

## Are Managed Futures the Same as Hedge Funds?

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In the world of alternative investments, managed futures and hedge funds have been broadly available for nearly 30 years and 20 years respectively. With these long track records we can analyze historical relationships between the strategies and use that information to integrate them into investment portfolios with confidence. Although there is no guarantee that past returns and relationships will occur in the future, history offers us important insight into how these investments have behaved in a wide variety of market environments.

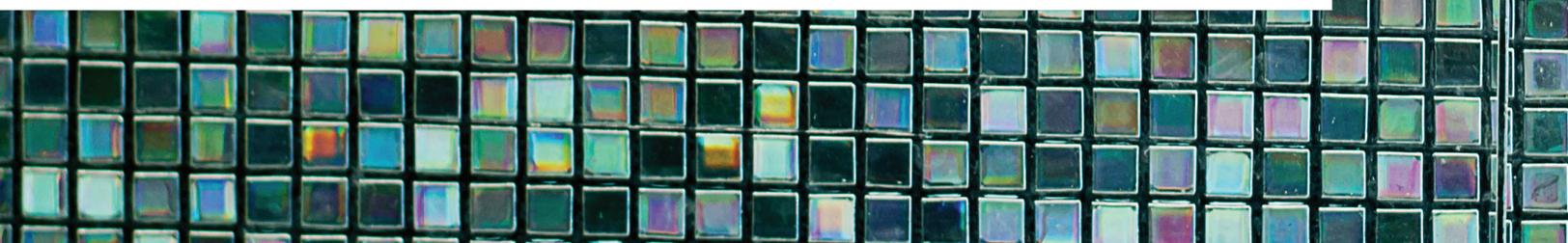
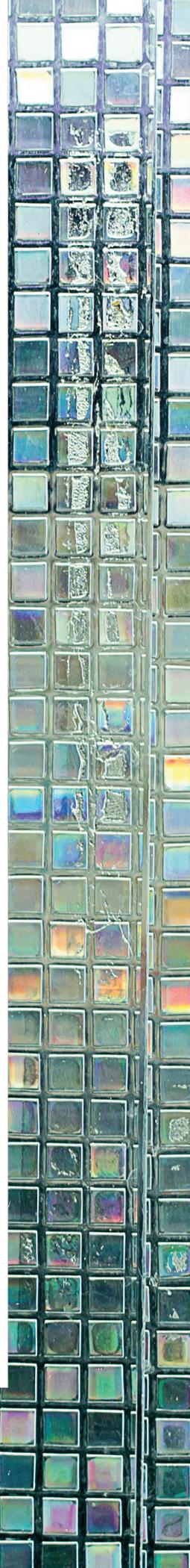
Are managed futures the same as hedge funds? Since there is no industry consensus on an answer to this question, we thought it would be useful to present the defining traits of each of the two investment strategies and let readers come to their own conclusions. In this paper, we will 1) discuss the composition of each marketplace, 2) describe each investment style, and 3) show historical correlation, risk, and return characteristics of each strategy—the three main determinants in portfolio construction decision making.

We assert that hedge funds, broadly defined, and managed futures are in fact very different from one another; we believe they complement each other. Each serves a different and important purpose in a well-constructed portfolio. We conclude that managed futures are “diversifiers” to equity and fixed income, whereas most hedge fund strategies behave as “substitutes” or “enhancers.”

Now we will highlight some of the differences between the two investment strategies.

### AUTHORS

MORGAN STANLEY  
INVESTMENT MANAGEMENT  
CERES MANAGED FUTURES TEAM



## Marketplace Composition

### MANAGED FUTURES TRADE FUTURES CONTRACTS, NOT INDIVIDUAL SECURITIES

The term managed futures defines an industry where professional asset managers are registered<sup>1</sup> with the Commodity Futures Trading Commission (CFTC). With this designation and with membership in the National Futures Association (NA), a CTA can manage client assets by trading the world’s futures, futures options and forward markets. There are approximately 300 global futures markets currently, and contracts are added and removed on a frequent basis.

Managed futures strategies can generally only trade in exchange cleared futures, options on futures and forward markets, while hedge funds can trade a broader variety of markets that include individual

equity and fixed income securities and over the counter derivatives on such securities. This difference in markets traded is the very essence of the distinction between the two strategies. The only hedge fund strategy that is statistically similar to managed futures is global macro. An easy way to distinguish these two is that generally global macro strategies tend to have a discretionary bias and focus on fewer larger concentrated market positions, whereas CTAs tend to be systematic and to take smaller positions in a large number of diversified futures positions.

