Executive summary. In previous research examining various hedge fund categories and their potential role in an investor’s portfolio, Vanguard has found that many categories have exhibited mixed results. Furthermore, hedge fund categories have shown positive monthly correlations with a 60% U.S. equity/40% U.S. bond portfolio, thus raising the question of their potential portfolio diversification benefit (Bhardwaj, 2010). Still, investors remain focused on this “alternative” type of investing, with total assets under management of the various hedge fund categories climbing above $1.6 trillion as of year-end 2011 (Source: BarclayHedge, 2011).

This paper considers the cumulative annualized performance of individual hedge fund categories and their return correlations with a 60% equity/40% bond portfolio, but this time our analysis extended from November 2007 through December 2011. Performance refers to the returns exhibited by the hedge fund category compared to the returns of the benchmarks we used. In other words, did the hedge fund category return more or less than the benchmark? Correlation refers to how the
indexes moved in relation to the benchmarks. In other words, did the hedge fund category move in the same direction as the benchmark? Our analysis found that although some of the hedge fund categories enjoyed outperformance versus benchmarks during the market downturn, all of the categories we analyzed failed to fully participate in the equity market recovery. We furthermore found that the Barclay Fund of Funds Index underperformed U.S. equities and bonds and also a 60%/40% portfolio following the financial crisis. Finally, we once again found that many hedge fund categories were highly correlated with a 60%/40% portfolio of equity and bonds.

This paper compares the performance of various categories of hedge funds with that of the broad U.S. equity market (as represented by the MSCI US Broad Market Index), the overall U.S. bond market (as represented by the Barclays Capital U.S. Aggregate Bond Index), and a 60% equity/40% bond portfolio (represented by these same respective indexes), rebalanced monthly from November 2007 through December 2011. We also analyze the results of the funds-of-hedge-funds category, as many of these funds of funds claim to have the expertise to pick the highest-performing hedge funds from among all of the hedge fund categories.

We emphasize up front the challenges of investing in a hedge fund, as explored in previous Vanguard research (Philips, 2005). As Philips stated, it is difficult to accurately and meaningfully measure hedge fund category performance, as a result of survivorship bias and other issues. In addition, hedge funds are subject to different (and sometimes fewer) regulatory investor protections than mutual funds. Selecting an individual hedge fund manager is also extremely challenging, given the lack of transparency and issues with data accuracy. Moreover, hedge funds are not required to report after-tax returns (although mutual funds are), and thus reported hedge fund performance may differ significantly from the experience of the individual investor. Finally, hedge fund fees and costs subtract from a hedge fund investor’s returns.

**Hedge fund category returns**

Figure 1 reports the cumulative annualized performance for various hedge fund categories, the broad market indexes, and a 60%/40% portfolio of equities and bonds. (Performance refers to whether the hedge fund category returned more or less than the benchmark.) We divided the period under analysis into two subperiods: (1) the equity market crash from November 2007 through February 2009 and (2) the rebound through the most recent period: March 2009 through December 2011.

*Notes on risk: All investing is subject to risk. Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index. There may be other material differences between products that must be considered prior to investing.*
In the first period, the U.S. equity market crashed at a cumulative annualized rate of –41.3%, and the U.S. bond market returned 4.5% (see Figure 1). During this time, the cumulative returns for the various hedge fund categories all exceeded those of equities, ranging from –33.9% to 25.7%. The dedicated short hedge fund category had the highest returns, at 25.7%. This was logical, because dedicated short funds are specifically designed to maintain a net short exposure to the market through a combination of short and long positions. The flip side, thus, is that as markets rise, dedicated short funds may fall in value, since they remain short the markets.

Also over the same period, the managed futures category showed significant outperformance, returning 12.3%. The positive return in this category, which is designed to capture trends in futures markets as well as provide alpha, was driven by nonreliance on traditional equity beta.¹

As noted, although many of the hedge fund categories had negative performance, none of the category averages underperformed the equity markets during the financial crisis. Note, however, that a 60% equity/40% bond portfolio would also have cushioned the fall in equities, with a return of –25.4% for the period, ahead of the results of several hedge fund categories (see Figure 1).

---

¹ The term beta refers to a measure of the volatility of a security or a portfolio relative to a benchmark.
Despite this relatively positive picture for hedge fund categories during the crisis, their performance reversed after the equity market downturn. In the second period, from March 2009 through December 2011, the broad equity market produced a cumulative return of 24.4%, beating all of the hedge fund categories cited in Figure 1. The bond market—up 7.7% for the same period—also outperformed many of the hedge fund categories. And for the same 34 months, a 60% equity/40% bond portfolio would have returned 17.9%, beating all of the hedge fund categories cited in the figure.

It’s important to note that the Barclay Fund of Funds Index also performed poorly during this second period, losing out to equities, bonds, and the 60%/40% portfolio. This weak performance was particularly notable, given the claim by many funds of funds that they have the professional expertise to select the best-performing hedge funds from among all the hedge fund categories.

