	0.35	0.30	0.34	0.37	0.35	0.29	0.40	0.76	0.46	0.29	0.45	1.00			
19 HF U.S. Long-Short Equity	0.80	–0.42	0.44	0.86	0.32	0.87	0.85	0.66	0.88	0.91	0.92	0.95	0.96	0.68	0.81	0.85	0.90	0.25	1.00		
20 HF U.S. Small-Cap Long-Short Equity	0.71	–0.35	0.47	0.84	0.30	0.82	0.76	0.59	0.86	0.89	0.86	0.92	0.92	0.65	0.78	0.84	0.89	0.22	0.95	1.00	
21 HF Volatility	–0.40	0.22	–0.10	–0.22	–0.20	–0.22	–0.48	–0.20	–0.39	–0.18	–0.33	–0.42	–0.34	–0.05	–0.19	–0.19	–0.19	0.13	–0.42	–0.30	1.00

1.00 to 0.76 | 0.75 to 0.51 | 0.50 to 0.26 | 0.25 to 0.00
0.00 to –0.24 | –0.25 to –0.49 | –0.50 to –0.74 | –0.75 to –1.00

Correlations of Alternative Funds to Traditional Asset Classes

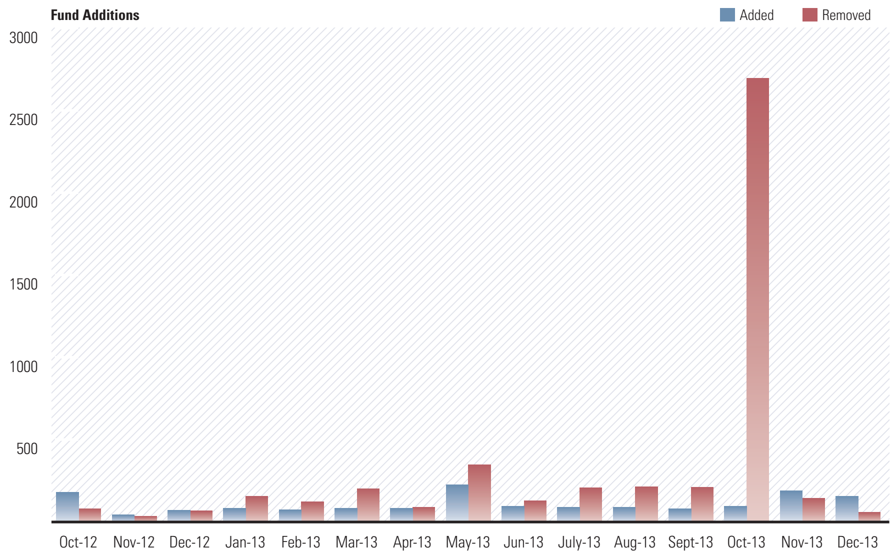
Correlation of Mutual Funds to U.S. Stocks and Bonds	S&P 500 Correlation (USD)			Barclays US Agg Correlation (USD)		
	3-Year	5-Year	10-Year	3-Year	5-Year	10-Year
US OE Bear Market	–0.95	–0.97	–0.96	0.15	–0.01	–0.11
US OE Long-Short Equity	0.98	0.95	0.93	–0.25	–0.11	0.02
US OE Managed Futures	0.04	0.12	N/A	0.26	0.00	N/A
US OE Market Neutral	0.80	0.35	0.17	–0.19	–0.05	–0.02
US OE Multialternative	0.88	0.92	0.91	0.08	0.13	0.17
US OE Multicurrency	0.77	0.59	0.41	0.12	0.08	0.09
US OE Nontraditional Bond	0.70	0.55	0.68	0.19	0.22	0.26