Futures contracts traded on individual markets are based on standardized terms and set dates, and they reflect an “average” price<sup>2</sup> of the underlying cash market on which the futures contract is based. As such, CTAs do not trade

in individual markets or securities, but rather, futures contracts based on representative asset prices or indices. For example, futures contracts traded on corn represent the average price of corn of a certain quality to be delivered at a particular time, not one farmer’s price of corn. Futures trade on the global equity indices, not on individual stocks.<sup>3</sup> In contrast, most hedge fund strategies trade primarily in individual equity or fixed income securities and their derivatives.

Futures markets allow direct access to markets that are important to the world’s economic flows and may offer opportunities that are difficult for investors to access via other investment options. The breadth of futures markets, as illustrated below, we believe is one of the main reasons that managed futures

## DISPLAY 1

### Representative Markets Traded

Global Market Exposure without Exchange Rate Risk

#### EQUITY INDICES

|                          |                    |
|--------------------------|--------------------|
| AEX                      | MSCI Singapore     |
| All Share                | MSCI Taiwan        |
| CAC 40                   | NASDAQ 100         |
| DAX                      | Nikkei 225         |
| DJIA                     | Nikkei 400         |
| MSCI EAFE                | NYSE Composite     |
| Euro Stoxx 50            | OMX 30             |
| Euro Stoxx 600           | Russell 1000       |
| E-Mini S&P Select Sector | Growth             |
| FTSE 100                 | Russell 1000 Value |
| FTSE China A50           | Russell 2000       |
| FTSE MIB                 | S&P Canada 60      |
| FTSE/JSE Top 40          | S&P Midcap         |
| H-Shares                 | S&P Nifty          |
| Hang Seng                | S&P 500            |
| IBEX 35                  | SPI 200            |
| ISE 30                   | STOXX Europe       |
| KLSE Composite           | Taiwan Set50       |
| MSCI EAFE                | TecDax             |
| MSCI Emerging Markets    | Topix              |
| MSCI Indonesia           | VIX                |
|                          | VSTOXX             |
|                          | WIG20              |

#### FIXED INCOME

|                              |
|------------------------------|
| Australian Bank Bill         |
| Australian Treasury Bonds    |
| British Long Gilt            |
| British Short Sterling       |
| Canadian Bankers Acceptances |
| Canadian Government Bond     |
| Euribor                      |
| Eurodollar                   |
| European Bonds               |
| Euroswiss                    |
| Euroyen                      |
| Japanese Government Bond     |
| New Zealand Bill             |
| Swapnotes                    |
| Swiss Government Bond        |
| U.S. Treasury Bonds          |
| U.S. Treasury Notes          |

#### CURRENCIES

|                    |
|--------------------|
| Argentine peso     |
| Australian dollar  |
| Brazilian real     |
| British pound      |
| Canadian dollar    |
| Chilean peso       |
| Chinese yuan       |
| Colombian peso     |
| Czech koruna       |
| Euro               |
| Hong Kong dollar   |
| Hungarian forint   |
| India rupee        |
| Indonesian rupiah  |
| Israeli shekel     |
| Japanese yen       |
| Korean won         |
| Malaysian ringgit  |
| Mexican peso       |
| New Zealand dollar |
| Norwegian krone    |
| Philippine peso    |

|                       |
|-----------------------|
| Polish zloty          |
| Russian ruble         |
| Singapore dollar      |
| South African rand    |
| Swedish krona         |
| Swiss franc           |
| Taiwan dollar         |
| Turkish lira          |
| U.S. dollar           |
| *Cross currency pairs |

#### AGRICULTURALS

|               |
|---------------|
| Barley        |
| Canola oil    |
| Cocoa         |
| Coffee        |
| Corn          |
| Cotton        |
| Feeder cattle |
| Lean hogs     |
| Live cattle   |
| Lumber        |
| Milk          |
| Oats          |
| Orange juice  |
| Palm oil      |
| Pork bellies  |
| Rapeseed      |
| Red wheat     |
| Rough rice    |
| Rubber        |
| Soybean meal  |
| Soybean oil   |
| Soybeans      |
| Sugar         |
| Wheat         |

#### METALS

|           |
|-----------|
| Aluminum  |
| Copper    |
| Gold      |
| Iron      |
| Lead      |
| Nickel    |
| Palladium |
| Platinum  |
| Silver    |
| Tin       |
| Zinc      |

#### ENERGIES

|                 |
|-----------------|
| Brent crude oil |
| Coal            |
| Crude oil (WTI) |
| Electricity     |
| Emissions       |
| Ethanol         |
| Gas oil         |
| Gasoline        |
| Heating oil     |
| Kerosene        |
| Natural gas     |
| Power           |

For illustrative purposes only.

