Alternative Investments
Observer

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The Morningstar Style Box for Alternative Funds
Introducing a new research framework for alternative strategies.

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Contents

Summary
After the financial crisis, many investors turned to liquid alternative mutual funds as a way to increase the diversification of their overall portfolio and improve risk-adjusted returns. Alternative strategies, however, have far more flexibility than most traditional funds, which has led to heterogeneous groupings, even within Morningstar Categories. Fund names and category assignments give limited insight into the expected diversification benefit of a given strategy or how volatile a strategy could be in a given market environment. Yet diversification and volatility are two of the most important factors investors should consider when evaluating an alternative strategy and determining its fit within a portfolio of traditional investments. To make these factors more apparent we are introducing the Morningstar Style Box for alternative funds. This style box is a graphical representation of a fund's correlation and volatility relative to global equities, providing a quick and intuitive guide to whether a fund has matched its stated diversification goals and/or meets an investor's personal goals for diversification.

Key Takeaways
- The Morningstar Style Box for alternative funds provides a quick, intuitive illustration of the key diversification traits that investors seek in alternative mutual funds.
- The alternatives style box is modeled after the well-known equity and fixed-income style boxes, but it is not based on underlying portfolio data.
- Instead, the alternatives style box's axes are derived from correlation and relative volatility.
- Key use cases for the alternatives style box include identifying the diversification traits of a single fund, creating better peer groups, determining changing diversification patterns over time, and comparing two alternative funds side by side.
- Initially, the alternatives style box will be used by Morningstar analysts and included in our published research; ultimately it will be a framework available in Morningstar products.

Alternative Investments Observer

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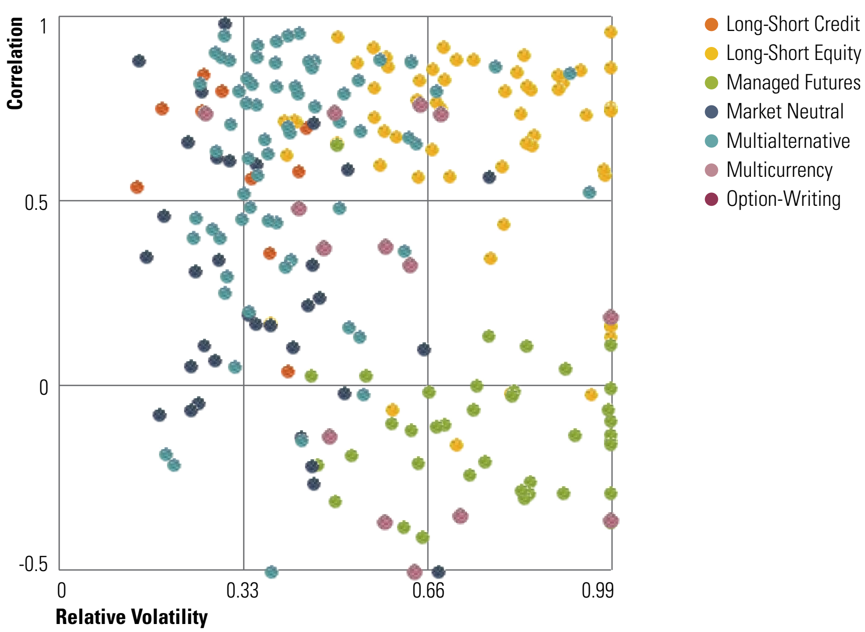
Introduction

Liquid alternatives are a potentially useful tool for building well-diversified portfolios. These strategies are designed to provide low exposure and low correlation to traditional asset classes, primarily stocks and bonds, which could help smooth out returns and lower maximum drawdowns at the overall portfolio level. While that's an admirable goal, it's difficult to achieve, and alternative funds have had varied levels of success when it comes to differentiating return streams from traditional asset classes. Achieving such diversification is critical for alternative funds: If they are offering only returns derived from beta (market) exposures, then investors are better off sticking with traditional investments, which will likely be much less expensive.

Yet investors lack a convenient means of quickly assessing these characteristics in a strategy and comparing it with peers. To remedy this state of affairs, we are introducing a new tool called the Morningstar Style Box for alternative funds (hereafter the alternatives style box). By providing an easy-to-understand visual representation of an alternative fund's diversification and volatility characteristics over time and versus peers, the alternatives style box allows for informed comparisons between funds running similar strategies and other liquid alternative strategies in a single glance.

Exhibit 1 The U.S. Liquid Alternatives Universe



Source: Morningstar Direct. Data as of 7/31/2016.

How It Works

The alternatives style box has several key differences when compared with the Morningstar Style Boxes for equity and fixed income. Unlike the equity and fixed-income style boxes, the alternatives style box is not based on portfolio holdings. Portfolio data for alternative strategies is not always available or reliable given their heavy use of derivatives. Instead, alternative strategies are plotted on the style box based on historical performance characteristics, namely, correlation and volatility relative to a market-cap-weighted global equity index.

The vertical axis measures a fund's correlation to the Morningstar Global Markets Index during the trailing three-year period using monthly return data. The horizontal axis represents what we are calling the fund's "relative volatility" compared with the same index during the same time. To calculate relative volatility, the fund's monthly standard deviation during the trailing three-year period is divided by the weekly standard deviation of the index during the same time period.

Why We Chose Global Equities as the Measuring Stick

In a traditional portfolio of long-only stocks and bonds, the key risk, measured by both volatility and potential maximum drawdown, comes from the equity portion of the portfolio. The overwhelming pull of stock-market returns on a traditional portfolio was evident during the financial crisis. From the precrisis market peak in October 2007 through the market bottom in March 2009, a balanced 50/50 portfolio comprising the S&P 500 and the Barclays U.S. Aggregate Bond Index had a maximum drawdown of more than 20%, as the bond index's 5% return during that time period wasn't nearly enough to make up for the S&P 500's 50% fall. Given that equities pose the predominant risk in traditional portfolios, it makes sense to first consider how well an alternative strategy diversifies away from that risk.

We chose a global equity index, instead of a domestic one, to reflect the increasing globalization of portfolios. Despite trailing U.S. equities significantly in performance during the 10-year period ended June 30, 2016, the market share of international developed-markets, emerging-markets, and world-stock mutual funds and exchange-traded funds has doubled to 12% during that time period. Asset-allocation vehicles are also getting more global. Industry giant Vanguard, for example, increased the non-U.S. equity exposure in its target-date and target-risk funds to 40% in 2015 from 30%. The U.S. share of global gross domestic product has also been on the decline. In 2000, it was approximately 30%, but by 2014 it had fallen to 22% when measured at current prices, according to the International Monetary Fund. We expect this trend to continue.

We are aware of other risks that investors may be looking to lower through diversification into alternatives, namely, interest-rate risk in fixed-income portfolios in the current low-rate environment. Yet we've found that many of the strategies that look to damp interest-rate risk, like non-traditional-bond and long-short credit funds, tend to do so by increasing equitylike risk. Avoiding unintended outcomes, such as trading the relatively lower risk posed by interest rates to fixed-income holdings for the potentially far greater risk in equities and more-equity-sensitive securities like high-yield bonds, should lead to better long-term results for investors. By seeing a fund's correlation to global equities during a particular time period, investors will have a better understanding of what role that strategy could play in a portfolio.

Using a blended stock and bond benchmark, like the Morningstar Moderate Target Risk Index, would yield similar directional results for each fund when plotted in the alternatives style box, but given the variety of individual portfolios, it might not be as informative for users.

Why Correlation?

A fund's correlation to the global equity market index shows how strong or weak a relationship with the global equity market the fund's returns have exhibited, a key concern when thinking about portfolio diversification. The closer an alternative fund's correlation is to 1.0 (the maximum achievable correlation), the stronger the relationship is between its returns and the returns of the global equity market. The closer the correlation is to negative 1.0, the closer the fund's returns are to having an inverse relationship, which means they would increase in value when global equities are down and vice versa.

Why Relative Volatility?

We use the fund's volatility (as measured by standard deviation) relative to the global equity market during a given time period. The amount of volatility a fund exhibits over time is an important factor for investors to consider. Absolute volatility, however, can vary greatly. The Morningstar Global Markets Index, for example, had a standard deviation of 32% based on weekly data in 2008 and less than 10% in 2013. Comparing a fund's volatility with global equities, likely the most volatile asset already in the portfolio, investors can more easily put the fund's volatility into the context of a larger portfolio. Other measures of risk, like value-at-risk and downside capture ratio, were considered and have their merits. Standard deviation remains a widely accepted and straightforward (if imperfect) measure of risk. Moreover, the limitations of the transparency of the underlying portfolio data in many alternative mutual funds, which can rely heavily on derivatives, and our reluctance to rely on measures that could lead to performance-chasing, such as a fund's downside capture ratio during a period of relatively little downside like 2013, led us away from performance-based risk measures.

Why Not Beta?

A reasonable question to ask is why the alternatives style box does not use beta. Equity beta measures the amount of systematic risk a portfolio has compared with a broad market. A fund with a beta of 0.50 to the Morningstar Global Markets Index would be expected to gain or lose roughly half the amount of the market plus or minus any alpha the strategy produces. It's a useful measure and one we consider regularly when analyzing liquid alternative funds to which we assign Morningstar Analyst Ratings.

It's important to know where a fund's beta is coming from, though, as it's based on measures of both correlation and relative volatility. Recall that one version of the formula to calculate an asset's beta is Correlation(a,b)*standard deviation of A/standard deviation of B. From that perspective, what we've done with the alternatives style box is essentially to decompose a fund's equity beta. Exhibit 2 highlights why this is important.

Exhibit 2 Comparison of Two Funds With the Same Beta

	Fund A	Fund B	Market
Standard Deviation	16	5	16
Correlation	0.25	0.8	1
Beta	0.25	0.25	1

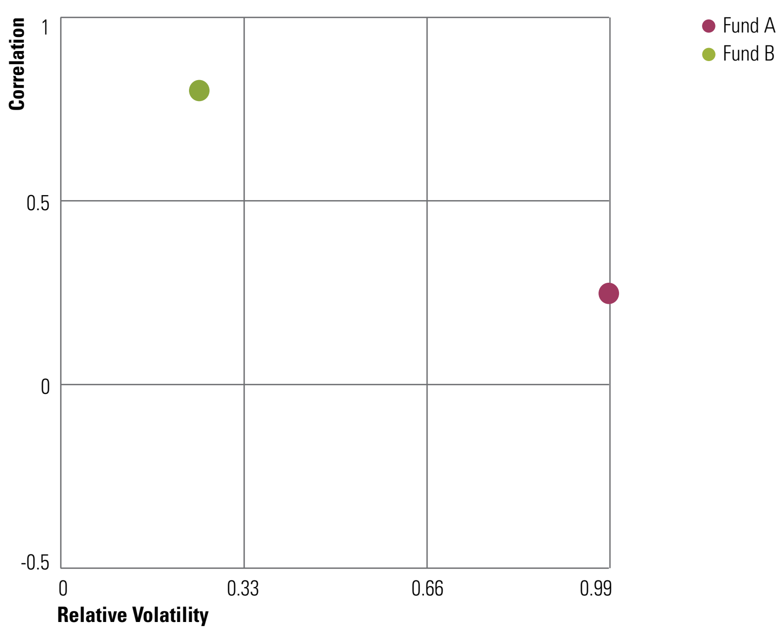
Source: Morningstar.

Fund A and Fund B both have the same beta of 0.25 to the equity market, but investors should have much different expectations for how either fund would behave on its own and within a larger portfolio.

Fund A is just as volatile as the market but has a very low correlation to it, so its return pattern isn't going to look like the market's. Fund B, on the other hand, is a low-volatility strategy, but the direction of its returns is very dependent on which way the market goes.

Exhibit 3 shows the same two funds plotted in the alternatives style box.

Exhibit 3 Two Funds With Equal Beta



Source: Morningstar Direct. Data as of 7/31/2016.

By breaking apart the two components of equity beta, investors get a more granular look at a fund's performance characteristics.

Interpreting the Alternatives Style Box

Interpreting the alternatives style box is relatively straightforward. The closer a fund is to the top of the box, the higher its correlation to the global equity market has been during that particular time period. The further a fund is to the right of the box, the higher its volatility has been.

Exhibit 4 How the Morningstar Style Box for Alternative Funds Works

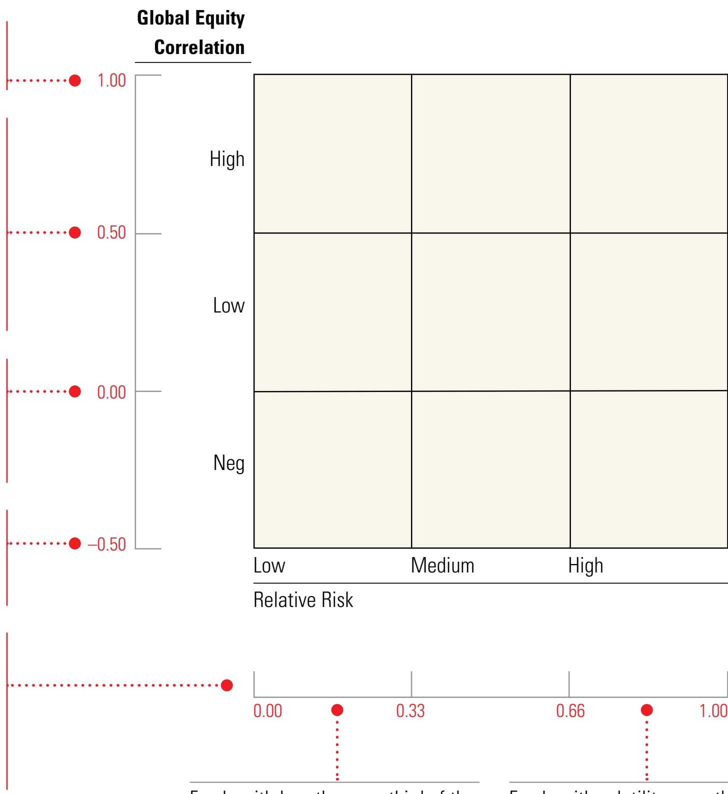
We divide the vertical axis into thirds. The upper bound of 1.0 indicates a fund that's perfectly correlated with the global equity market.

We use 0.5 as the first break point. Investors shouldn't take it as a hard rule that funds with correlations above 0.5 have a "high" correlation or that they don't qualify as alternative funds. Many long-short equity funds, for example, have relatively high correlations because of their net long exposure. Those funds' short exposures still represent an alternative investment strategy, but their roles in portfolios will be different than those of investments with lower correlations.

We use 0.0 as this axis' second and final breakpoint. Funds that hover around this line essentially have no correlation with equity markets, so their performance patterns move relatively independent of the market's movements.

Few funds have correlations with the global equity market of less than –0.50, so we cut off the y-axis at this point. We plot funds with correlations less than –0.50 on this line.

This horizontal axis represents funds' relative volatility compared with the global equity market over a given time period. We divide the axis into thirds, at 33% relative volatility and 66% relative volatility. We measure relative volatility by dividing a fund's standard deviation with that of the index's.



Funds with less than one third of the volatility of the global equity market exhibit more bondlike volatility. The Barclays U.S. Aggregate Bond Index, for example, has registered between 15% and 20% relative volatility over the last 15 years.

Funds with volatility more than two thirds the volatility of the global equity market exhibit more stocklike behavior. These funds would likely be a poor substitute for a traditional bond allocation.

Source: Morningstar.