Correlation of Hedge Funds to U.S. Stocks and Bonds	S&P 500 Correlation (USD)			Barclays US Agg Correlation (USD)		
	3-Year	5-Year	10-Year	3-Year	5-Year	10-Year
Morningstar MSCI Composite AW HF Index	0.74	0.69	0.68	0.12	0.05	0.06
HF Asia/Pacific Long-Short Equity	0.75	0.80	0.73	0.02	0.06	0.16
HF Bear Market Equity	–0.48	–0.42	–0.48	0.11	0.10	0.08
HF China Long-Short Equity	0.32	0.25	0.26	–0.21	–0.09	0.04
HF Convertible Arbitrage	0.77	0.65	0.70	–0.19	0.00	0.19
HF Currency	0.24	0.49	0.36	0.12	0.17	0.14
HF Debt Arbitrage	0.82	0.72	0.74	–0.04	0.12	0.20
HF Distressed Securities	0.79	0.75	0.77	–0.25	–0.12	–0.06
HF Diversified Arbitrage	0.59	0.55	0.59	–0.21	0.05	0.18
HF Emerging-Markets Long-Short Equity	0.79	0.70	0.71	–0.12	0.04	0.13
HF Equity Market Neutral	0.86	0.79	0.71	–0.12	0.02	0.13
HF Europe Long-Short Equity	0.86	0.83	0.78	–0.22	–0.04	0.08
HF Event Driven	0.87	0.82	0.83	–0.19	–0.06	0.04
HF Global Long-Short Equity	0.89	0.88	0.81	–0.15	–0.03	0.09
HF Global Macro	0.64	0.63	0.51	0.17	0.18	0.18
HF Long-Short Debt	0.75	0.73	0.74	0.02	0.19	0.26
HF Merger Arbitrage	0.84	0.81	0.78	–0.15	0.06	0.20
HF Multistrategy	0.83	0.77	0.74	0.01	0.06	0.14
HF Systematic Futures	0.23	0.40	0.16	0.35	0.23	0.12
HF U.S. Long-Short Equity	0.94	0.89	0.88	–0.23	–0.13	–0.02
HF U.S. Small-Cap Long-Short Equity	0.86	0.85	0.85	–0.21	–0.12	–0.01
HF Volatility	–0.41	0.01	0.14	0.38	0.33	0.36

Morningstar Hedge Fund Database Overview as of 12-31-2013

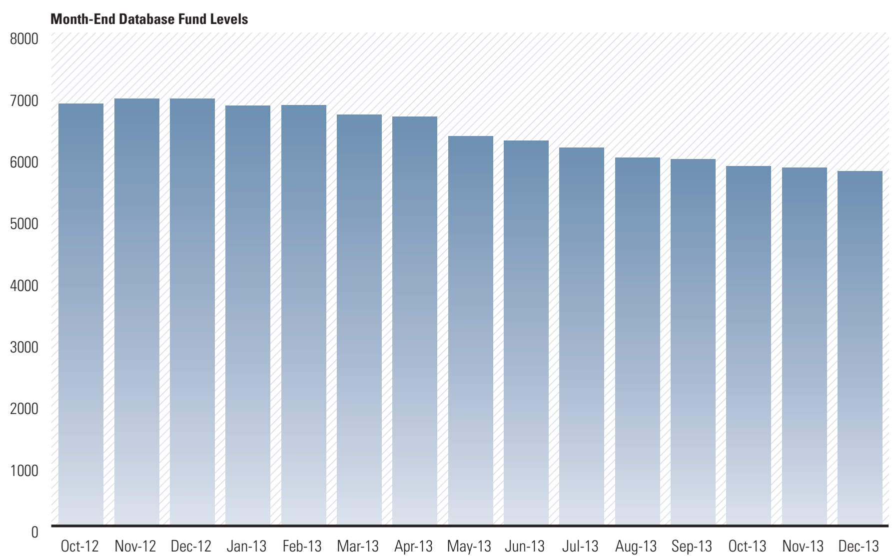
Net Fund Additions by Month

Morningstar's hedge fund database experienced a net removal of 2,456 funds during the fourth quarter of 2013. The database saw 2,895 additions and 439 fund withdrawals during the quarter. Funds drop out because they have liquidated or because they cease sharing performance data, typically because of poor performance. Fund additions occur as a result of new fund launches or a recent decision to supply data to Morningstar. The unusual volume of funds removed in October 2013 was due to a periodic purging of the database by Morningstar.



Month-End Database Fund Levels

As of Dec. 31, 2013, the Morningstar hedge fund database contained 5,748 funds that actively report performance and assets-under-management data. This figure includes about 3,700 single-manager hedge funds and about 1,600 funds of hedge funds. As of quarter-end, the number of funds in the database had dropped approximately 1.03% from September 2013 levels.