<sup>1</sup> In certain circumstances, managers are exempted from registration as Commodity Trading Advisors (CTAs)

<sup>2</sup> Dan Siegel, Diane Siegel, *Futures Markets* (Dryden Press, 1989.)

<sup>3</sup> Single stock futures do exist but they are not commonly traded. Managed futures investments should be considered as part of a diversified investment portfolio. Morgan Stanley Investment Management considers managed futures investments suitable solely for the risk capital portion of such a portfolio. See page 7 for additional information on risks.

indices have historically performed very differently from hedge funds as well as equity and bond indices.

## Investment Style

### **FUTURES ARE EXCHANGE-CLEARED, WHICH MEANS MINIMIZED COUNTERPARTY RISK**

Futures and options on futures are exchange-traded derivatives based on underlying cash markets. Each exchange has a clearing corporation that consists of multiple, institutional members. The clearing corporation takes the offsetting positions of each participant and clears them so that all parties are made whole and all transactions are completed. Clearing members have a financial obligation to support this function. A clearing corporation's multiple members help to minimize the risk of single counterparty default—a risk that exists for securities that are not cleared via a clearing corporation.

### **LEVERAGE IS EMBEDDED IN FUTURES: NO NEED TO BORROW AND PAY INTEREST**

Positions in futures contracts are established and maintained through margin deposit. Accounts are marked-to-market daily, so participants can value their trades and positions daily. Since balances on open trades don't build up between buyers and sellers, daily reconciliation is another way in which counterparty risk is mitigated.

The margin feature is what creates the leverage that is characteristic to futures-based strategies. Because the leverage is embedded in the futures contract, which is settled daily, the manager performs daily analysis and either re-commits to the trade by committing additional capital or exits. We believe this discipline is why futures managers have a reputation for being good risk managers. They can liquidate a trade they feel is no longer viable and look for other opportunities. It is also a reason for the return pattern of futures managers. Many small and contained losses can be experienced in between the profitable opportunities that can emerge.

Leverage can increase returns, but it also increases the risk that a manager is taking. It is therefore critical to understand

the way that leverage is obtained. The embedded nature of the leverage in futures contracts tends to give more control to the manager. In other words, as long as the manager maintains daily margin requirements, only he will determine his buy and sell points. Furthermore, since futures contracts are held via margin, the remainder of the invested capital can earn interest from the cash or government securities that are held as collateral.

### **FUTURES PROVIDE GLOBAL MARKET EXPOSURE WITH MINIMAL FOREIGN EXCHANGE RISK**

Futures trade globally, yet for non-US exchanges, only the amount held as margin needs to be converted from US dollars into local currency. This allows for the participation in foreign markets, with minimal exchange rate risk.

### **WITH FUTURES, ONE CAN GO LONG OR SHORT WITH EQUAL EASE**

Futures are liquid, and short positions can be established as easily as long positions because the mechanics are the same. This is what makes futures such good trading vehicles and what enables managed futures models to seek long or short opportunities with no bias.

Forward contracts are sometimes traded by futures managers, predominantly in foreign exchange (i.e. currencies). These forwards may or may not be cleared on an exchange. If they are not exchanged-cleared, then there is an element of counterparty risk involved, since a non-exchange cleared forward is a contract executed between one buyer and one seller.

Hedge funds obtain leverage exclusively through external borrowing, which by definition involves counterparty risk. Additionally, hedge funds that wish to short a security have to borrow the security first and incur additional costs.

### **CTAS TEND TO BE SYSTEMATIC—NOT EMOTIONAL—IN THEIR DECISION MAKING**

From their early days, managed futures traders have tended to use mathematical calculations in making the decision to be

long or short. The primary input for that calculation was the price of the futures contract. The evolution in computing power over the past 30 years has propelled CTAs to become more sophisticated and increasingly systematic in developing their models for decision making and portfolio composition, not to mention trade execution and back office operations.

Each systematic manager has its own proprietary trading models. These models differ greatly with regards to markets traded, time horizon, type of analysis employed, and input data analyzed. These models attempt to determine the future trajectory of prices or relative relationships based on historical data inputs. Accordingly, research departments at CTAs are staffed primarily by scientists, mathematicians, physicists, engineers and other individuals with highly quantitative backgrounds.