Use Cases: How to Use (and Not to Use) the Alternatives Style Box

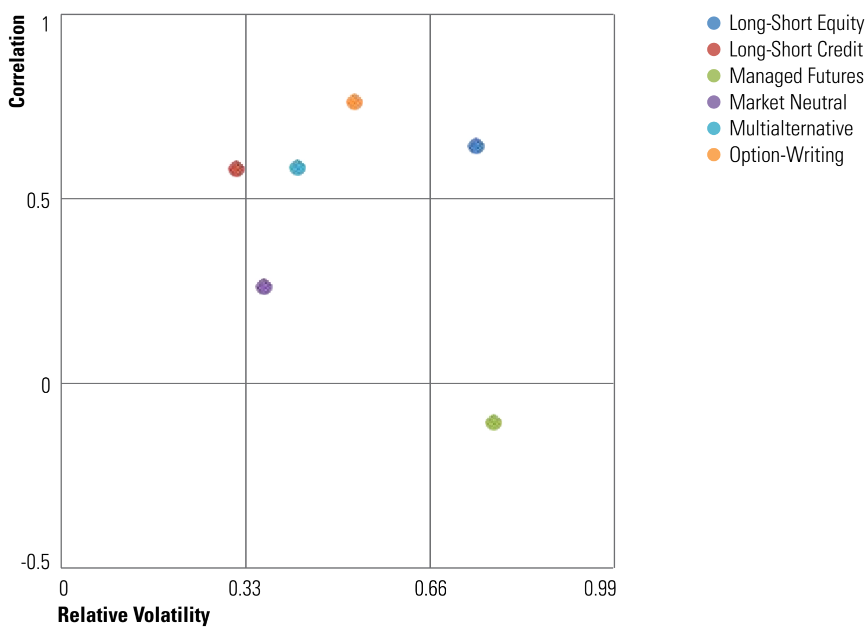
The alternatives style box is not intended to be an all-in-one solution for choosing alternative funds. It is intended to be a supplementary tool that enables investors to more easily compare funds within a category and to get a sense of how a fund could affect a larger portfolio. It's still important to consider the quality of the management team, the underlying process, the expected returns, and the stated objectives of the strategy, and to make sure it's being offered at a reasonable, if not low, price.

In what follows, we provide examples of various circumstances and situations in which the alternatives style box can provide useful insights to investors. These examples are not comprehensive, but they showcase some of the most common quandaries that may arise when researching alternative funds and the answers that the style box can help provide.

Use Case: Finding the Right Alternative for Your Portfolio

Liquid alternative mutual funds tend to fall into one of two broad camps: strategies that take on equity market risk and hedge against the downside and strategies that are generally uncorrelated to risk assets. Either of those broad strategies could be a way to damp a portfolio's overall volatility, but investors would probably use each differently. A strategy that is solely hedging equity market risk, like an option-writing fund or a long-short equity fund, is likely suitable only as a replacement for some portion of the long-only equity part of the portfolio. A strategy with low correlation is more likely to be funded from multiple asset classes in the portfolio. While there is a lot of dispersion among funds within a category, the average position of the alternatives style box on each gives a general starting point for selecting whichever style of alternative fits a portfolio best. Exhibit 5 shows the alternative categories' average positions in the style box.

Exhibit 5 Alternative Category Averages



Source: Morningstar Direct. Data as of 7/31/2016.

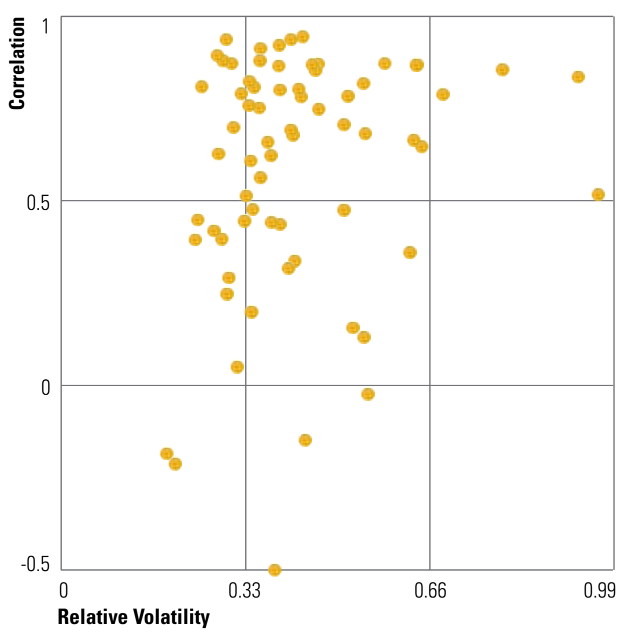
Long-short equity and option-writing strategies tend to have the highest correlations among alternative strategies. Both have net long equity biases, so it's not surprising they tend to have high correlations. Some funds in the option-writing category, but not all, make long investments in equities and buy put options for protection. In an equity market sell-off, those puts could have a positive return that offsets some of, but not all, of the losses in their long equity positions. Long-short equity funds generally have net long equity exposure of around 50% and short individual securities or ETFs as their hedge. Similar to the puts, these short positions could be positive contributors in an equity sell-off.

On the other end of the spectrum, market-neutral and managed-futures strategies tend to be the least correlated. Market-neutral funds make equal long and short bets on equities, which eliminates most equity beta. This should lead to returns that are based more on stock selection, that is, long positions outperforming short positions, than on how the overall market is performing. Managed-futures funds follow trends and can go long and short a variety of asset classes. The ability to capture negative momentum in risk assets tends to make managed-futures funds outperformers when equity markets go south.

Use Case: Finding Better Peers

The multialternative category is the most diverse in terms of the variety of strategies. The category includes multistrategy funds that invest in a variety of hedge fund strategies, either through separate accounts, third-party mutual funds, or by replicating the returns of a multistrategy hedge fund index. It also includes global macro funds that can tactically invest long and short across global equities, interest rates, currencies, and commodities. There are also a handful of event-driven funds that invest long and short across the capital structure to take advantage of arbitrage opportunities and special situations. These funds are all in the same category because from a portfolio-holdings standpoint they look similar. The variety of strategies, and the flexibility those strategies grant portfolio managers, creates a wide range of outcomes for investors. Exhibit 6 plots all the funds in this category.

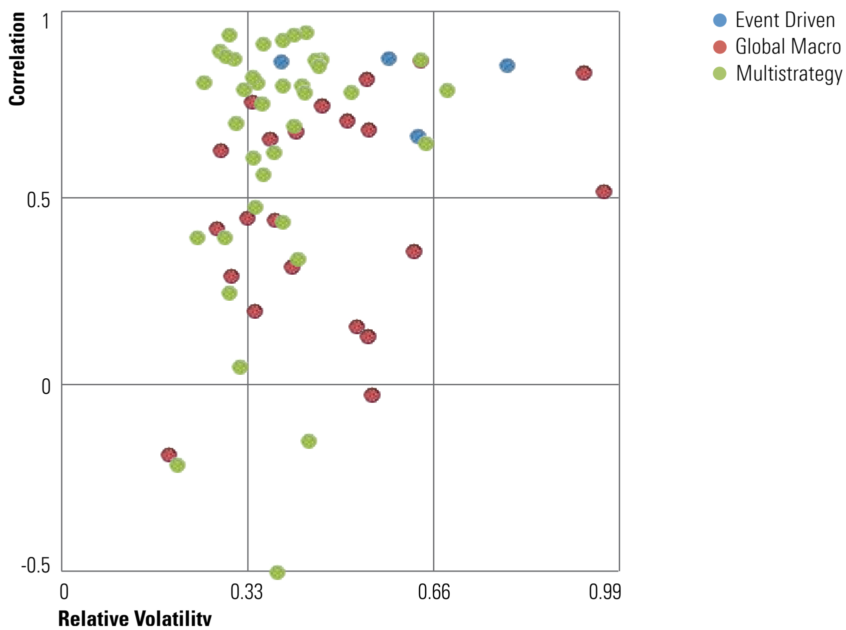
Exhibit 6 Multialternative Category



Source: Morningstar Direct. Data as of 7/31/2016.

When it comes to benchmarking performance for a fund in the category, the variety means that the category average is likely not the best guidepost. With the alternatives style box, however, we can get a clearer picture of how the dispersion is spread across the subcategories. Even within the subcategories there is still a fair amount of dispersion, but from there an investor can find funds that are taking on similar levels of risk and have similar diversification benefits to start building out a smaller and more relevant group of peers to compare a fund against. Exhibit 7 shows the multialternative category breakdown by subcategory.

Exhibit 7 Multialternative Subcategories



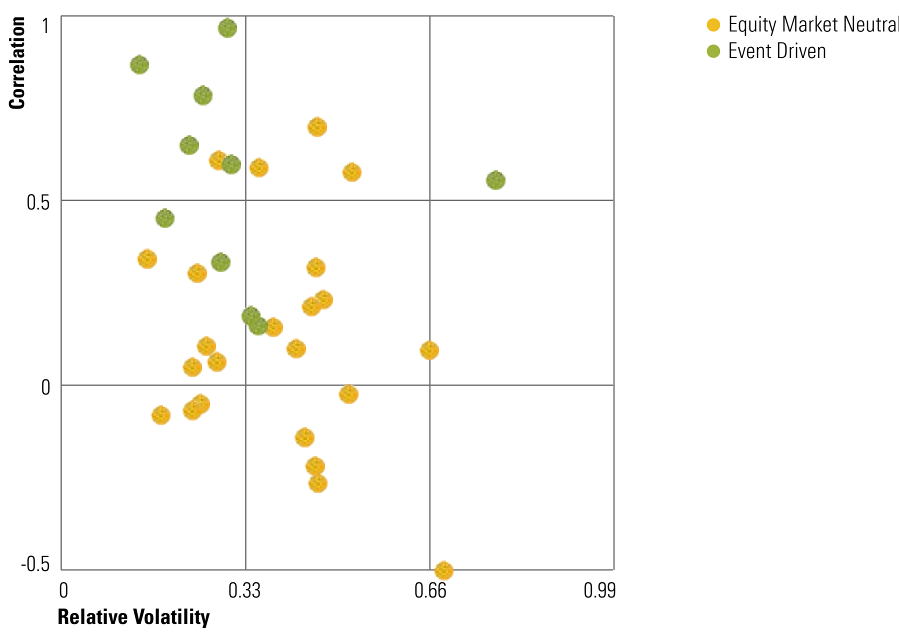
Source: Morningstar Direct. Data as of 7/31/2016.

As the exhibit shows, most multistrategy alternative funds tend to cluster together more tightly than global macro funds. Most multistrategy funds fall in the upper left corner of the box, which indicates a high correlation to equities and relatively lower volatility. The high correlations among multistrategy funds may seem surprising, but given their underlying strategies it should be expected. Many multistrategy funds purposefully take on equity beta through strategies like long-short equity and event-driven arbitrage in order to deliver returns. An investor looking to these alternative allocation funds as a diversifier should pay extra attention to the fund's correlation.

The global macro funds have the widest dispersions. Global macro strategies have perhaps the widest latitude of investments of any strategy, so it's not surprising to see those scattered throughout the alternatives style box. There are, however, some global macro funds that do display similar levels of risk and diversification benefits and could be used to form purer peer groups.

Multialternative isn't the only category with more than one underlying strategy. The market-neutral category includes long-short equity funds with betas that average less than 0.30 over time. Inside the market-neutral category are two main subgroups: equity market-neutral funds, which use traditional stock-picking methods to choose long and short positions with roughly equal gross exposures, and event-driven funds, which typically invest long and short in mergers and acquisitions and other special situations, like spin-offs. Event-driven funds tend to have higher correlations than equity market-neutral strategies. That's because the likelihood of a proposed merger closing ebbs and flows with overall economic activity, which also drives broader stock market directionality. Exhibit 8 shows the two substrategies plotted together. The alternatives style box provides a quick and clear visual guide to the differentiated characteristics of the two substrategies, with event-driven funds gravitating to the upper left quadrant of the style box.

Exhibit 8 Market-Neutral Subcategories



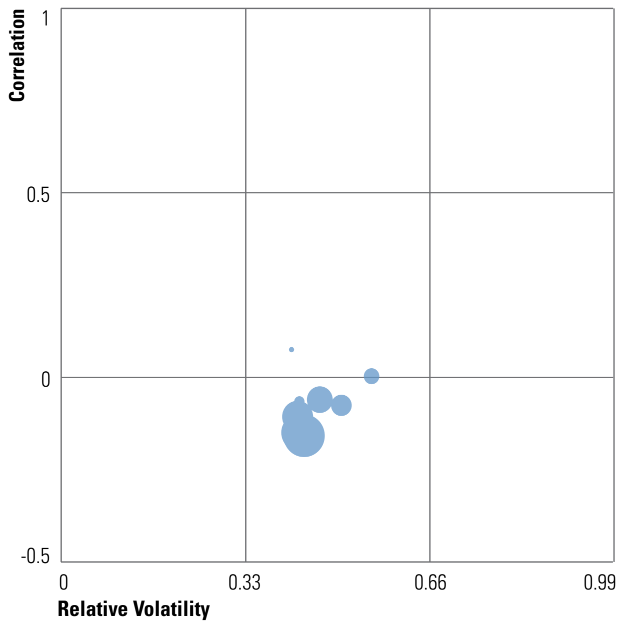
Source: Morningstar Direct. Data as of 7/31/2016.

Use Case: Changing Risk Profiles

It's important to note that a fund's correlation and volatility levels aren't likely to remain static over long periods. For one thing, managers of liquid alternative mutual funds can be very active in shifting the portfolio to alter exposure levels. For another, even if the portfolio holdings and exposures are stable, the ever-evolving market environment could cause the fund to react differently under various circumstances. What that means is that investors should consider how a fund's correlation and relative volatility characteristics have changed over time.

Exhibit 9 shows how the positioning of AQR Multi-Strategy Alternative ASAIX in the alternatives style box has changed from its inception in July 2011 through June 30, 2016. Each dot represents where the fund would have landed based on three-year trailing data during that time period. The larger the bubble is, the more recent the data.

Exhibit 9 AQR Multi-Strategy Alternative Through Time



Source: Morningstar Direct. Data as of 6/30/2016.

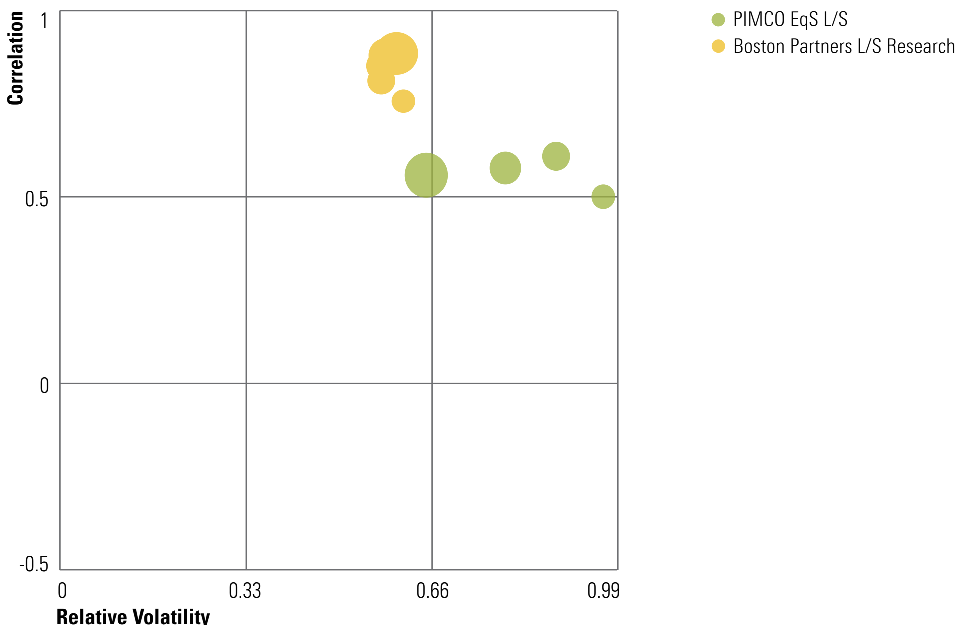
The alternatives style box shows that over the course of the fund's past its correlation to global equities has been virtually zero. Management purposefully hedges out any residual equity market beta to keep the fund's correlation low.

