

HEDGE FUND REPLICATION: KNOW WHAT YOU OWN

Looking under the hood

Does it align with your objectives?

A popular way to access hedge fund exposure is with liquid, transparent ETFs that track hedge fund replication indexes. But not all of these indexes follow the same approach to recreating the risk/return profile of a diversified set of hedge funds. It's a good idea to look under the hood of these indexes to be sure their holdings are aligned with your objectives.

How it works

Hedge fund replication strategies do not invest directly in hedge funds or funds of hedge funds. Instead, they seek to capture hedge fund beta, the component of hedge fund returns driven by liquid financial market factors. Hedge fund replication indexes typically include long and short holdings across a set of these financial market factors. These holdings are rebalanced periodically to seek a high correlation with historical hedge fund performance.

The starting point for evaluating hedge fund replication strategies is to look at the factors used, how their weights change over time, and how this translates into the performance and risk profile of the strategy. In this report, we compared the Merrill Lynch Factor Model® – Exchange Series (MLFM-ES), the benchmark for ProShares Hedge Replication ETF (HDG),¹ and IQ Hedge Multi-Strategy Index, the benchmark for IQ Hedge Multi-Strategy Tracker (QAI), the largest hedge fund replication ETF.

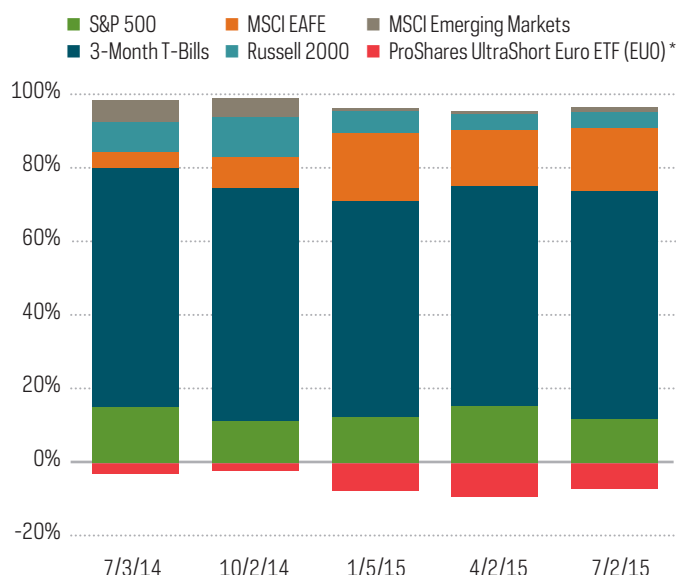
MLFM-ES: The moving parts

MLFM-ES dynamically allocates among six factors to target a high correlation to the Hedge Fund Research Indices Fund Weighted Composite Index (HFRI), which represents over 2,000 hedge funds and a variety of investing styles. Weights are updated monthly based on an analysis of factor and HFRI returns over the prior 24 months.

The six factors MLFM-ES uses are

- S&P 500
- MSCI EAFE
- MSCI Emerging Markets
- Russell 2000
- ProShares UltraShort Euro ETF (EUO)²
- 3-month Treasury bills

MLFM-ES Dynamically Allocates Exposures



*Euro/dollar exposure is represented by EUO, an ETF with -2x inverse exposure to the euro/dollar exchange rate. EUO weight is multiplied by -2 to show implied exposure to underlying euro/dollar exchange rate. For illustrative purposes only.

MLFM-ES factor weights change over time. For instance, over the last year, the index's exposure to MSCI EAFE tripled, its short exposure to the euro-U.S. dollar exchange rate more than doubled, and its exposure to S&P 500 and MSCI Emerging Markets declined by 20% and 80%, respectively.

¹MLFM-ES was created in 2011 as a variation of the Merrill Lynch Factor Model (2006) to serve as a benchmark for HDG.

²ProShares UltraShort Euro ETF (EUO) is used as a proxy for the euro-U.S. dollar exchange rate.

Comparing MLFM-ES vs. IQ Hedge Multi-Strategy Index

The IQ Hedge Multi-Strategy Index uses 68 factors to represent the risk-adjusted return characteristics of a broad group of hedge fund investment styles, including long/short equity, global macro, market neutral, event-driven, fixed income arbitrage and emerging markets equity. The table below shows the top five components of each index in July 2015.