This automated style of trading has many advantages. Most important, a CTA can monitor and trade in multiple markets at one time. Generally speaking, most CTAs trade between 75 and 200 markets at once, many of which have little to no correlation to one another. This broad exposure to multiple market opportunities lies at the foundation of managed futures trading. Using strict risk controls, liquid markets and daily mark-to-market practices, managers position themselves in numerous trades, waiting for opportunities to develop. Trading models are developed by humans, but have the advantage of being able to quickly increase or decrease exposures as opportunities ebb and flow, without the “in the moment” emotion that can be involved with discretionary decision making.

Discretionary managers, on the other hand, acquire deep expertise in their areas of specialty. This expertise tends to result in fewer, larger positions than a systematic manager would make. Discretionary managers, whether they trade futures or securities, share this trait.

**DISPLAY 2****Correlations Between Managed Futures and Other Asset Classes**

January 2000 – June 2017

|                  | EQUITIES | BONDS  | HEDGE FUNDS | BTOP50 | SYSTEMATIC MF | DISCRETIONARY MF |
|------------------|----------|--------|-------------|--------|---------------|------------------|
| EQUITIES         | 1.00     |        |             |        |               |                  |
| BONDS            | (0.09)   | 1.00   |             |        |               |                  |
| HEDGE FUNDS      | 0.76     | 0.01   | 1.00        |        |               |                  |
| BTOP50           | (0.17)   | 0.26   | 0.03        | 1.00   |               |                  |
| SYSTEMATIC MF    | (0.17)   | 0.26   | 0.08        | 0.93   | 1.00          |                  |
| DISCRETIONARY MF | 0.05     | (0.03) | 0.16        | 0.37   | 0.41          | 1.00             |

Source: PerTrac, data from Jan 2000 – June 2017. Equities represented by S&P 500 TR Index, bonds by Barclays Aggregate Bond Index, hedge funds by HFRI Fund Weighted Composite Index, BTOP50 by Barclay BTOP50 Index, systematic by Barclays Systematic Traders Index and discretionary by Barclays Discretionary Traders Index

**Performance Characteristics****A LOOK AT THE STATISTICS: MANAGED FUTURES VS. OTHER ASSET CLASSES**

*Display 2* shows the correlation coefficients calculated between 2000 and 2017 of equity, bond and hedge fund indices, as well as three managed futures indices; the BTOP 50, which includes both systematic and discretionary trading styles, one index of systematic managers, and one index of discretionary managed futures returns. Relative to the hedge fund index used in the analysis, you can observe correlation coefficients for the three managed futures groups of 0.03, 0.08 and 0.16, respectively.<sup>3,4</sup> These low numbers show that managed futures have behaved very differently from hedge funds in the past. One can further see the low levels of correlation of the three managed futures indices relative to the broad equity market, with correlation coefficients of -0.17, -0.17 and 0.05, respectively. These low numbers suggest that managed futures would have

provided diversification<sup>5</sup> to both equities and broad based hedge funds over this particular time frame analyzed.

**MANAGED FUTURES VS. HEDGE FUNDS: HISTORICAL PERFORMANCE IN CONTEXT**

In *Display 3*, we can look at managed futures relative to some of the individual subsets of the hedge fund universe. Analysis of monthly returns from January 1990 to June 2017 shows that managed futures has low correlation to nearly all of these sub strategies as well. Not surprisingly, the highest correlation, 0.46, is between managed futures and global macro hedge funds—the only two investment strategies that are statistically similar.

The column labeled “S&P 500” is interesting as it sheds light on the behavior of investment strategies relative to stocks. Exhibiting lower correlations to the S&P 500 Index, managed futures, global macro, and equity market neutral can be considered as providing

a greater level of diversification to a domestic equity portfolio than the other strategies listed.

These correlations are calculated over a long time period and wouldn't necessarily be observable over a shorter one. Nor could we predict that the correlations would be the same in the future. Nevertheless, they do hold relevant information about the potential for long-term portfolio diversification benefits.

What is the importance of diversification in a portfolio? We believe it is prudent that all clients with a reasonable investment horizon should own stocks in their portfolios. Ownership of stocks is ownership in the global macro growth of an economy. Since stocks can be volatile, portfolio management theory holds that a well balanced portfolio should include other asset classes as well—ones that perform differently, at different times and for different reasons than stocks.<sup>6</sup> As investors we are vulnerable to our

<sup>4</sup> As a reminder, when looking at the relationship between any two or more variables, a statistical summary of the relationship can be viewed in a correlation number (correlation coefficient). Correlations range from +1.00 (perfectly correlated) to -1.0 (perfectly negatively correlated). From an investment point of view, finding individual investments with low correlations (generally less than 0.40) to each other makes for good diversification, as a portfolio is exposed to investments that have historically behaved differently from one another. The correlations for the indices are provided for illustrative purposes only and are not meant to depict the performance of a specific investment. **Past performance is no guarantee of future results.** See page 7 for index definitions.