The fund's relative volatility has also been fairly stable. For the most part, the fund has stayed between one third and two thirds as volatile as the index. Its target volatility level is approximately two thirds the long-term volatility of the global equity markets. This is more easily interpreted by a quick glance at the style box than it would be by looking at its historical returns.

Use Case: Comparing Funds in the Same Category

In addition to viewing a fund's own history, it's also a useful to compare funds against peers in the same category. Using the same methodology as the previous example, Exhibit 10 shows PIMCO EqS Long/Short PMHIX and Boston Partners Long/Short Research BPIRX since April 2012, when the PIMCO fund was converted from a hedge fund to a mutual fund.

Exhibit 10 PIMCO EqS Long/Short and Boston Partners Long/Short Research



Source: Morningstar Direct. Data as of 6/30/2016.

PIMCO EqS Long/Short's former portfolio manager Geoffrey Johnson, who retired on Aug. 1, 2016, was very active in managing the fund's net exposure. It ranged from a high of 80% to a low of less than 10%. As a result, this fund has seen much more dramatic shifts in relative volatility. By contrast, Boston Partners Long/Short Research has much tighter guardrails around its exposure levels; net long exposure typically stays between 40% and 50%.

Investors can take away that for PIMCO EqS Long/Short under Johnson, both stock-picking and managing the net exposure were going to be key return drivers. For Boston Partners Long/Short Research, stock-picking alone typically drives returns. Both approaches can work, but to investors one might be more attractive than the other based on their personal preference. The style box dramatically illustrates the differences in approach.

Conclusion

This paper introduces the Morningstar Style Box for alternative funds, aimed at helping investors assess the diversification benefits of an alternative mutual fund. Unlike Morningstar's traditional style boxes, this one is not based on portfolio-based metrics but on correlation to equity markets and a concept we have labeled "relative risk." In developing the style box, we have attempted to straddle the demands of simplicity—to create a framework that will be quickly intuitive to users—while also capturing key traits of alternative funds that are important to investors. The alternatives style box should not be considered a comprehensive tool for performing due diligence on alternative funds. Rather, it is a starting point, useful for screening and making comparisons. This paper has outlined several important use cases for the alternatives style box. Over time, we plan to publish additional papers making more intensive use of the style box, such as studies of alternative asset allocation and category deep dives. Eventually, the alternatives style box will be a data point and tool within Morningstar products, where individual users will have the ability to use the style box for their own research purposes, customizing inputs and time periods as well.

Have Long-Short Credit Funds Delivered?

Implementation challenges, poor performance, and high costs weigh heavily on this Morningstar Category.

By Miriam Sjoblom, CFA

In May, Morningstar spun out a small subset of non-traditional-bond funds that focus on corporate credit into a new long-short credit category (currently 19 funds totaling roughly $8 billion in assets). Long-short credit funds sound interesting in theory. Corporate credit markets are rife with inefficiency, and a long-short strategy that seeks to benefit from anomalies in the pricing of credit risk while minimizing exposure to broader credit and interest-rate market swings may sound enticing—especially in overvalued (2013) and volatile (2015) credit markets.

In practice, though, the strategy has struggled to deliver, both for the hedge funds that have greater flexibility with which to execute it and the highly regulated open-end mutual funds that try to adapt it to structures that permit investors to redeem assets at any time of their choosing. The long-short credit Morningstar Category may be a newly assembled group, but we don't expect its popularity to take off anytime soon. Implementation challenges, poor performance, and high costs damage the group's overall appeal.

As with the non-traditional-bond group, these funds typically have absolute return targets of Libor plus a spread of between 300 and 600 basis points, with the intention of producing mid-single-digit annualized returns. Unlike the non-traditional-bond group, however, many funds in the long-short credit category attempt to take bets on the direction of interest rates out of the equation by hedging out their interest-rate sensitivity to focus on extracting value from their corporate trades. Those trades may include directional long and short bets on over- or undervalued corporate debt, or relative value trades. The latter could include exploiting divergence in the pricing of cash bonds and derivatives markets, betting that one security in a company's capital structure is undervalued versus another, or pair-trading between the debt of two different but correlated companies.

These can be difficult strategies to pull off successfully, even for hedge funds, which have more flexibility to control the timing of investor redemptions than mutual funds. Given the fluctuating here-today-gone-tomorrow nature of liquidity in the corporate-bond market, even relative value trades between closely linked securities can court significant basis risk that can cause volatility when pricing relationships move in unexpected ways. Timing can also be tricky when shorting bonds. If a manager is too early, a fund will lose money paying out income on the bonds it has borrowed until a trade succeeds. If a manager waits too long, the cost of borrowing the bonds for shorting could overwhelm the value of the trade. Although the evolution of derivatives markets has given managers more-liquid instruments to work with, strategies that rely heavily on trading can still find it difficult to source and sell bonds at optimal times.

Hedge funds that aim to minimize systematic credit market exposure, or beta, tend to stick to a relative value approach. Because the expected gains from individual trades are typically small, it's not unusual to see pure relative-value credit hedge funds apply leverage of 3 times or more in order to target returns in a more salable high-single-digit range. Leverage is a two-edged sword, of course, magnifying returns when the execution is successful but amplifying losses when bets go badly.

Credit hedge fund strategies that don't take on a lot of leverage may lean more heavily on directional bets, often among higher-yielding stressed issuers for which they believe their fundamental research gives them an edge. That, in turn, exposes the fund to more event risk—the risk that downgrades, defaults, or bankruptcies will trigger a sudden sell-off—in which losses are typically larger than potential gains (that is, negative skewness), and to broader market risk as well.

Neither approach represents an easy path to riches, and both of these strategies are inherently problematic for their mutual fund adopters. For one, mutual funds are limited in the amount of leverage they can use, which is an important risk-management guardrail but makes it hard to get much oomph from a pure relative-value strategy. For funds that lean more heavily on directional (mainly long) trades, the liquidity risk associated with investing in lower-credit-quality tiers is a potential danger. Indeed, of the funds that report credit-quality breakdowns in their literature, exposures to junk-rated bonds can take up half or more of a portfolio. Several also include significant exposure to bonds rated CCC or below, with some plunking as much as a third of assets in CCC rated fare (compared with 15% of the Barclays U.S. Corporate High Yield Index).

Meanwhile, credit hedge funds typically lock up investor capital for at least a quarter, and those that focus mainly on distressed investing often won't allow redemptions more frequently than once a year, with many employing gating mechanisms that return capital to investors gradually. Those terms help prevent hedge funds from having to sell less-liquid instruments in an inhospitable market environment if investors suddenly want their money back. Mutual funds that invest in stressed and distressed issues enjoy no such safeguards, a lesson that Third Avenue Focused Credit crystallized in 2015.

The downside of these funds' appetite for credit risk has been on display recently, as fundamental cracks in energy and other commodity-related industries caused tumult in the high-yield market from June 2015 through February 2016, as shown in the following table.

Exhibit 11 Long-Short Credit Morningstar Category 3-Year Performance Statistics

			Total Return %				3-Year Correlation	
Long-Short Credit Funds 3+ Years Old	Fund Size (USD, mil)	Estimated Net Flows 1-Year through July 2016 (USD, mil)	HY Sell-Off June 2015– Feb 2016	3-Year Annualized	Max Drawdown	Max Drawdown Peak Date	HY	Equities
BlackRock Global Long/Short Credit	4,145	-1,356	-4.57	1.10	-4.57	5/1/15	0.83	0.66
Driehaus Active Income	2,356	-1,067	-5.34	0.88	-5.34	6/1/15	0.83	0.76
PIMCO Credit Absolute Return	412	-330	-7.37	1.91	-7.37	6/1/15	0.89	0.71
Legg Mason BW Alternative Credit	392	-496	-9.40	4.42	-9.69	2/1/15	0.47	0.27
GS Long Shrt Crdt Strats	210	11	-1.82	1.92	-4.84	7/1/14	0.83	0.60
Driehaus Select Credit	113	-451	-14.38	-3.20	-18.56	7/1/14	0.79	0.58
Salient Tactical Muni & Credit	106	6	5.34	6.39	-2.75	10/1/13	0.07	-0.20
Arbitrage Credit Opportunities	56	-14	-1.74	1.07	-3.72	9/1/14	0.57	0.46
Altegris Fixed Income Long Short	50	-145	-15.98	-0.58	-16.42	6/1/15	0.52	0.52
Hatteras Long/Short Debt	29	-238	-15.29	-4.78	-20.42	7/1/14	0.60	0.41

Source: Morningstar Direct. Data as of 8/31/2016.

Many long-short credit investors are losing patience. Steady net outflows from this cohort since August 2014 reached $6.5 billion as of July 2016, a sizable decline from the group's peak asset base of nearly $16 billion in July 2014. Most funds that have been launched in the past couple of years have fared no better than those listed above, and early blemishes on their performance records won't make it any easier for them to raise assets.

Long-short credit investing is difficult under the best of circumstances. Pulling it off successfully within the constraints of the Investment Act of 1940 open-end mutual fund structure is even more difficult. With the added impediment of steep price tags starting in excess of 1.00% per year for most institutional share classes, it's hard to make a case for these funds.

A 'Check the Runner' Moment for Global Macro Funds

Did Brexit catch these go-anywhere alternative funds leaning the wrong way?

By Josh Charlson, CFA

We won't know for some time whether the immediate post-Brexit market volatility augured a longer-term increase in global market volatility or just a short-term bout of uncertainty. (Certainly, the markets' subsequent rebound has restored some calm and confidence.) At a minimum, however, for investors in global macro funds, the two days of post-Brexit market volatility served as a "check the runner" moment.

In baseball, when a player reaches first base, the pitcher will adjust his pitching routine to incorporate various "checks" on the runner, which may include altering his windup, looking over at the runner, and tossing the ball to the first baseman. Through these actions, the pitcher can gauge the runner's intentions and perhaps catch the runner leaning the wrong way—which, with a good pickoff move, can result in an out.

Similarly, the recent volatility across regions and asset classes serves as an opportunity for investors to determine if global macro funds have been "leaning" the wrong way. This is of particular relevance for global macro funds, both because they have the flexibility to change their allocations greatly over short periods and because their heavy use of derivatives makes it difficult to discern their true economic exposures through typical portfolio data. By contrast, if you own a traditional equity fund, its most recent portfolio holdings disclosure would likely give you a pretty accurate sense of how it was positioned and likely to perform in a stock market downturn.

Moreover, unlike some recent spells of volatility, the Brexit-induced market-shudders are more global and multiasset in nature, including significant currency movements, an area in which most global macro funds trade significantly. Thus, Brexit represents an opportunity for global macro managers to prove what they often contend: Their strategies thrive on dispersion and volatility in financial markets, and they can respond quickly to hedge and take advantage of opportunities.

Promising Early Results

The good news is that global macro funds, which are a subset of the multialternative Morningstar Category, held up relatively well in the first two days of post-Brexit trading in the United States. The multialternative category as a whole lost 1.02% on average, relative to losses of 5.34% for the S&P 500, 7.09% for the MSCI World Index, and 3.82% for a blended 60% MSCI World/40% Barclays U.S. Aggregate Bond Index. (Many multistrategy funds in the category use managed futures, which once again proved their value during market sell-offs, with the category gaining 3% in the two-day period.) A subset of 31 funds we've identified as global macro in nature did not perform quite as well on average (with a mean loss of 1.6%), but that's skewed by several outliers with big losses. Overall, 27 of the 31 funds lost less than the blended global 60/40 index, 22 of the 31 lost less than half the blended index, and nine of the 31 (or more than a fourth of the group) ended up in positive territory. Of course, few funds or asset classes did as well as plain old bonds, as the Barclays U.S. Aggregate Bond Index rose more than 1%.

The average losses for the multialternative category and the global macro subset over the two-day period were of lesser magnitude than one might have predicted based on the three-year downside capture ratio of around 40% for each group. That suggests that managers had been positioning themselves more defensively, perhaps in part because of concerns about the risks of the Brexit vote and in part because of equity valuation sensitivity. In addition, many global macro managers have been long the dollar versus other currencies, particularly the euro, given diverging central-bank monetary policies, a stance that would have been a boon during this span.

Dreyfus Dynamic Total Return AVGAX, for instance, which is subadvised by Mellon Capital and lost just 0.07% during the downdraft, had been reducing exposure to European and Asian equities as part of its scenario-testing process modeling the Brexit risk. In addition, the fund has for some time held a significant defensive stake in U.S. Treasuries and cash. And it has been long the U.S. dollar with a modest short position in the British pound, all of which helped.

William Blair Macro Allocation WMCIX, a Morningstar Prospect, lost 1.67% during the stretch. Manager Brian Singer incorporates game theory into his analysis of geopolitical dynamics and had been modeling populism and Brexit into the fund's risk scenarios. The fund had been maintaining relatively low equity beta, while incorporating shorts on the pound versus the Canadian dollar and the yen. However, the fund had previously increased exposure to European financials within its long equity sleeve for valuation reasons, which undoubtedly was a detractor, though European equities represented only 6% of the overall portfolio at the end of March.

Among funds that have Morningstar Analyst Ratings, Bronze-rated MFS Global Alternative Strategy DVRAX and Neutral-rated UBS Dynamic Alpha BNAAX, which serves as a fundamental piece of the MFS fund, held up well, with the former gaining 0.10% and the latter losing 0.48%. The UBS Dynamic Alpha team has also been cautious regarding its equity exposure, but at least as of the first quarter, it did have eurozone exposure, including banks. The fund had much greater exposure to high-quality bonds, however, and it had long U.S. dollar and yen positions. The UBS team has historically used options effectively to hedge around potential risky events, so it is possible the strategy used such tactics in 2016.

Bronze-rated John Hancock Global Absolute Return Strategies JHAIX, which is subadvised by Standard Life, lost 1.7%—better than the blended index but not stellar. The fund generally diversifies across many trades and may change positions quickly, but the GARS team had been favoring European equities, which may have been a detractor. Management did remove a long British pound position in the first quarter because of Brexit concerns and has a number of long U.S. dollar trades.

Concluding Thoughts

One of the characteristic traits of global macro funds is that they can change positioning quickly, so it is hard to say with confidence whether positions held several months back were still in place at the time of the Brexit vote, and it is equally possible that managers took advantage of the volatility to take profits and reposition their portfolios. And a two-day period of volatility centered on a specific though broad-reaching event is a limited statistical sample. But investors can take some confidence from the generally robust results of global macro vehicles, which appeared not to be caught out in unexpectedly risky spots and, indeed, in many cases seem to have had the right bets in place. There are a few outlier funds that appear to take on a lot of volatility or big bets, but those seem to be in the minority. If market volatility continues to rise in 2016, there will be further tests for these funds.

Exhibit 12 20 Best-Performing Global Macro Funds During Brexit Sell-Off

Fund Name	Ticker	**Total Return %** (June 24, 2016 through June 26, 2016)
Dreyfus Global Real Return A	DRRAX	1.64
Nuveen Tactical Market Opportunities I	FGTYX	1.28
Cane Alternative Strategies I	CDMIX	1.1
Context Macro Opportunities Instl	CMOTX	0.79
Natixis ASG Global Macro A	GMFAX	0.67
AQR Global Macro I	QGMIX	0.55
Hartford Real Total Return A	HABMX	0.12
MFS Global Alternative Strategy A	DVRAX	0.1
Dreyfus Dynamic Total Return A	AVGAX	–0.07
Putnam Absolute Return 500 A	PJMDX	–0.09
Putnam Absolute Return 700 A	PDMAX	–0.27
Balter Discretionary Global Macro Inv	BGMVX	–0.31
UBS Dynamic Alpha A	BNAAX	–0.48
All Terrain Opportunity A	TERAX	–1.3
Stadion Trilogy Alternative Return A	STTGX	–1.41
Invesco Global Targeted Returns A	GLTAX	–1.64
Prudential QMA Global Tactical Allc A	PTALX	–1.64
William Blair Macro Allocation I	WMCIX	–1.67
JHancock Global Absolute Ret Strats I	JHAIX	–1.69
BlackRock Macro Themes Investor A	BTHAX	–1.72
Benchmarks		
Multialternative Category		–1.02
Barclays US Agg Bond Index		1.1
S&P 500 TR USD		–5.34
MSCI EAFE NR USD		–9.84
MSCI World PR USD		–7.09
60/40 MSCI World/Barclays Agg		–3.82

Source: Morningstar Direct.