Hedge fund category correlations with 60% equity/40% bond portfolio

Figure 2 reports the monthly correlation between the returns for each hedge fund category and the 60% equity/40% bond portfolio for each period as well as for the overall period. We emphasize that correlation refers to how the indexes moved in relation to the benchmark. In other words, did the hedge fund category move in the same direction as the benchmark? If the correlation number is positive, this means that if the benchmark returns were above their average returns, then the hedge fund returns would also tend to be above their averages. We stress that this comparison is not meant to imply that an investor would necessarily invest in a hedge fund to “hedge” the portfolio. We also note that not all hedge funds are actually designed to be negatively correlated with either the equity or bond markets. We nevertheless provide correlations to shed light on the oft-made suggestion that a hedge fund is an

---

**Figure 2. Dow Jones Credit Suisse hedge fund category monthly correlations with 60% equity/40% bond portfolio**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Convertible Arbitrage Hedge Fund USD</td>
<td>0.48</td>
<td>0.62</td>
<td>0.62</td>
</tr>
<tr>
<td>Dedicated Short Bias Hedge Fund USD</td>
<td>(0.52)</td>
<td>(0.92)</td>
<td>(0.79)</td>
</tr>
<tr>
<td>Emerging Markets Hedge Fund USD</td>
<td>0.69</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td>Equity Market Neutral Hedge Fund USD</td>
<td>0.15</td>
<td>0.76</td>
<td>0.31</td>
</tr>
<tr>
<td>Event Driven Hedge Fund USD</td>
<td>0.57</td>
<td>0.77</td>
<td>0.75</td>
</tr>
<tr>
<td>Fixed Income Arbitrage Hedge Fund USD</td>
<td>0.62</td>
<td>0.48</td>
<td>0.62</td>
</tr>
<tr>
<td>Global Macro Hedge Fund USD</td>
<td>0.28</td>
<td>0.29</td>
<td>0.33</td>
</tr>
<tr>
<td>Long/Short Equity Hedge Fund USD</td>
<td>0.67</td>
<td>0.91</td>
<td>0.83</td>
</tr>
<tr>
<td>Managed Futures Hedge Fund USD</td>
<td>(0.39)</td>
<td>0.15</td>
<td>(0.10)</td>
</tr>
<tr>
<td>Barclay Fund of Funds Index</td>
<td>0.55</td>
<td>0.79</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Sources: Dow Jones Credit Suisse Hedge Fund Indexes, Barclay Fund of Funds Index, MSCI US Investable Market 2500 Index, and Barclays Capital U.S. Aggregate Bond Index.
“alternative” investment that can provide portfolio diversification. In fact, many hedge fund categories are found to be positively and strongly correlated with a 60%/40% portfolio of stocks and bonds.

Over the full period, only the dedicated short hedge fund category and the managed futures hedge fund category exhibited a negative correlation with the 60%/40% portfolio. It should be noted that in the second period specifically, the managed futures category actually exhibited a slightly positive correlation with the 60%/40% portfolio. Moreover, the funds-of-hedge-funds index also exhibited a correlation of 0.73 with the 60%/40% portfolio, implying that, at the category index level, hedge funds are not always an “alternative” investment, but, rather, are strongly correlated with the equity and bond markets.

**Funds of hedge funds**

Figure 3 plots the cumulative annualized returns of the Barclay Fund of Funds Index, the equity and bond markets, and the 60%/40% portfolio. As shown, the funds-of-hedge-funds index outperformed the 60%/40% portfolio during the 2009 downturn in the markets. Once the equity markets recovered, however, the funds-of-hedge-funds index significantly underperformed the 60%/40% portfolio. Note also that even if investors wanted to “achieve” the return of the funds-of-hedge-funds index, they could not have done so, since the index itself is not investable. Therefore, the investor could have fallen prey to all the earlier-mentioned challenges of selecting an individual fund of hedge funds (for example, in terms of differences in performance measurement, different regulations to protect investors, lack of transparency, and problems with data accuracy).
Figure 4. Dow Jones Credit Suisse hedge fund category returns versus benchmarks over time

A final comment on returns

Figure 4 presents the same cumulative annualized returns of the individual hedge fund categories versus the equity and bond markets and the 60%/40% portfolio. As previously noted, the dedicated short category outperformed during the downturn in the equity markets, but declined in value during the recovery. Notably, the managed futures category appeared to provide some positive cumulative annualized return over the period versus the 60%/40% portfolio.

Sources: Dow Jones Credit Suisse Hedge Fund Indexes, Barclay Fund of Funds Index, MSCI US Investable Market 2500 Index, and Barclays Capital U.S. Aggregate Bond Index.
Conclusion

Our analysis found that although some hedge fund categories enjoyed outperformance versus broad U.S. equity and bond benchmarks during the market downturn, all of the hedge fund categories analyzed failed to fully participate in the market recovery. We also found that the funds-of-hedge-funds index fell short of the returns of broad U.S. equities and bonds, as well as the 60% equity/40% bond portfolio, in the period following the financial crisis. Furthermore, many of the hedge fund categories analyzed, as well as the funds-of-hedge-funds index, were shown to be highly correlated with a 60%/40% portfolio of equities and bonds. The two exceptions to these findings were dedicated short funds and managed futures, both of which had negative correlations versus a 60%/40% portfolio. However, while dedicated short funds exhibited negative correlation versus a 60%/40% portfolio, they had significantly negative returns when the markets recovered. The managed futures hedge fund category, on the other hand, did exhibit a negative correlation versus a 60%/40% portfolio and positive returns over time. We emphasize that an individual seeking to invest in hedge funds would be subject to the implementation challenges cited in this paper as well as the difficulty of selecting an individual hedge fund manager.

References


Vanguard research >
Vanguard Center for Retirement Research
Vanguard Investment Counseling & Research
Vanguard Investment Strategy Group

E-mail > research@vanguard.com

For more information about Vanguard funds, visit vanguard.com, or call 800-662-2739, to obtain a prospectus. Investment objectives, risks, charges, expenses, and other important information about a fund are contained in the prospectus; read and consider it carefully before investing.

CFA® is a trademark owned by CFA Institute.