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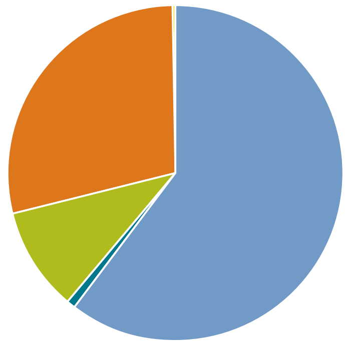
Hedge Funds by Region

Approximately 60.40% of hedge funds in the Morningstar database are legally domiciled in the North American/Caribbean region, primarily in the Cayman Islands and United States. A large percentage of U.K. hedge funds are also domiciled in the Cayman Islands for tax and regulatory purposes. Approximately 28.74% of funds in Morningstar's database are domiciled in Europe, including both European Union and non-EU jurisdictions, and 9.78% of funds are domiciled in Asia and Australia, primarily in China (95%). All figures are as of Dec. 31, 2013.

Morningstar Hedge Fund Database by Region



Region	# Funds
N. America/Caribbean	3,342
Africa	54
Asia/Australia	541
Europe	1,590
South America	6
Other	0
Total	**5,533**

Hedge Funds by Location

Approximately 78% of the hedge funds in Morningstar's database are domiciled in the United States, the Cayman Islands, China, the British Virgin Islands, Bermuda, and Luxembourg. Switzerland, France, and Ireland continue to domicile a large portion of European hedge funds, trailing Luxembourg.

North America and Surrounding	**3,342**
Cayman Islands	1,420
United States	1,154
British Virgin Islands	311
Bermuda	211
Canada	185
Curaçao	47
Bahamas	12
Barbados	1
St Kitts and Nevis	1

Africa	**54**
South Africa	26
Mauritius	24
Seychelles	2
Swaziland	1
United Arab Emirates	1

Asia and Australia	**541**
China	514
Australia	13
Israel	4
Hong Kong	3
Japan	2
Bahrain	2
Christmas Island	1
Marshall Islands	1
Vanuatu	1

Europe	**1,590**
Luxembourg	753
Ireland	197
Switzerland	162
France	111
Guernsey	106
Italy	53
Jersey	35
United Kingdom	30
Spain	27
Liechtenstein	25
Netherlands	25
Malta	19
Germany	7
Isle of Man	7
Sweden	6
Gibraltar	5
Norway	4
Macedonia	4
Denmark	4
Channel Islands	2
Cyprus	2
Portugal	2
Finland	1
Austria	1
Andorra	1
Belgium	1

South America	**6**
Brazil	5
Chile	1

Morningstar Hedge Fund Database Overview as of 12-31-2013

Service Providers

Morgan Stanley and Goldman Sachs are the largest prime brokerage-service providers to hedge funds in Morningstar's database, serving just under a 27% share combined. The big four accounting firms are employed by approximately 75% of the hedge funds listed in Morningstar's database, with PricewaterhouseCoopers leading the pack. Citco Fund Services provides administration services to more than 9% of funds in Morningstar's database, in comparison with the next-largest administrator, BNY, which services 6.1% of funds in the database. Walkers, Maples & Calder, and Dechert are the three largest legal-counsel-service providers to hedge funds in the database, with a combined 27% market share.

Type	Rank	Service Provider	% of Database
Prime Broker	1	Morgan Stanley	14.52
	2	Goldman Sachs	12.43
	3	UBS	9.10
	4	Credit Suisse AG	7.45
	5	Deutsche Bank	7.38
	6	J.P. Morgan	6.37
	7	Citibank	3.40
	8	Newedge Group Inc.	3.00
	9	Bank of America	2.70
	10	BNP Paribas	2.06
Legal Counsel	1	Maples & Calder	12.15
	2	Walkers	9.92
	3	Dechert LLC	5.58
	4	Elvinger, Hoss & Prussen	5.00
	5	Seward & Kissel LLP	4.70
	6	Sidley Austin LLP	3.79
	7	Simmons & Simmons	3.79
	8	Ogier	3.10
	9	Schulte Roth & Zabel LLP	2.81
	10	Conyers Dill & Pearman	2.58
Auditor	1	PricewaterhouseCoopers	23.93
	2	Ernst & Young	19.96
	3	KPMG	17.03
	4	Deloitte	14.54
	5	Rothstein Kass	4.99
	6	BDO	2.74
	7	Grant Thornton	2.02
	8	Eisner Amper	1.38
	9	McGladrey LLP	1.32
	10	Arthur Bell	1.00
Administrator	1	Citco	9.48
	2	BNY	6.10
	3	Citi	4.48
	4	UBS	4.11
	5	State Street Bank & Trust	3.64
	6	RBC Dexia	3.43
	7	Credit Suisse (New York, NY)	2.96
	8	HSBC	293.00
	9	Northern Trust	2.84
	10	SS&C	2.60

Alternative Investments Observer

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