Making Sense of Merger-Arbitrage Funds

A primer on one of the oldest alternative strategies.

By Tayfun Icten

Merger arbitrage is one of the oldest hedge fund strategies, often described as a subset of event-driven investing. The primary differentiator for event-driven strategies is the existence of a specific catalyst, an "event" to unlock value for the investor. This is distinctly different from investing on the basis of valuations, statistical relationships, and/or factor-based analysis. Merger arbitrage is also unique in that it has less reliance on an incremental investor to pay a higher price for a security because of favorable demand/supply characteristics.

This strategy is one of the simplest to execute. After a merger deal is announced, the arbitrager buys the stock of the company to be acquired and pockets the spread between the market price of the target company following the announcement and the deal price upon closing. This spread exists because the target company's stock does not immediately appreciate to the deal price because of uncertainties associated with regulatory approvals, antitrust matters, and other complexities. Say, for example, Company A makes an announcement to acquire Company B at a 40% premium to its current market price, say $100. Company B's stock price might go up to only $137 immediately after the announcement, but not $140. This $3 spread corresponds to a 2.2% return for the investor ($3/$137 -1). If the deal closes in three months, the investor earns approximately 8.8% annualized. Depending on the type of the deal, merger arbitragers may or may not sell the acquirer's stock short. For instance, in an all-cash deal, they do not need to short the acquirer's stock, but they might short a relevant sector exchange-traded fund as a hedge in the event of a sectorwide sell-off leading to a deal break. For stock-for-stock acquisitions, the acquirer's stock is shorted at a ratio consistent with the initially announced deal terms to lock in the spread at the close.

How Does It Benefit Your Portfolio?

The strategy produces a bondlike risk/return profile. The upside is limited, akin to a bond's coupon, but the downside loss potential is significantly larger if the deal breaks (analogous to a default event in a bond investment where the investor loses a large portion of the principal less the recovery amount, though the risks are, of course, quite different). In the previous example, the investor's upside is 8.8% annualized return, but his/her downside is as large as 40%, all else being equal. This means prudent risk controls and diversification need to be in place to limit the downside. This strategy also provides strong diversification benefits in a portfolio of traditional investments like stocks and bonds. Even though, on a mark-to-market basis, deal spreads exhibit some correlation to the broad equity markets, as long as no deal break occurs, equity correlations aren't a primary driver of returns, as ultimately the completion of the deal determines the payoff. The relatively low beta (0.1 to 0.2) of merger-arbitrage funds to equities reaffirms their diversification value.

From a purely quantitative perspective, an allocator should note that the return distribution of a merger-arbitrage strategy may not look normally distributed for the reasons that were mentioned above. An asymmetric upside and downside risk/return profile presents leptokurtic qualities associated with fat tails. In very simple terms, this means that the investors may observe a large number of small monthly returns coupled with a small number of disproportionately larger down months. Therefore, mean-variance-based optimization models with blind normal distribution assumptions should be taken with a grain of salt when making allocation decisions regarding the size of an investment.

What Is Going on in the World of Mergers and Acquisitions?

The global merger and acquisition market has experienced two opposing forces in the past 18 months. While 2015 was a record year for worldwide M&A activity, surpassing $4 trillion, 2016 has shaped up to be a record year for "broken deals," as the U.S. Treasury and Justice departments intensified their scrutiny of mergers and acquisitions. For example, the collapse of the $160 billion deal between Pfizer PFE and Allergan AGN cost funds dearly after the Treasury Department announced new rules regarding the treatment of tax-inversion deals, in which a company switches its structure to become the subsidiary of a foreign entity to lower its tax rate. The surprise factor in the announcement was the inclusion of a three-year look-back provision that enmeshed the Pfizer/Allergan tax-motivated deal (and other inversion-related deals). Another deal gone awry was the $28 billion merger of U.S. oilfield services providers Halliburton HAL and Baker Hughes BHI, which was terminated after regulators in Europe and the United States opposed it on the basis of antitrust laws. And national security concerns blocked a deal between Koninklijke Philips PHG and Chinese consortium GO Scale Capital.

As these deals fell apart, they affected the M&A market in several ways. First, they caused deal spreads to widen out, creating a more robust market for merger arbitragers. Wider spreads allow merger-arbitrage funds to construct trades with higher internal rates of return. Second, they led to slower deal flow globally. In the U.S., for instance, deal volume in the first half of 2016 was down 20%, totaling $700 billion across 5,300 deals, according to Thompson/Reuters. Merger-arbitrage operators generally look to have 30 to 90 deals in their portfolios, emphasizing circumstances in which the deal-break probability is extremely low. Out of the 5,300 reported deals, only 200 to 300 of them make it to the universe of "investable" deals because that overall number includes private deals as well as very small deals.

According to Morgan Stanley and CapIQ, S&P 500 companies still hold $1.9 trillion of cash on their balance sheets, about 12% of total revenues. Cash-rich balance sheets will probably motivate companies to seek strategically driven acquisition opportunities. However, a higher level of government scrutiny in the long run, and the upcoming U.S. general elections in the short run, could be potential impediments to deal activity for the remainder of the year.

Merger-Arbitrage Options in Liquid Alternatives

Merger Fund MERFX, which has a Morningstar Analyst Rating of Silver, and Arbitrage Fund ARBNX, which has a Bronze rating, are the largest merger-arbitrage players in the liquid alternatives space. These funds' long-term risk/return profiles resemble short- to medium-term bond funds, with 10-year annualized returns of 2.56% and 3.07%, respectively. Both funds' return engines rely primarily on merger spreads with some event-driven positions such as spin-off, split-offs, closed-end fund arbitrage, and other corporate reorganizations. In terms of year-to-date performance, a smaller Bronze-rated competitor, Touchstone Merger Arbitrage TMGLX, has outperformed both aforementioned funds with a 2.40% return. This fund's significantly smaller size ($200 million) has been an advantage because its manager was able to avoid some of the broken mega deals like Pfizer/Allergen. All of these funds have highly experienced teams, long track records, and well-diversified portfolios. Liquid alternative funds in this space generally lag their hedge fund counterparts because they do not use as much leverage and tend to run more-conservative portfolios, generally avoiding hostile takeovers, leveraged buyouts, and rumored deals.

Conclusion

In the very long run, particularly prior to the Fed's quantitative easing, studies have shown that merger spreads traded at approximately 3 times the risk-free rate (and managers conventionally believed so). This relationship has weakened, however, as short rates have come down to near-zero levels. Safer merger deals today trade around the 3% to 4% levels, as opposed to the 10%-15% range when the risk-free rate (the three-month U.S. Treasury Bill, for example) was close to 5%. So, empirical evidence suggests that merger spreads may provide better opportunities with higher interest rates, offering a beneficial diversifying opportunity in that scenario. This strategy still faces longer-term structural challenges driven by compressed risk premiums in the wake of extremely low interest rates, but investors who have conservative expectations in the long run might consider investing in merger-arbitrage funds as a diversifying component in their traditional portfolios.

Fund Profile
American Beacon AHL Managed Futures Strategy

By Tayfun Icten

Advisor
American Beacon

Advisor Location
Irving, Texas

Subadvisor
Man AHL

Assets Under Management
$471.6 million

Inception Date
Aug. 19, 2014

Investment Type
Mutual fund

Morningstar Category
Managed futures

Purpose

This fund's subadvisor is a managed-futures commodity trading advisor (CTA) that focuses on pure systematic trend-following strategies. Systematic trend-followers rely on momentum and trends in multiple asset classes, and they generally offer low correlation to traditional asset classes, and thus can be useful diversifiers in a portfolio.

People

Man AHL is one of the largest firms in the alternative investment industry with $78.6 billion in assets under management and a 25-year track record in systematic strategies. This fund is managed by Matthew Sargaison and Russell Korgaonkar. Sargaison is the CIO of Man AHL and served as chief risk officer between 2009 and 2012. Prior to AHL, Sargaison spent 13 years working at Deutsche Bank, Barclays Capital, and UBS. Korgaonkar joined AHL in 2001 and spent several years researching and managing equity strategies such as statistical arbitrage and equity market-neutral. He moved to his current role as head of portfolio management in March 2011, and he provides high-level portfolio construction, investment management, and research oversight. Under Sargaison's supervision, there are 88 investment professionals who specialize in trading strategies and model development. Man AHL also sponsors the Oxford-Man Institute of Quantitative Finance academic research center to keep a close eye on new research and for recruitment opportunities.

Process

Man AHL's process employs trend-following models that are momentum-based and 100% systematic. These models profit from sustained trends in rallying or declining markets. They rely on technical (price) and fundamental (interest rates) data and combine to generate signals in each of the 80 traded markets. There are three fundamental signals and 18 momentum signals with weightings from 2 to negative 2. Once specific market positions are suggested by the models, they go through a number of risk filters, such as liquidity, positon limits, and volatility, before a target portfolio is constructed. The fund's risk management process monitors portfolio-level risk on the basis of changes in interest rates and historical/implied volatility levels. In addition, the fund will give a greater weighting to implied volatility to cut back positions in periods where implied and realized volatility diverge substantially (around Brexit, for example). The fund allocates 20% to 30% to each of four asset classes: equities, fixed-income, commodities, and currencies. The final allocations are determined by a mean-variance optimization process that aims to generate strong risk-adjusted returns by maximizing diversification benefits among the 80 markets traded.

Portfolio

This mutual fund's platform is a carve-out from Man AHL's larger flagship fund. For better scalability, this fund trades the 80 most liquid markets out of 150 traded in the flagship fund. The margin/equity ratio runs from 5% to 10%, targeting a 10% realized volatility in the long run. As of June 30, 2016, the fund allocated 17% to equities, 32% to fixed income, 24% to currencies, and 27% to commodities. The top risk allocations were gold (4.20%), sugar (3.99%), and natural gas (3.29%) on the long side, and the Brazilian real (4.30%), Japanese yen (4.30%), and euro (3.80%) on the short side.

Price

After accounting for a fee waiver expiring in April 29, 2017, American Beacon AHL Managed Futures Strategy's institutional shares and Y shares charge 1.54% and 1.65%, respectively. These expense ratios are average when compared with a typical fund in the managed-futures Morningstar Category. The fund's A and C shares charge 1.94% and 2.69%, respectively, which are above average when compared with their Morningstar peers. The majority of this fund's assets reside in the institutional shares.

American Beacon AHL Mgd Futs Strat A (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 09-30-2016

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2014	—	—	—	10.46	—
2015	5.11	-6.36	5.60	-5.26	-1.54
2016	4.56	-2.72	-4.49	—	-2.85

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	-13.26	—	—	—	0.97
Std 09-30-2016	-13.26	—	—	—	0.97
Total Return	-7.96	—	—	—	3.84
+/- Std Index	-9.39	—	—	—	—
+/- Cat Index	-9.39	—	—	—	—
% Rank Cat	90	—	—	—	
No. in Cat	180	—	—	—	

	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 800-658-5811 or visit www.americanbeaconfunds.com.

Fees and Expenses

Sales Charges

Front-End Load %	**5.75**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	1.05
12b1 Expense %	0.25
Net Expense Ratio %	**1.95**
Gross Expense Ratio %	**2.56**

Risk and Return Profile

	3 Yr	5 Yr	10 Yr
	126 funds	*55 funds*	—
Morningstar Rating™	—	—	—
Morningstar Risk	—	—	—
Morningstar Return	—	—	—

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

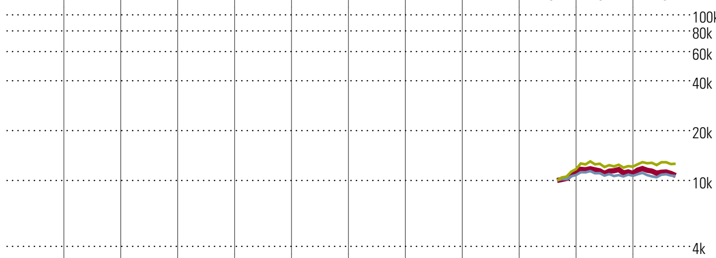
MPT Statistics	Standard Index	Best Fit Index
Alpha	—	—
Beta	—	—
R-Squared	—	—

12-Month Yield	—
Potential Cap Gains Exp	-3.98%

Investment Style
Fixed-Income
Bond %

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	09-16
—	—	—	—	—	—	—	—	—	78	61	73

Growth of $10,000



Performance Quartile (within category)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	09-16	**History**
—	—	—	—	—	—	—	—	—	10.93	10.43	10.13	NAV/Price
—	—	—	—	—	—	—	—	—	—	-1.54	-2.85	Total Return %
—	—	—	—	—	—	—	—	—	—	-5.11	-6.93	+/- Standard Index
—	—	—	—	—	—	—	—	—	—	-5.11	-6.93	+/- Category Index
—	—	—	—	—	—	—	—	—	—	52	—	% Rank Cat
—	—	—	—	—	—	—	—	—	—	171	186	No. of Funds in Cat

Portfolio Analysis 06-30-2016

Asset Allocation %	Net %	Long %	Short %
Cash	19.84	22.95	3.12
US Stocks	0.00	0.00	0.00
Non-US Stocks	-0.93	0.94	1.87
Bonds	77.23	77.23	0.00
Other/Not Clsfd	3.87	4.34	0.48
Total	100.00	105.46	5.46

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	—	—

Share Chg since 03-2016	Share Amount	Holdings: 0 Total Stocks , 27 Total Fixed-Income, — Turnover Ratio	% Net Assets
☼	360 mil	3mo Euro Euribor Sep17 Ifll 201709	15.06
☼	220 mil	3mo Euro Euribor Mar19 Ifll 201903	9.19
☼	171 mil	90day Eur Futr Mar19 Xcme 20190318	6.36
☼	125 mil	90day Sterling Fu Jun18 Ifll 20180	6.23
☼	114 mil	90day Sterling Fu Sep17 Ifll 20170	5.70
☼	136 mil	90day Eur Futr Jun18 Xcme 20180618	5.05
☼	119 mil	Us 2yr Note (Cbt) Sep16 Xcbt 20160	4.89
☼	138 mil	Aust 3yr Bond Fut Sep16 Xsfe 20160	4.39
⊕	10 mil	American Beacon Cayman Managed Mut	4.23
☼	104 mil	90day Eur Futr Sep17 Xcme 20170918	3.88
☼	81 mil	3mo Euro Euribor Jun18 Ifll 201806	3.37
☼	45 mil	Euro-Bobl Future Sep16 Xeur 201609	2.50
☼	49 mil	Us 5yr Note (Cbt) Sep16 Xcbt 20160	2.23
☼	56 mil	Aust 10y Bond Fut Sep16 Xsfe 20160	2.15
☼	28 mil	Long Gilt Future Sep16 Ifll 201609	1.77

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:	American Beacon	Base Currency:	USD	Incept:	08-19-2014
Manager:	Multiple	Ticker:	AHLAX	Type:	MF
Tenure:	2.2 Years	Minimum Initial Purchase:	$2,500	Total Assets:	$471.14 mil
Objective:	Growth	Purchase Constraints:	—		

Fund Profile
Collins Long/Short Credit

By Josh Charlson, CFA

Advisor
Collins Capital Investments

Advisor Location
Coral Gables, Florida

Subadvisor
Pinebank Asset Management

Assets Under Management
$41.4 million

Inception Date
Feb. 27, 2015

Investment Type
Mutual fund

Morningstar Category
Long-short credit

Purpose
This fund invests long and short in corporate credits, taking an active approach to exposure management and a concentrated approach to portfolio construction. It may appeal to investors seeking an investment that may generate alpha from the credit markets and who have a higher appetite for risk.