MLFM-ES Has Lower Fixed Income Exposure

As of last rebalance³

| Merrill Lynch Factor Model – Exchange Series | | IQ Hedge Multi-Strategy Index | |
|--|--------|---|--------|
| Factor | Weight | Factor | Weight |
| 3-month Treasury bills | 61.7% | Vanguard Short-Term Bond ETF | 19.5% |
| MSCI EAFE | 17.3% | Vanguard Total Bond Market ETF | 15.3% |
| S&P 500 | 11.9% | iShares Core U.S. Aggregate Bond ETF | 14.1% |
| ProShares UltraShort Euro ETF (EUO) ⁴ | -7.3% | iShares 1-3 Yr Treasury Bond ETF | 10.6% |
| Russell 2000 | 4.3% | SPDR® Barclays Convertible Securities ETF | 9.7% |

³Last rebalance for MLFM-ES was 7/2/2015 and for IQ Hedge Multi-Strategy Index was 7/9/2015.

⁴The EUO weight of 3.65% reflects euro exposure of -7.3%. For illustrative purposes only.

As of the last rebalance, both indexes had a large component of fixed income, which is not surprising since hedge replication indexes typically have a low beta to the S&P 500. MLFM-ES had a factor weight of 61.7% entirely in Treasury bills, which have a very low duration. IQ Hedge Multi-Strategy Index had weights in a variety of fixed income ETFs that combined to a total of approximately 65% in bonds and 10% in convertibles. Though the index uses 68 factors, note that the top five factors represented just under

70% of the index. Also notable is the longer duration of IQ Hedge Multi-Strategy Index's fixed income exposure.

The takeaway

If you own or are considering a hedge fund replication strategy to help diversify your portfolio, it's important to look under the hood to understand what factors are used and how they are combined to capture hedge fund-like returns.

It's also important to understand what risks you are trying to offset and what risks you are comfortable taking. For example, if the strategy you're considering has a high level of fixed income exposure, ask yourself what level of duration aligns with your portfolio objectives.



ProShares Hedge Replication ETF

- Unlocks the potential of hedge funds
- Liquid, flexible access to hedge fund replication
- Can be a valuable component of an alternative asset allocation
- Seeks to track the Merrill Lynch Factor Model – Exchange Series (MLFM-ES). There is no guarantee HDG or MLFM-ES will achieve their objectives.

Find out more

Visit ProShares.com or consult your financial advisor.

This information is not meant to be investment advice. Indexes are unmanaged and one cannot invest directly in an index. Index performance does not reflect any management fees, transaction costs or expenses. Past performance is not a guarantee of future results.

Investing involves risk, including the possible loss of principal. ProShares ETFs are generally non-diversified and each entails certain risks, which may include risk associated with the use of derivatives (swap agreements, futures contracts and similar instruments), imperfect benchmark correlation, leverage and market price variance. Short positions lose value as security prices increase. Leverage can increase market exposure and magnify investment risk. These risks can increase volatility and decrease performance. Please see their summary and full prospectuses for a more complete description of risks. **There is no guarantee any ProShares ETF will achieve its investment objective.**

ProShares Hedge Replication ETF (HDG) does not invest in any hedge funds or funds-of-hedge-funds. There is no guarantee that HDG will successfully achieve its investment objective or that the "Merrill Lynch Factor Model® – Exchange Series" (MLFM-ES) will successfully provide the risk/return characteristics of a broad universe of hedge funds or achieve a high correlation with the HFRI Fund Weighted Composite Index (HFRI). Performance differences between MLFM-ES and HFRI are expected to be material at times. Even if HDG achieves its benchmark tracking objective, MLFM-ES may not produce the risk/return characteristics of a broad universe of hedge funds, as measured by HFRI or any other hedge fund benchmark. Individual hedge funds or funds-of-hedge-funds have the potential to provide materially higher or lower returns than HDG, MLFM-ES, or the average return of a broad universe of hedge funds.

Carefully consider the investment objectives, risks, charges and expenses of ProShares before investing. This and other information can be found in their summary and full prospectuses. Read them carefully before investing. Obtain them from your financial advisor or broker/dealer representative or visit ProShares.com.

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