People
Lead manager Oren Cohen founded Pinebank Asset Management in 2004, where he also serves as CIO. Cohen ran a hedge fund there in a substantially similar way to this mutual fund. He also subadvised a long-short credit sleeve of the now defunct Collins Alternative Solutions from 2012 to 2015. Prior to founding Pinebank, Cohen spent two years as a partner at Trilogy Capital and before that 11 years as a sell-side analyst at Salomon Brothers, Bear Stearns, and Merrill Lynch, covering the high-yield and media sectors. This fund also has a named manager from Collins, Richard de Garis. He serves in an oversight role, responsible both for subadvisor selection and monitoring and risk management. Cohen also benefits from support from a team of credit analysts at Cohanzick Management, a firm of which Pinebank is an affiliate, and where Cohen is also a principal.

Process
Cohen employs both top-down and bottom-up methods in running this fund. From a top-down perspective, he looks to vary the fund's market exposure throughout the credit cycle, making adjustments based on the economy's point in the business cycle, the status of credit spreads, valuations, and other risk factors that Cohen may identify on a qualitative basis. Historically, over the life of the hedge fund, Cohen has altered net exposure dramatically in periods of market stress or extremes. For instance, during the 2007-08 period of the financial crisis, Pinebank's net exposure reached a low at negative 50%, while by July 2009 net exposure had turned positive to about 40% net. Although Cohen has a fairly successful track record of managing exposure, active approaches like this do take on timing risk of being early or late at inflection points. Cohen's approach to security selection is based on fundamentals, however. Because he typically invests in lower-rated credits, he is particularly mindful of risk management and pays close attention to asset coverage, free cash flow, and liquidity, with stress-testing of individual credits and the portfolio conducted regularly. The fund will also invest in securities at different levels in the capital structure, depending on where Cohen believes the best relative opportunities lie.

Portfolio
Cohen believes in running a concentrated portfolio, so the fund will average between 35 and 40 names (as of Aug. 31, 2016, the portfolio held 31 individual securities). The fund does have some

limits on position size and looks to diversify across industries and the capital structure, but there is certainly concentration risk here. Position sizes typically range from 2% to 10% of assets, with a 10% limit on a single issuer. Since mid-2015, Cohen has kept the portfolio's net exposure in the 50% to 60% range, with minimal use of shorting, as he has not found a lot of compelling short opportunities. Instead he's used cash to reduce net exposure, while keeping duration at around two years (including cash). As of Aug. 31, of the fund's 57% of assets invested in high-yield bonds, about 25% was in bonds rated B or higher. The remainder was split about evenly between B- and CCC+ (based on S&P ratings, according to data from Collins).

Price

The fund's fees are high. The expense ratios of both the A shares (2.09%) and the institutional shares (1.90%) rank high relative to similarly distributed peers. They are also higher than the long-short credit Morningstar Category average expense ratio of 1.78%.

Collins Long/Short Credit A (USD)

Standard Index	Category Index	Morningstar Cat
Barclays US Agg Bond TR USD	BofAML USD LIBOR 3 Mon CM	US OE Long-Short Credit

Performance 09-30-2016

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2014	—	—	—	—	—
2015	—	0.20	-1.05	-0.85	—
2016	1.03	2.45	2.01	—	5.58

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	—	—	—	—	-0.81
Std 09-30-2016	—	—	—	—	-0.81
Total Return	4.69	—	—	—	2.44
+/- Std Index	-0.50	—	—	—	—
+/- Cat Index	4.19	—	—	—	—
% Rank Cat	38	—	—	—	
No. in Cat	75	—	—	—	

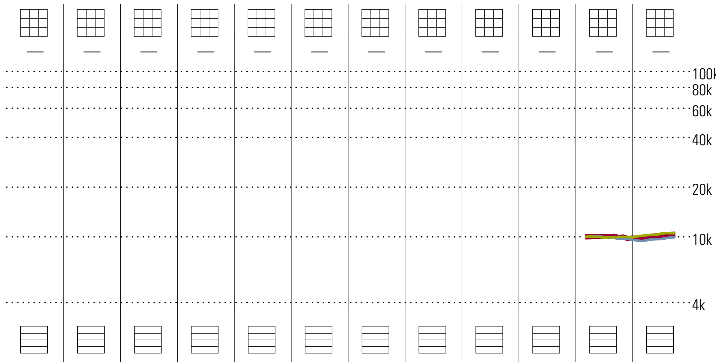
	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield	—	—

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 855-552-5863 or visit www.collinsalternativefunds.com.



Investment Style
Equity
Stock %

Growth of $10,000
Collins Long/Short Credit A 10,390
Category Average 9,950
Standard Index 10,518

Performance Quartile (within category)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	09-16	History
—	—	—	—	—	—	—	—	—	—	9.60	9.93	NAV/Price
—	—	—	—	—	—	—	—	—	—	—	5.58	Total Return %
—	—	—	—	—	—	—	—	—	—	—	-0.21	+/- Standard Index
—	—	—	—	—	—	—	—	—	—	—	5.12	+/- Category Index
—	—	—	—	—	—	—	—	—	—	—	—	% Rank Cat
—	—	—	—	—	—	—	—	—	—	—	75	No. of Funds in Cat

Fees and Expenses

Sales Charges

Front-End Load %	**5.00**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	1.35
12b1 Expense %	0.25
Net Expense Ratio %	**1.75**
Gross Expense Ratio %	**5.65**

Risk and Return Profile

	3 Yr *31 funds*	5 Yr *22 funds*	10 Yr *1 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	1.76%

Portfolio Analysis

Asset Allocation %	Net %	Long %	Short %
Cash	0.00	0.00	0.00
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	100.00	100.00	0.00
Total	100.00	100.00	0.00

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	—	—

Share Chg since	Share Amount	Holdings: 0 Total Stocks , 0 Total Fixed-Income, 93% Turnover Ratio	% Net Assets
—			

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:	Collins	Base Currency:	USD	Purchase Constraints:	—
Manager:	Multiple	Ticker:	CLCAX	Incept:	02-27-2015
Tenure:	1.7 Years	Minimum Initial Purchase:	$2,500	Type:	MF
Objective:	Growth and Income	Min Auto Investment Plan:	$2,500	Total Assets:	$45.90 mil

Fund Profile
Dreyfus Global Real Return

By Josh Charlson, CFA

Advisor
Dreyfus

Advisor Location
New York, New York

Subadvisor
Newton Investment Management

Assets Under Management
$1.3 billion

Inception Date
May 12, 2010

Investment Type
Mutual fund

Morningstar Category
Multialternative

Purpose
This fund takes a multiasset, theme-based, unconstrained approach to investing in global markets. The fund aims for returns of cash plus 4% over the long term, with considerable attention to capital preservation and risk reduction. Investors may use it within the context of a goals-based portfolio (seeking to achieve certain return and volatility targets) or as a moderate-return diversifier to a global-equity allocation.

People
London-based subadvisor Newton Investment Management (a subsidiary of BNY Mellon) has a 30-year history of running global multiasset portfolios, and its management team has run versions of the global real-return strategy (with around $19 billion in total assets under management) on which this fund is based since 2004. The real-return portfolio management team is composed of eight people. The named managers for the U.S. fund are Suzanne Hutchins and Aron Pataki. Hutchins had worked for Newton for 14 years before leaving in 2005; she rejoined the firm in 2010. She has a general management role in the group and also chairs the real-return committee meetings. Pataki joined Newton in 2006 and focuses on risk management. Iain Stewart is the overall leader of the real-return group and is a named manager on U.K. versions of the strategy. Other members of the team tend to divvy up particular specialties, such as macro trends, credit, and security selection. They are also supported by a 29-person research team at Newton that supplies many of the specific investment ideas for the fund.

Process
The strategy aims for a cash plus 4% return over five-year periods, with volatility closer to that of bonds. The team uses a theme-based approach, with longer-term structural trends identified formally by Newton's global strategy group. The portfolio typically features around 15 themes; the list tends to evolve over three- to four-year periods. Recent themes include aging populations, China influence, central bank interventions, and demand for healthcare, among others. These are translated into specific investment ideas by Newton's research analysts and the real-return team; the fund invests directly in securities in the long book rather than via a fund-of-funds structure but does not use direct shorting or leverage. Management divides the portfolio conceptually into two buckets: one return-seeking and one hedging or stabilizing. The return-seeking bucket consists of investments in traditional, beta-oriented asset classes such as equities, corporate bonds, and convertibles. The stabilizing bucket is intended as more of a diversifier or hedge; it may consist of a large number of potential asset types, but among the more commonly used ones are government bonds, active

currency trades, currency hedges, derivatives-based hedges (such as puts or shorts on futures), and gold or precious metals. Management has wide latitude to shift allocations and exposures based on its macro views as well as its assessment of relative value between asset classes.

Portfolio

As of Aug. 31, 2016, the Newton management team's cautious views on global growth and risks had led to relatively conservative positioning in this fund. Of note, on a net basis, the return-seeking core of the portfolio represented only 21% of the portfolio (down from 29% earlier in the year and at the low end of the historical range), while the stabilizing bucket represented 51% of assets, and a separate equity-protection overlay constituted 28% of the portfolio. Equities represent 46% of the portfolio on a gross basis, and within that sleeve, management has emphasized more-defensive sectors such as healthcare, utilities, and tobacco. The top stock holding was Wolters Kluwer WOLTF, at 2.6% of assets (the fund caps individual stock positions at 5%). In the currency sleeve, the fund was long the U.S. dollar and short the Australian and New Zealand dollars, the euro, and the pound sterling. Government bonds represented 26% of assets and corporate bonds only 3%. The fund has long held a stake in gold, which stood at about 10%. And during 2016, the fund increased its equity protection through shorts on S&P 500 and FTSE futures.

Price

The fund's three largest share classes in terms of assets are the Y, I, and A shares, which together constitute nearly all of the fund's $1.3 billion in AUM. All three share classes receive a Morningstar Fee Level of Low, meaning they are priced well relative to similarly distributed alternative funds. The Y shares charge 0.83% annually, the I shares 0.86%, and the A shares 1.15%.

Dreyfus Global Real Return A (USD)

Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
★★★★ 252 US OE Multialternative	Morningstar Mod Tgt Risk TR USD	Morningstar Mod Tgt Risk TR USD	US OE Multialternative

Performance 09-30-2016

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2014	1.63	2.43	-0.46	0.46	4.10
2015	2.27	-2.29	-0.96	0.82	-0.22
2016	3.30	4.45	-0.67	—	7.18

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	1.85	2.27	3.63	—	3.67
Std 09-30-2016	1.85	—	3.63	—	3.67
Total Return	8.07	4.31	4.86	—	4.64
+/- Std Index	-2.62	-0.93	-3.71	—	—
+/- Cat Index	-2.62	-0.93	-3.71	—	—
% Rank Cat	6	4	20	—	
No. in Cat	473	252	157	—	

	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 800-373-9387 or visit www.dreyfus.com.

Fees and Expenses

Sales Charges

Front-End Load %	**5.75**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	0.75
12b1 Expense %	NA
Net Expense Ratio %	**1.15**
Gross Expense Ratio %	**1.15**

Risk and Return Profile

	3 Yr 252 funds	5 Yr 157 funds	10 Yr 44 funds
Morningstar Rating™	4★	3★	—
Morningstar Risk	Avg	Avg	—
Morningstar Return	+Avg	Avg	—

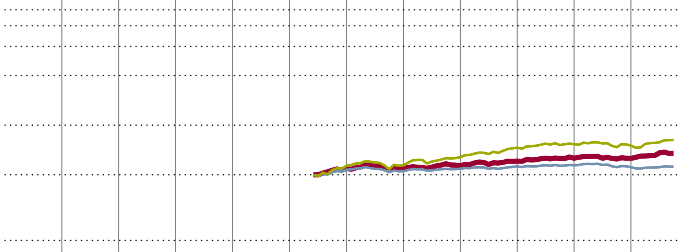
	3 Yr	5 Yr	10 Yr
Standard Deviation	4.56	4.67	—
Mean	4.31	4.86	—
Sharpe Ratio	0.93	1.02	—

MPT Statistics	Standard Index	Best Fit Index Morningstar Con Tgt Risk TR USD
Alpha	2.47	0.63
Beta	0.34	1.08
R-Squared	24.14	45.70

12-Month Yield	—
Potential Cap Gains Exp	-0.05%

Investment Style
Equity
Stock %

—	—	—	—	—	35	26	32	34	31	32	32



Growth of $10,000
- Dreyfus Global Real Return A 13,477
- Category Average 11,211
- Standard Index 16,272

Performance Quartile (within category)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	09-16	History
—	—	—	—	—	13.55	13.38	13.85	14.61	14.52	13.92	14.92	NAV/Price
—	—	—	—	—	—	-0.22	4.01	6.65	4.10	-0.22	7.18	Total Return %
—	—	—	—	—	—	-0.81	-8.03	-7.66	-0.79	1.57	-0.98	+/- Standard Index
—	—	—	—	—	—	-0.81	-8.03	-7.66	-0.79	1.57	-0.98	+/- Category Index
—	—	—	—	—	—	—	—	—	22	19	—	% Rank Cat
—	—	—	—	—	—	—	—	—	373	461	500	No. of Funds in Cat

Portfolio Analysis 08-31-2016

Asset Allocation %	Net %	Long %	Short %
Cash	-16.99	101.00	117.99
US Stocks	24.95	24.95	0.00
Non-US Stocks	44.40	44.40	0.00
Bonds	44.28	44.28	0.00
Other/Not Clsfd	3.37	3.37	0.00
Total	100.00	217.99	117.99

Equity Style
Value Blend Growth
Large Mid Small

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	21.7	1.21	1.11
P/C Ratio TTM	12.0	1.25	1.21
P/B Ratio TTM	2.6	1.29	1.18
Geo Avg Mkt Cap $mil	29078	1.08	1.48

Fixed-Income Style
Ltd Mod Ext
High Med Low

Avg Eff Maturity	12.04
Avg Eff Duration	8.83
Avg Wtd Coupon	—
Avg Wtd Price	106.31

Credit Quality Breakdown 06-30-2016	Bond %
AAA	58.79
AA	0.79
A	0.60
BBB	0.36
BB	1.12
B	1.87
Below B	0.00
NR	36.47

Regional Exposure	Stock %	Rel Std Index
Americas	44.8	0.64
Greater Europe	44.2	3.14
Greater Asia	11.0	0.69

Share Chg since 07-2016	Share Amount	Holdings: 65 Total Stocks , 41 Total Fixed-Income, 69% Turnover Ratio	% Net Assets
⊕	38 mil	US Treasury Bond 3%	5.05
⊕	43 mil	US Treasury Note 1.75%	4.94
⊕	37 mil	US Treasury Bond 3%	4.93
⊕	41 mil	US Treasury Note 1.5%	4.66
⊕	34 mil	US Treasury Note 2%	3.95
⊕	492,438	Microsoft Corp	3.20
⊕	33 mil	Australia(Cmnwlth) 3.25%	3.17
⊕	649,846	CMS Energy Corp	3.09
⊕	615,682	Wolters Kluwer NV	2.92
⊕	662,000	Japan Tobacco Inc	2.90
⊕	24 mil	Tsy Corp Victoria 5.5%	2.71
⊕	413,208	Eversource Energy	2.52
⊖	24 mil	Australia(Cmnwlth) 3.75%	2.43
⊕	183,885	Accenture PLC A	2.39
⊕	1 mil	Vivendi SA	2.32

Sector Weightings	Stocks %	Rel Std Index
Cyclical	**27.0**	**0.69**
Basic Materials	13.6	2.63
Consumer Cyclical	11.4	1.00
Financial Services	0.0	0.00
Real Estate	2.0	0.32
Sensitive	**23.5**	**0.63**
Communication Services	3.9	0.95
Energy	0.0	0.00
Industrials	5.0	0.44
Technology	14.6	0.98
Defensive	**49.5**	**2.12**
Consumer Defensive	12.4	1.37
Healthcare	20.6	1.97
Utilities	16.6	4.27

Operations

Family:	Dreyfus	Base Currency:	USD	Purchase Constraints:	—
Manager:	Multiple	Ticker:	DRRAX	Incept:	05-12-2010
Tenure:	5.8 Years	Minimum Initial Purchase:	$1,000	Type:	MF
Objective:	Growth and Income	Minimum IRA Purchase:	$750	Total Assets:	$1,341.16 mil

Fund Profile
Schwab Hedged Equity

By Josh Charlson, CFA

Advisor
Charles Schwab Investment Management

Subadvisor
Mellon Capital Management

Advisor Location
San Francisco, California

Assets Under Management
$200.7 million

Inception Date
Sept. 3, 2002

Investment Type
Mutual fund

Morningstar Category
Long-short equity

Purpose
This fund takes a consistently hedged stance on the stock market, with 60% long exposure and 40% exposure to a market-neutral long-short sleeve. Thus, it can serve investors who are seeking lower-volatility exposure to the equity market or who want stock exposure with some downside protection.

People
Although the fund has an inception date of 2002, lead portfolio manager Jonas Svallin has been running this fund only since August 2012, and he significantly revamped it at that time. Svallin brings a solid track record of long-short and market-neutral investing, having spent a number of years as a portfolio manager for a quantitative market-neutral hedge fund. Svallin also acts as head of active equity strategies at Charles Schwab Investment Management (CSIM). He is joined on the portfolio management team by Wei Li, who prior to joining Schwab in 2012, spent more than a decade at BGI/Blackrock in research and portfolio management positions. They are supported by four other experienced research personnel on the active equity team. In addition, management relies on the Schwab Equity Rating system for ranking stocks in its universe, a long-standing quantitative system run by a separate group at Schwab.

Process
From a broad perspective, the fund seeks to provide an average beta of 0.6 over time, via a 100% long portfolio and a 40% short portfolio. This results in roughly 140% gross exposure and 60% net exposure, though management has the ability to vary short exposure by greater amounts based on its macro views. Management begins by using the proprietary Schwab Equity Ratings to winnow down a 3,000-stock universe to a more manageable 1,600. From that point, the managers use their own systematic process to further filter stocks, based on three primary factors: fundamentals (quality metrics like profitability), valuation, and momentum. Generally speaking, the highest-ranked stocks are long positions, while management takes short positions in the lowest-ranked stocks. Unlike purely quantitative funds, however, this fund's management team integrates a qualitative component into the process. Members of the team will scrutinize companies for accounting practices or potential corporate actions, for example, and these assessments are ultimately fed back into the stock rankings, and further optimization identifies which longs and shorts will be selected for the portfolio. They also take into consideration the fund's risk budget and turnover target (simply going by the quantitative ratings would entail too much turnover and transaction costs). Svallin's team will also occasionally use third-party research to buttress its own work.

Portfolio

Svallin aims for an average net exposure of around 60%, or a beta of 0.6. That is typically derived from a portfolio that's 100% long and 40% short. The fund does have a pronounced smaller-cap bias relative to the S&P 500. As of June 30, 2016, the fund had around 60% of its long book in mid- or small-cap stocks, versus only 13% for the benchmark. The previous year's annual turnover of 146% was significantly lower than the long-short equity Morningstar Category average of 283%. Svallin tends to take a longer-term perspective on both his long and short holdings, whereas many competitors trade their shorts more frequently. As of June 30, the fund held 139 stocks long and 87 short, a fairly well-diversified portfolio but not without some concentration risk, particularly on the short side of the book. The fund's largest single-stock long position was Amazon AMZN at 2.84%, while its biggest short was Martin Marietta MLM, at negative 1.45%. In recent years the fund has stayed within about 5 percentage points of its 40% short exposure target, but in the past it has deviated further; in June 2008, for example, short exposure was as high as 50%.

Price

The fund's expenses are capped at 1.33% by a fee waiver that does not have an expiration date and earn a Morningstar Fee Level of Below Average relative to other no-load alternative funds. The expense ratio is also significantly below the long-short equity category average of 1.92%. M

Schwab Hedged Equity (USD)

Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
★★★★ 163 US OE Long-Short Equity	S&P 500 TR USD	S&P 500 TR USD	US OE Long-Short Equity

Performance 09-30-2016

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2014	3.00	2.14	1.40	3.55	10.46
2015	1.05	-0.52	-2.68	1.81	-0.39
2016	1.11	-0.65	5.20	—	5.69

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	7.60	7.35	9.69	3.80	6.51
Std 09-30-2016	7.60	—	9.69	3.80	6.51
Total Return	7.60	7.35	9.69	3.80	6.51
+/- Std Index	-7.83	-3.81	-6.69	-3.44	—
+/- Cat Index	-7.83	-3.81	-6.69	-3.44	—
% Rank Cat	12	6	24	54	
No. in Cat	325	163	89	27	

	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 800-435-4000 or visit www.schwab.com.

Fees and Expenses

Sales Charges

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

Fund Expenses

Management Fees %	1.05
12b1 Expense %	NA
Net Expense Ratio %	**1.33**
Gross Expense Ratio %	**1.84**

Risk and Return Profile

	3 Yr 163 funds	5 Yr 89 funds	10 Yr 27 funds
Morningstar Rating™	5★	4★	3★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	High	+Avg	Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	7.56	7.94	9.76
Mean	7.35	9.69	3.80
Sharpe Ratio	0.96	1.20	0.35

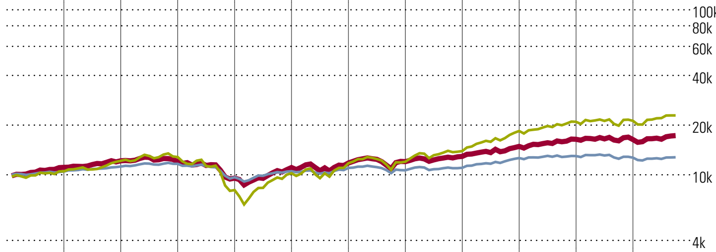
MPT Statistics	Standard Index	Best Fit Index Russell 3000 TR USD
Alpha	0.22	0.66
Beta	0.64	0.63
R-Squared	83.21	84.89

12-Month Yield	—
Potential Cap Gains Exp	8.96%

Investment Style
Fixed-Income Bond %

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	09-16
0	0	0	0	0	0	0	1	0	0	0	0

Growth of $10,000



Schwab Hedged Equity 17,277
Category Average 12,766
Standard Index 22,901

Performance Quartile (within category)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	09-16	**History**
14.58	15.89	15.54	12.34	14.30	15.24	15.53	16.71	17.67	17.09	15.30	16.17	NAV/Price
10.91	9.57	-1.21	-20.51	15.88	6.57	1.90	7.60	14.98	10.46	-0.39	5.69	Total Return %
6.00	-6.23	-6.71	16.49	-10.58	-8.49	-0.21	-8.41	-17.41	-3.23	-1.78	-2.15	+/- Standard Index
6.00	-6.23	-6.71	16.49	-10.58	-8.49	-0.21	-8.41	-17.41	-3.23	-1.78	-2.15	+/- Category Index
12	23	77	65	30	24	25	35	46	10	39	—	% Rank Cat
54	98	143	152	195	216	145	191	241	326	439	359	No. of Funds in Cat

Portfolio Analysis 06-30-2016

Asset Allocation %	Net %	Long %	Short %
Cash	41.15	41.15	0.00
US Stocks	57.19	93.98	36.78
Non-US Stocks	2.20	3.21	1.01
Bonds	0.00	0.00	0.00
Other/Not Clsfd	-0.54	0.00	0.54
Total	100.00	138.33	38.33

Equity Style
Value Blend Growth
Large Mid Small

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	14.3	0.73	0.88
P/C Ratio TTM	6.4	0.52	0.61
P/B Ratio TTM	2.0	0.73	0.97
Geo Avg Mkt Cap $mil	9465	0.12	0.32

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	100.0	1.00
Greater Europe	0.0	0.00
Greater Asia	0.0	0.00

Share Chg since 03-2016	Share Amount	Holdings: 226 Total Stocks , 0 Total Fixed-Income, 146% Turnover Ratio	% Net Assets
☼	2,850	S+p500 Emini Fut Sep16 Xcme 201609	3.02
⊖	7,831	Amazon.com Inc	2.84
	28,707	Amgen Inc	2.21
	323,460	Bank of America Corporation	2.17
	71,733	Merck & Co Inc	2.09
⊕	48,338	Gilead Sciences Inc	2.04
⊖	94,361	Citigroup Inc	2.03
⊖	17,007	C.R. Bard Inc	2.03
⊕	211,253	Dean Foods Co	1.94
⊕	46,225	Cardinal Health Inc	1.83
⊖	45,386	Lowe's Companies Inc	1.82
⊕	211,444	R.R.Donnelley & Sons Co	1.81
⊖	55,784	Darden Restaurants Inc	1.79
☼	126,204	Smith & Wesson Holding Corp	1.74
	19,529	Huntington Ingalls Industries Inc	1.66

Sector Weightings	Stocks %	Rel Std Index
Cyclical	**36.4**	**1.20**
Basic Materials	5.0	1.80
Consumer Cyclical	16.7	1.52
Financial Services	12.6	0.89
Real Estate	2.1	0.85
Sensitive	**38.5**	**0.93**
Communication Services	1.2	0.26
Energy	7.2	0.99
Industrials	14.8	1.37
Technology	15.3	0.81
Defensive	**25.1**	**0.90**
Consumer Defensive	4.7	0.47
Healthcare	18.7	1.26
Utilities	1.8	0.55

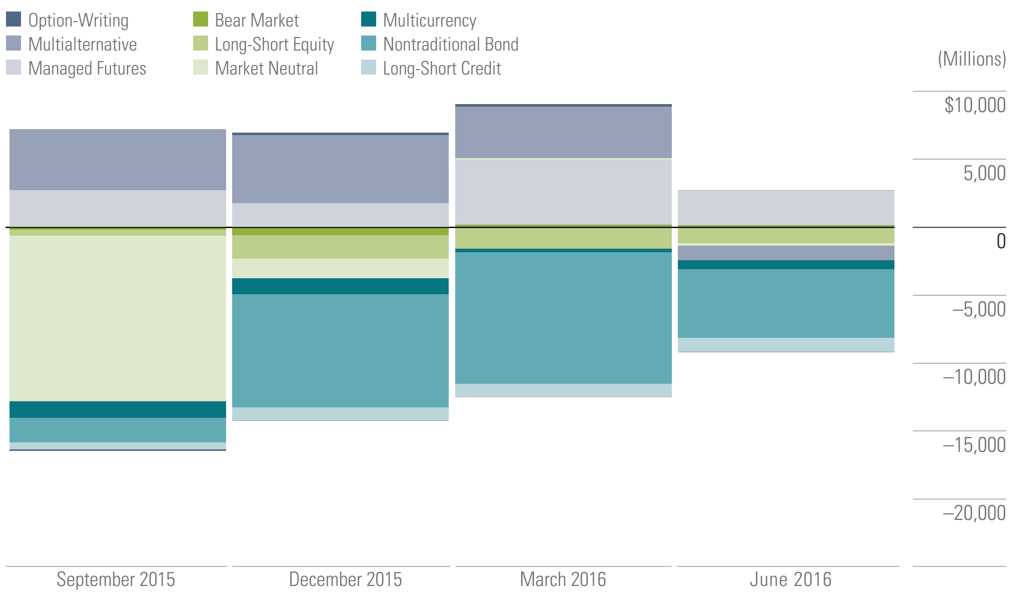
Operations

Family:	Schwab Funds	Base Currency:	USD	Incept:	09-03-2002
Manager:	Multiple	Ticker:	SWHEX	Type:	MF
Tenure:	4.2 Years	Minimum Initial Purchase:	$100	Total Assets:	$202.73 mil
Objective:	Growth	Purchase Constraints:	—		

Quarterly Data Review: Q2 2016
Flows and Assets Under Management
Alternative Mutual Funds

By Josh Charlson

Exhibit 1 Quarterly Alternative Mutual Fund Flows

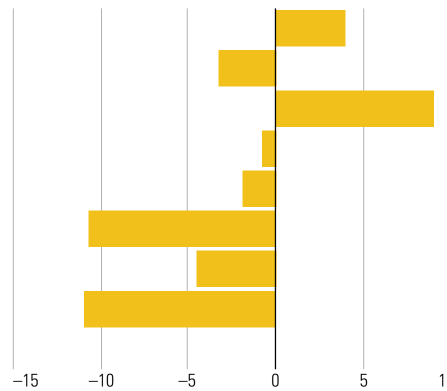


Source: Morningstar, Inc. Effective Date: 09/1/2015-6/30/2016.

During the second quarter of 2016, alternative mutual funds' net outflows amounted to $6.4 billion, continuing the trend from the previous quarter's outflows of roughly $3.4 billion. Bear market, managed futures, and option-writing were the only Morningstar Categories that experienced inflows in the second quarter, with $129 million, $2.5 billion, and $4 million, respectively. Managed-futures funds have continued an ongoing trend of significant inflows since 2014, while bear-market funds have experienced inflows since the start of 2016. Non-traditional-bond ($5 billion), long-short equity ($1.2 billion), multialternative ($1.8 billion), multicurrency ($673 million), and long-short credit ($1 billion) funds faced outflows for the fourth consecutive quarter, while market-neutral ($185 million) funds saw outflows for the first time in 2016.

Exhibit 2 Quarterly Alternative Mutual Fund Organic Growth

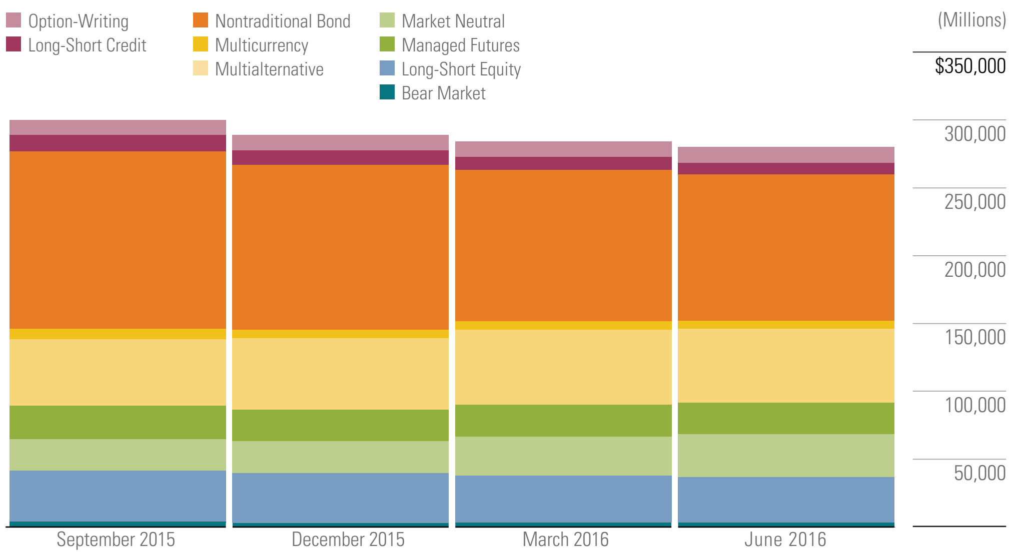
Morningstar Category	%
Bear Market	3.94
Long-Short Equity	–3.29
Managed Futures	8.98
Market Neutral	–0.80
Multialternative	–1.91
Multicurrency	–10.68
Nontraditional Bond	–4.54
Long-Short Credit	–10.93
Option-Writing	0.04



Source: Morningstar, Inc. Data as of 6/30/2016.

In the second quarter of 2016, the category with the strongest organic growth (that is, growth reflective of net inflows and excluding market appreciation) was the managed-futures category, which grew 8.9%. Positive organic growth was also experienced by the bear-market and option-writing categories, with 3.9% and 0.04% growth rates, respectively. The six other categories experienced negative organic growth rates, including long-short equity (negative 3.3%), nontraditional bond (negative 4.5%), multialternative (negative 1.9%), market neutral (negative 0.8%), multicurrency (negative 10.7%), and long-short credit (negative 10.9%).

Exhibit 3 Quarterly Alternative Mutual Fund Assets Under Management

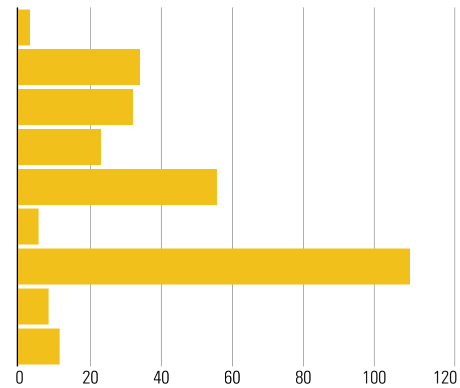


Source: Morningstar, Inc. Data as of 6/30/2016.

Assets under management for all alternative mutual funds decreased by 1.44% quarter over quarter, totaling $279 billion at the end of June 2016. Six of the nine alternative mutual fund categories decreased in assets in the second quarter. Long-short credit and multicurrency experienced the largest percentage losses in assets quarter over quarter, losing 9.97% and 9.41%, respectively. Market-neutral, multialternative, long-short equity, and non-traditional-bond funds all also showed losses this quarter. Managed-futures, bear-market, and option-writing funds fared well over the quarterly time frame, increasing assets 10.54%, 1.77%, and 1.82%, respectively.

Exhibit 4 Quarter-End Alternative Mutual Fund Assets by Morningstar Category

Morningstar Category	$ Billion
Bear Market	3.35
Long-Short Equity	33.68
Managed Futures	31.67
Market Neutral	22.96
Multialternative	54.69
Multicurrency	5.71
Nontraditional Bond	107.69
Long-Short Credit	8.53
Option-Writing	11.57

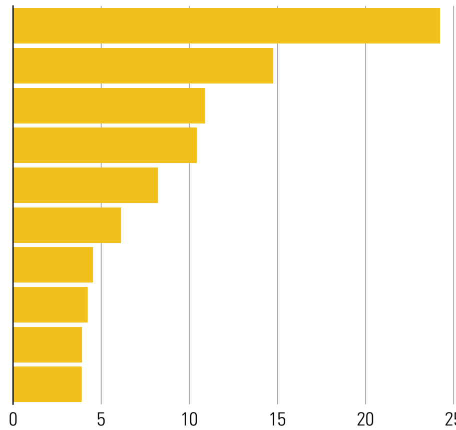


Source: Morningstar, Inc. Data as of 6/30/2016.

By the end of the second-quarter 2016, the non-traditional-bond category captured 41% of alternative fund assets, with $107.7 billion. The second-largest category was multialternative at $54.7 billion, accounting for about 21% of the total. The long-short equity and managed-futures categories held similar assets, at $33.7 billion and $31.7 billion, respectively. Market neutral accounted for 8.84% of alternative fund assets, with $22.9 billion, while long-short credit and option-writing held $8.5 billion and $11.6 billion fund assets, respectively. Multicurrency and bear market were the smallest, at $5.7 billion and $3.3 billion, respectively.

Exhibit 5 Largest Mutual Fund Firms by Alternative Assets Under Management

Fund Family	$ Billion	% of Total
AQR Funds	13.83	24.21
Natixis Funds	8.44	14.77
John Hancock	6.21	10.88
PIMCO	5.95	10.40
Robeco Boston Partners	4.69	8.22
BlackRock	3.49	6.11
Blackstone	2.59	4.54
Diamond Hill Funds	2.42	4.23
Westchester Capital	2.22	3.90
Calamos	2.22	3.89

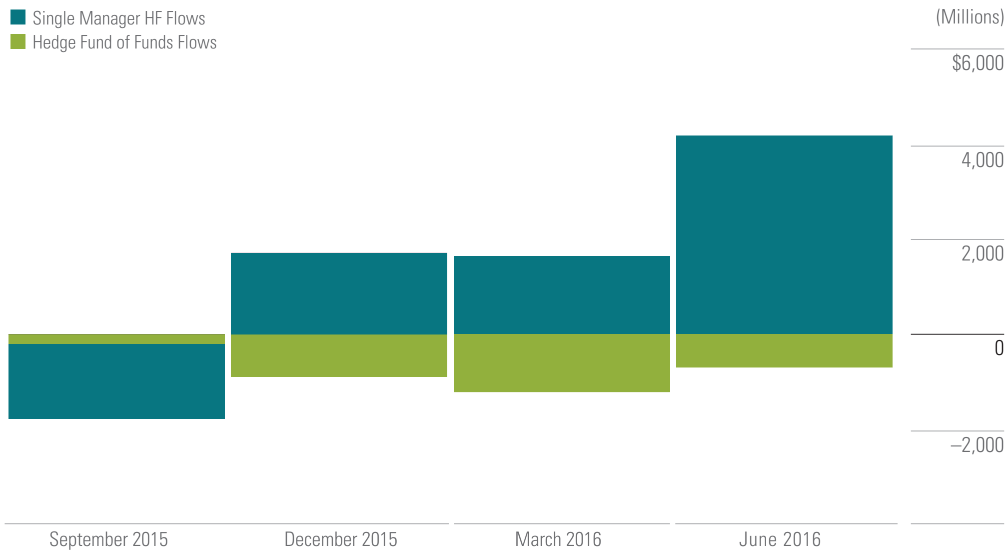


Source: Morningstar, Inc. Data as of 6/30/2016.

By the end of the second quarter in 2016, AQR ran the most money in alternative mutual fund assets, with 24.21% of the total, thanks in particular to the dominance of AQR Managed Futures in the managed-futures category. Natixis, which has seen significant growth in assets in the products run by affiliate AlphaSimplex Group, ranked second with 14.77% of the total. Traditional fund companies John Hancock and PIMCO took the next two spots, at about 10% each, with their growing emphasis on alternative strategies bearing fruit. John Hancock Global Absolute Return Strategies, subadvised by Standard Life, is now one of the largest alternative mutual funds in the United States. Robeco Boston Partners, with its suite of long-short equity funds, followed with an 8.22% share, while relative newcomer Blackstone (though the firm has a long history in the hedge fund space) slipped into the seventh spot with a 4.54% share.

Flows and Assets Under Management
Hedge Funds

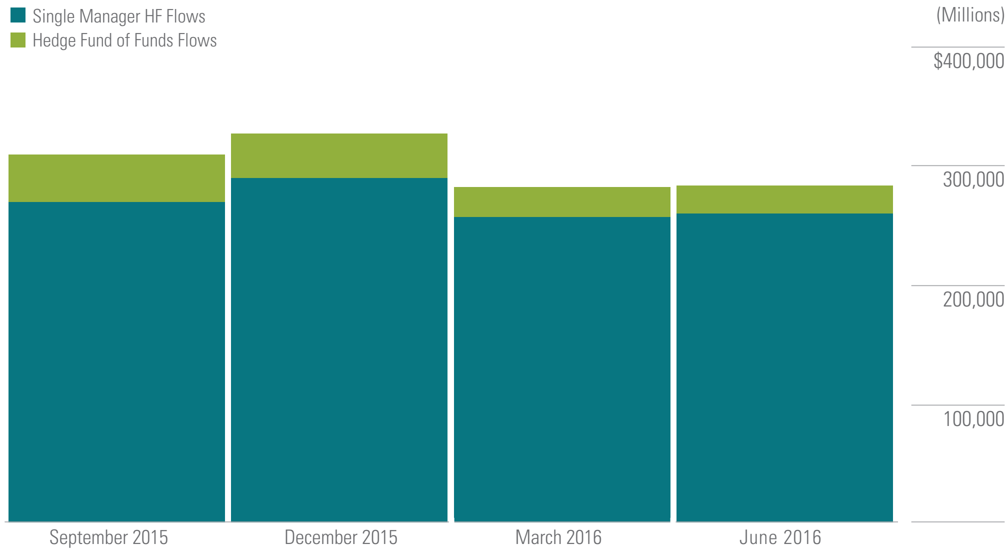
Exhibit 6 Quarterly Estimated Hedge Fund Net Flow



Source: Morningstar, Inc. Data as of 6/30/2016.
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.

Single-manager hedge funds in Morningstar's database experienced inflows of $4.1 billion, and hedge funds of funds recorded outflows of $696 million during the second quarter of 2016. Global macro (single-manager) hedge funds experienced the highest inflows, with more than $2.7 billion. Global long-short equity (single-manager) trailed with the second-highest inflows at $1.5 billion, marking a fourth consecutive quarter of inflows. Systematic futures, Europe long-short equity, and event-driven (single-manager) hedge funds demonstrated the largest outflows of $2.3 billion, $264 million, and $180 million, respectively. For hedge funds of funds, no categories displayed positive flows in the second quarter. Equity funds experienced the largest outflows ($250 million), followed by macro/systematic funds ($203 million); both have posted outflows for the fourth quarter in a row.

Exhibit 7 Quarterly Hedge Fund Total Net Assets Under Management

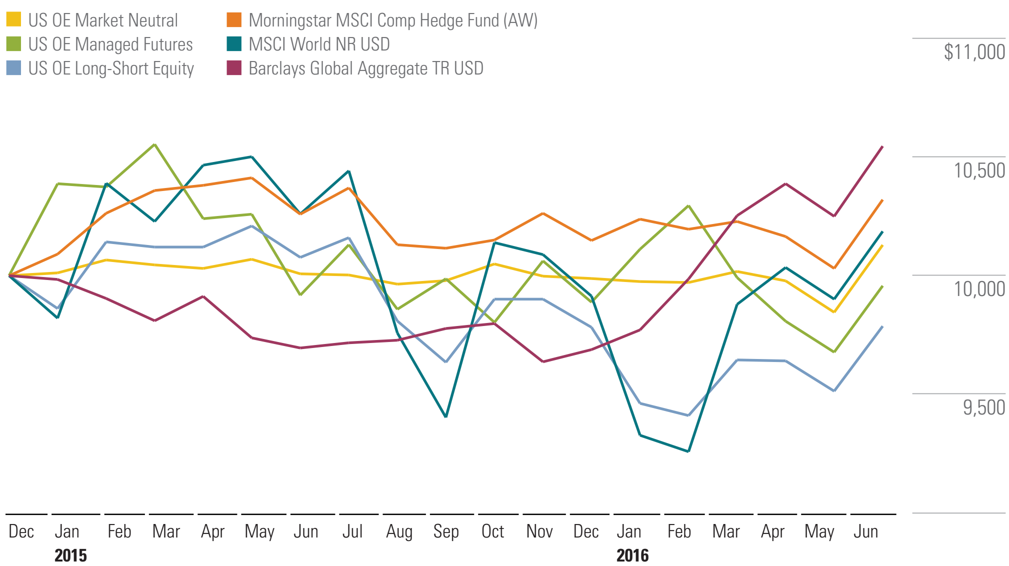


Source: Morningstar, Inc. Data as of 6/30/2016.

In the second quarter of 2016, assets under management for single-manager hedge funds in Morningstar's database increased by 1.19% to $260 billion. Despite gains over the previous quarter, assets have decreased by a total margin of 15.8% during the past year. Hedge funds of funds in Morningstar's database, on the other hand, managed 7.32% fewer assets than in the prior quarter, with $23.2 billion in assets recorded as of June 30, 2016. Assets under management for hedge funds of funds decreased 46.27% since June 2015. Overall, combined hedge fund assets increased by 0.43% in the second quarter and have declined 19.56% during 2016.

Alternative Investment Performance

Exhibit 8 Growth of a $10,000 Alternative Investment

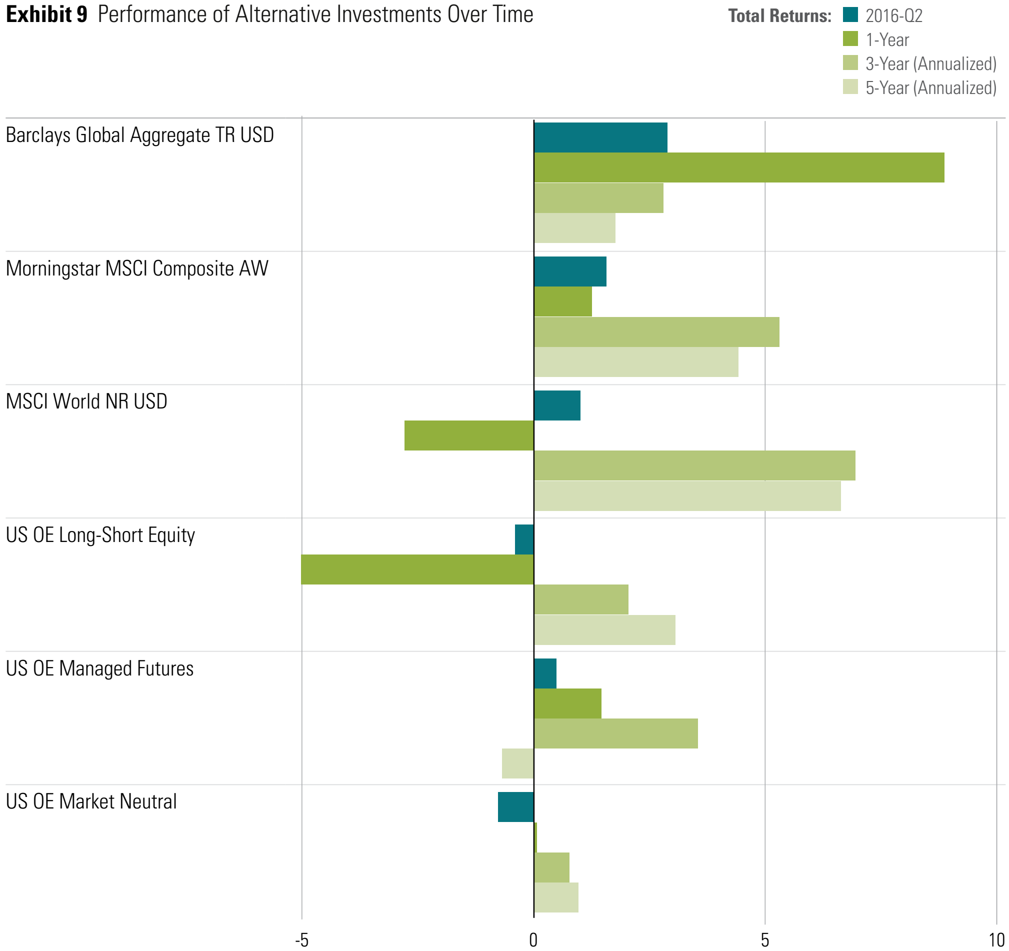


Source: Morningstar, Inc. Data as of 6/30/2016.
Morningstar no longer publishes proprietary hedge fund indexes. Morningstar now uses the Morningstar MSCI series of indexes, including the Morningstar MSCI Composite AW, a currency-hedged asset-weighted index of 1,000 hedge funds, or the applicable category averages.

In the second quarter of 2016, the long-short equity and market-neutral category averages displayed the only negative performance, losing 0.40% and 0.76%, respectively. In contrast, bonds experienced the sharpest gain this quarter, as measured by the Barclays Global Aggregate TR USD, rising 2.89%. Managed futures, global equity, as measured by the MSCI World Index, and hedge funds, as measured by the Morningstar MSCI Composite Hedge Fund Index, all experienced gains during the same time period. Over the three-year period ended June 30, 2016, global equities, as measured by the MSCI World Index, had the largest annualized return at 6.95%. Hedge funds, as represented by the Morningstar MSCI Composite Hedge Fund Index, had the next highest return of 5.30% annualized, followed by the managed-futures category's 3.55% return. Market-neutral funds were slightly positive over the period.

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.

Exhibit 9 Performance of Alternative Investments Over Time



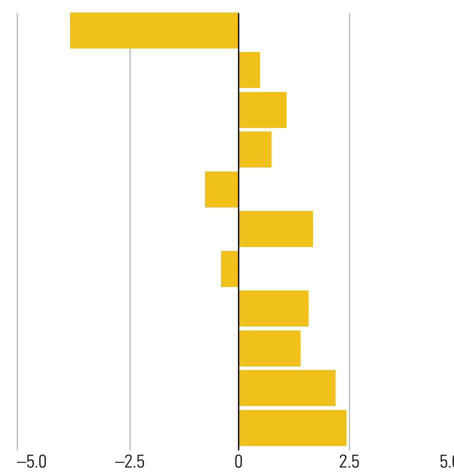
Source: Morningstar Direct. Data as of 6/30/2016.

Alternative investments posted sluggish returns in the second quarter of 2016. This is a continuing trend, in which alternatives have underperformed their more traditional counterparts. Over longer periods of time, alternatives have looked slightly more attractive. Global stocks, as represented by the MSCI World NR Index, steadily outperformed all other alternative investments over the three-year and five-year time frames (ended June 30, 2016) but had negative returns over the one-year period. Long-short equity funds displayed strong single-digit returns over the three- and five-year periods but lost more than 5% over the one-year period. Market-neutral funds posted low-single-digit returns over the trailing three- and five-year periods, with slightly positive returns during the past year. Global bonds, as represented by the Barclays Global Aggregate TR USD Index, have been strong performers, largely due to their one-year return of 8.87%. This has helped increase bonds' three-year and five-year returns to 2.80% and 1.77%, respectively.

Second-Quarter 2016 Performance by Category

Exhibit 10 Total Return % Q2 2016 by Category

	%
Bear Market	-3.85
Managed Futures	0.49
Multicurrency	1.09
Multialternative	0.75
Nontraditional Bond	-0.76
Market Neutral	1.70
Long-Short Equity	-0.40
Long-Short Credit	1.60
Option-Writing	1.41
Barclays U.S. Agg Bond	2.21
S&P 500	2.46

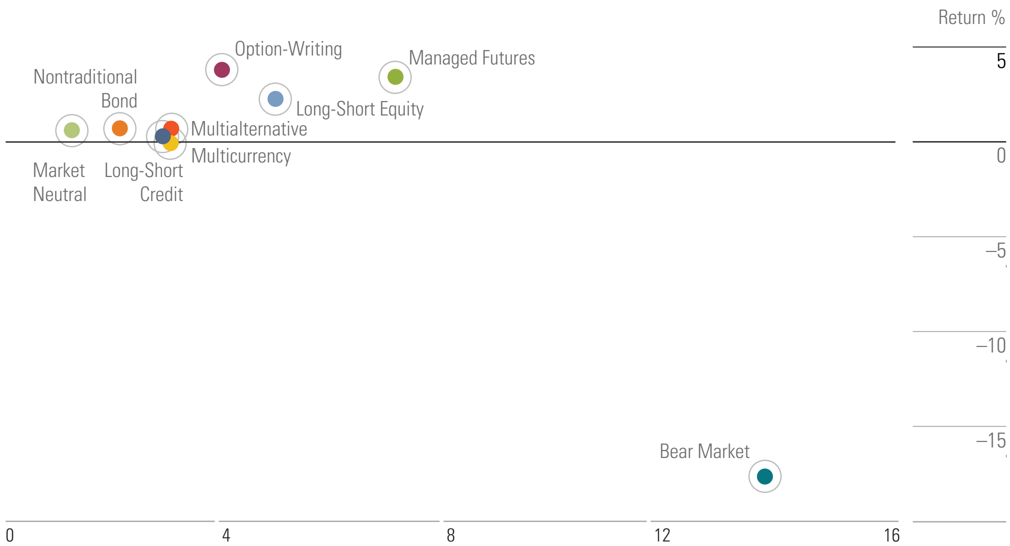


Source: Morningstar, Inc. Data as of 6/30/2016.

Alternative mutual funds posted varied returns in the second quarter of 2016. Bear market, nontraditional bond, and long-short equity all garnered negative returns, losing 3.85%, 0.76%, and 0.40%, respectively. Multicurrency, multialternative, managed futures, market neutral, long-short credit, and option-writing gained 1.09%, 0.75%, 0.49%, 1.70%, 1.60%, and 1.41%, respectively. Both the S&P 500 and Barclays U.S. Aggregate Bond TR Index outperformed all of the alternative mutual fund categories. The Barclays U.S. Aggregate Bond TR Index returned 2.21%, while the S&P 500 had a slightly higher return at 2.46%.

Risk Versus Return
Alternative Mutual Funds

Exhibit 11 3-Year Standard Deviation and Return



Source: Morningstar, Inc. Data as of 6/30/2016.

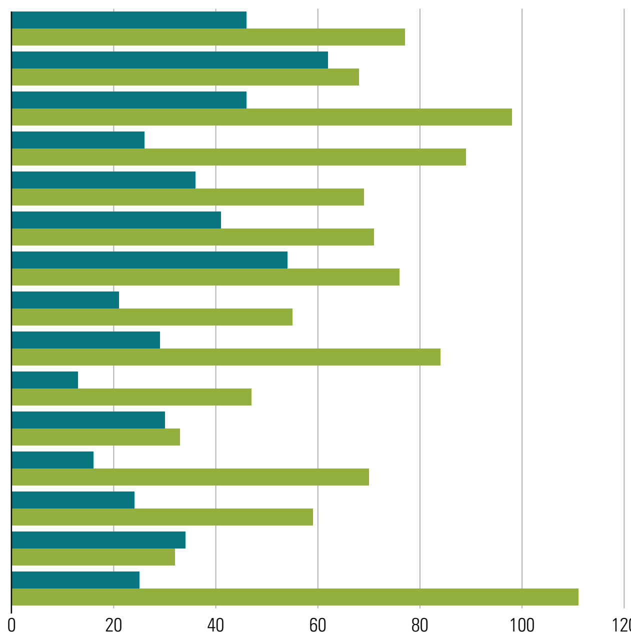
Of the nine alternative mutual fund category averages, seven displayed positive returns over the three-year period ended June 30, 2016. Option-writing funds produced the highest three-year total returns with 3.80%, while bear-market and multicurrency funds had the lowest returns at negative 17.62% and negative 0.06%, respectively. Option-writing funds also exhibited the best risk-adjusted return with a Sharpe ratio of 0.97, while bear-market and multicurrency funds displayed the lowest (negative 1.29 and negative 0.02).

Morningstar Hedge Fund Database Overview

As of 6-30-2016

Exhibit 12 Net Fund Additions by Month

	Month	Added	Removed
2015	April	46	77
	May	62	68
	June	46	98
	July	26	89
	August	36	69
	September	41	71
	October	54	76
	November	21	55
	December	29	84
2016	January	13	47
	February	30	33
	March	16	70
	April	24	59
	May	34	32
	June	25	111

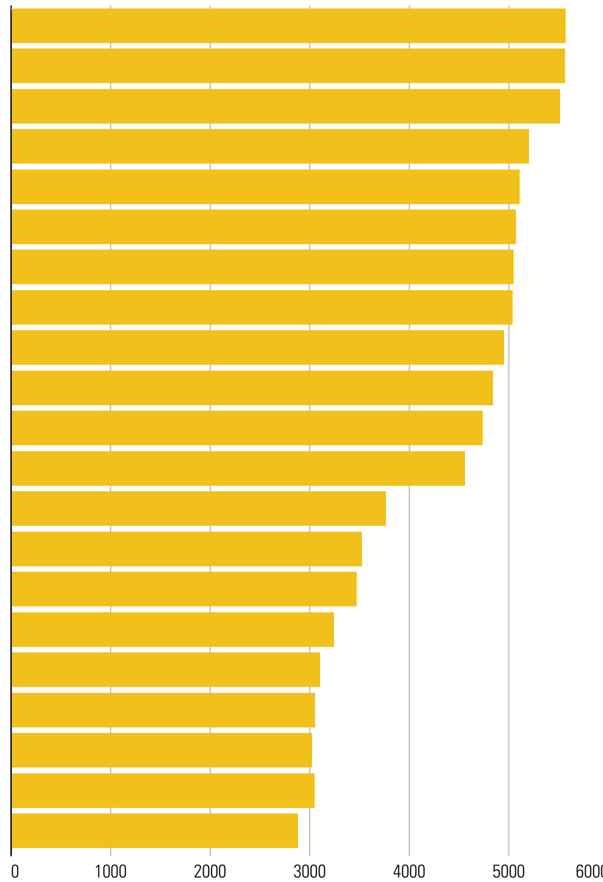


Source: Morningstar, Inc. Data as of 6/30/2016.

In the second quarter of 2016, Morningstar's hedge fund database experienced a net removal of 119 funds. During the quarter, the database saw 83 additions and 202 fund withdrawals. 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.

Exhibit 13 Month-End Database Fund Levels

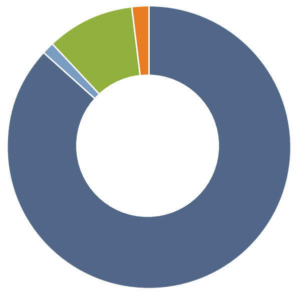
	Month	# of Funds
2014	October	5,566
	November	5,560
	December	5,513
2015	January	5,201
	February	5,105
	March	5,070
	April	5,045
	May	5,035
	June	4,949
	July	4,840
	August	4,732
	September	4,557
	October	3,765
	November	3,525
	December	3,467
2016	January	3,243
	February	3,103
	March	3,049
	April	3,020
	May	3,044
	June	2,882



Source: Morningstar, Inc. Data as of 6/30/2016.

As of June 30, 2016, the Morningstar hedge fund database contained 2,882 funds that actively report performance and assets-under-management data.

Exhibit 14 Hedge Funds by Region



	# of Funds
North America/Caribbean	2,504
Africa	36
Asia/Australia	289
Europe	53
South America	0
Other	0
Total	**2,882**

Source: Morningstar, Inc. Data as of 6/30/2016.

Approximately 87% 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. Roughly 2.1% of funds in Morningstar's database are domiciled in Europe, including both European Union and non-EU jurisdictions, and about 10% of funds are domiciled in Asia and Australia, primarily in China. All figures are as of June 30, 2016.

Exhibit 15 Hedge Funds by Location

North America / Caribbean	**2,504**
Cayman Islands	992
United States	936
Canada	207
British Virgin Islands	189
Bermuda	139
Curaçao	31
Bahamas	7
Barbados	3
Anguilla	—
Panama	—
St Kitts and Nevis	—
St. Vincent and the Grenadines	—

Africa	**36**
Mauritius	21
South Africa	13
United Arab Emirates	2
Swaziland	—
Seychelles	—

Asia/Australia	**289**
China	271
Australia	9
Hong Kong	2
Israel	2
India	1
Japan	1
Marshall Islands	1
Singapore	1
Vanuatu	1
Bahrain	—
Christmas Island	—

Europe	**53**
Luxembourg	14
Gibraltar	9
Jersey	9
Macedonia	4
United Kingdom	4
France	3
Guernsey	3
Switzerland	3
Channel Islands	2
Ireland	1
Malta	1
Andorra	—
Austria	—
Belgium	—
Cyprus	—
Denmark	—
Finland	—
Germany	—
Isle of Man	—
Italy	—
Liechtenstein	—
Netherlands	—
Norway	—
Portugal	—
Spain	—
Sweden	—

South America	**0**
Brazil	—
Chile	—

Source: Morningstar, Inc. Data as of 6/30/2016.

Approximately 98% of the hedge funds in Morningstar's database are domiciled in the United States, the Cayman Islands, Asia, and Europe.

Exhibit 16 Top 10 Hedge Fund Service Providers

Type	Rank	Prime Broker	% of Database
Prime Broker	1	Goldman Sachs	5.88
	2	Morgan Stanley	5.59
	3	Credit Suisse (Bahamas) Limited	4.31
	4	UBS	3.77
	5	J.P. Morgan	3.21
	6	Deutche Bank	3.01
	7	Bank of America	2.04
	8	NewEdge (U.K.)	1.94
	9	Interactive Brokers LLC	1.40
	10	Jefferies	1.00
Legal Counsel	1	Maples & Calder	5.00
	2	Walkers	3.35
	3	Seward & Kissel	2.62
	4	Sidley Austin LLP	2.14
	5	Ogier	2.04
	6	Dechert LLC	2.00
	7	Schulte Roth & Zabel	1.72
	8	Akin Gump	1.20
	9	Simmons & Simmons	1.16
	10	Conyers Dill & Pearman	1.00
Auditor	1	EY	11.04
	2	PricewaterhouseCoopers	10.64
	3	KPMG	9.34
	4	Deloitte	5.03
	5	Rothstein Kass	2.89
	6	RSM US LLP	1.56
	7	BDO	1.36
	8	Eisner Amper	1.12
	9	Grant Thornton LLP	0.92
	10	Arthur Bell	0.72
Administrator	1	Citco	4.61
	2	SS&C	3.45
	3	BNY	2.50
	4	HSBC	1.94
	5	Citi	1.78
	6	State Street	1.52
	7	RBC	1.38
	8	Northern Trust	1.28
	9	NAV Consulting	1.00
	10	UBS	0.92

Source: Morningstar, Inc. Data as of 6/30/2016.

Goldman Sachs, Morgan Stanley, and Credit Suisse are the largest prime brokerage-service providers to hedge funds in Morningstar's database, serving a 15.78% share combined. The big four accounting firms are employed by 36.05% of the hedge funds listed in Morningstar's database, with EY leading the pack. Citco provides administration services to 4.61% of funds in Morningstar's database, while SS&C services about 3.5%. Maples & Calder, Walkers, and Seward & Kissel are the three largest legal-counsel providers to hedge funds in the database, with a combined market share of about 11%. This data is as of June 2016.

Alternative Mutual Fund Correlations

Exhibit 17 3-Year Correlations: Alternative Mutual Fund Categories

Category	1	2	3	4	5	6	7	8	9
Bear Market	1.00								
Long-Short Equity	–0.97	1.00							
Managed Futures	0.10	–0.05	1.00						
Market Neutral	–0.67	0.75	0.06	1.00					
Multialternative	–0.90	0.93	0.21	0.73	1.00				
Multicurrency	–0.51	0.40	–0.17	0.32	0.46	1.00			
Nontraditional Bond	–0.71	0.70	–0.27	0.47	0.74	0.61	1.00		
Long-Short Credit	–0.65	0.68	–0.23	0.53	0.73	0.55	0.92	1.00	
Option-Writing	–0.97	0.97	–0.06	0.72	0.92	0.52	0.75	0.68	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

Source: Morningstar Direct. Data as of 6/30/2016.

Exhibit 18 Correlation of Alternative Mutual Funds to U.S. Stocks and Bonds

	S&P 500 Correlation			**Barclays U.S. Aggregate Correlation**		
	3-Year	5-Year	10-Year	3-Year	5-Year	10-Year
Bear Market	–0.97	–0.96	–0.96	0.04	0.13	–0.09
Long-Short Equity	0.96	0.97	0.95	–0.06	–0.20	0.00
Managed Futures	–0.06	–0.12	—	0.46	0.41	—
Market Neutral	0.72	0.78	0.23	0.14	–0.08	–0.03
Multialternative	0.90	0.89	0.92	0.20	0.11	0.19
Multicurrency	0.46	0.64	0.46	0.29	0.14	0.12
Nontraditional Bond	0.71	0.71	0.71	0.09	0.11	0.19
Long-Short Credit	0.64	0.68	0.64	0.23	0.16	0.12
Option-Writing	0.98	0.98	0.93	–0.05	–0.17	0.00

Source: Morningstar Direct. Data as of 6/30/2016.

About Morningstar® Manager Research

Morningstar Manager Research provides independent, fundamental analysis on managed investment strategies. Analyst views are expressed in the form of Analyst Ratings, which are derived through research of five key pillars—Process, Performance, Parent, People, and Price. A global research team issues detailed analyst reports on strategies that span vehicle, asset class, and geography.

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