<sup>5</sup> Diversification does not eliminate the risk of loss.

<sup>6</sup> Dorag Peleg, *Fundamentals in Financial Theory* (MIT Press, 2015.)

**DISPLAY 3****Not All Hedge Fund Strategies Exhibit the Same Diversification Benefit***Correlation Statistics: January 1990 through June 2017*

|                               | MANAGED FUTURES | GLOBAL BONDS | S&P    |
|-------------------------------|-----------------|--------------|--------|
| Managed Futures               | 1.00            | 0.20         | (0.10) |
| Hedge Fund of Funds Composite | 0.24            | 0.07         | 0.54   |
| Relative Value                | (0.09)          | 0.10         | 0.51   |
| Event Driven                  | (0.07)          | 0.05         | 0.70   |
| Global Macro                  | 0.46            | 0.32         | 0.31   |
| Equity Market Neutral         | 0.16            | 0.10         | 0.27   |
| Distressed Credit             | (0.09)          | 0.01         | 0.52   |
| Merger Arbitrage              | (0.04)          | 0.10         | 0.52   |
| Emerging Markets              | (0.04)          | 0.06         | 0.63   |
| Equity Hedge                  | 0.01            | 0.06         | 0.73   |

Source: PerTrac. Data from January 1990 – June 2017. Hedge Fund of Funds Composite represented by HFRI Fund of Fund Composite Index, Relative Value represented by HFRI Relative Value (Total) Index, Event Drive represented by HFRI Event-Driven (Total) Index, Global Macro represented by HFRI Macro (Total) Index, Equity Market Neutral represented by HFRI EH - Equity Market Neutral Index, Distressed Credit represented by HFRI ED: Distressed-Restructuring Index, Merger Arbitrage represented by HFRI ED - Merger Arbitrage Index, Emerging Markets represented by HFRI Emerging Markets (Total) Index, Equity Hedge represented by HFRI Equity Hedge (Total) Index, High Yield Credit Bond Index represented by Barclays High Yield Credit Bonds Index, Managed Futures represented by Barclay CTA Index, Global Bonds represented by Barclays Aggregate Bond Index, S&P represented by S&P 500 (TR).

The correlations for the indices are provided for illustrative purposes only and are not meant to depict the performance of a specific investment. **Past performance is no guarantee of future results.** See page 7 for index definitions.

emotions, panicking during equity downturns and often selling at the wrong times. Owning a variety of investments that may perform differently during those times can help us to stay the course during equity downturns. In truth, a diversified portfolio will likely always have something that is performing poorly when other things are performing well. This is the point of diversification, a point that long-term investors should bear in mind. It is the strength of the whole portfolio, not the performance of the individual components that makes a difference in the end.

**CONCLUSION: IT'S THE PATH THAT MATTERS**

It's important for investors considering an allocation to alternatives to understand how those strategies could reasonably be expected to interact with each other—and with their traditional investments—over time, and therefore what role they should play in a portfolio.

We hope the information we've shared will provide a good framework for thinking about how different investments can work together in a portfolio. And we hope to have clarified which key characteristics make managed futures different from hedge funds:

- Futures are unique instruments; liquid, self-leveraged and exchange-cleared
- Managed futures traders don't trade individual securities, and therefore they cannot get caught in a single stock position (or short squeeze)
- Systematic managers take positions across a large number of markets that tend to be uncorrelated with each other

In summary, it is our conclusion that managed futures are not the same as hedge funds and should not be considered a subset or allocated to as such. We hope to have highlighted characteristics that show managed futures have a unique place within a diversified portfolio.

Managed futures investments should be considered as part of a diversified investment portfolio. Morgan Stanley Investment Management considers managed futures investments suitable solely for the risk capital portion of such a portfolio. If a managed futures fund does not perform in a manner that has a low correlation to the performance of traditional financial markets or does not perform successfully, investors will obtain no diversification benefits by investing in such fund, and there is no guarantee that a managed futures investment will provide such benefits.

- Investments in futures, forwards, and options on futures and forwards trading is speculative and volatile and an investor could lose all or a substantial part of his or her investment. Key risks to consider when investing in managed futures strategies include the following: Strategies generally employ substantial leverage in their trading which accentuates the trading profit and trading loss;
- Strategies may trade on non-U.S. exchanges and in the over-the-counter market which may not be subject to regulation by the Commodity Futures Trading Commission;
- Liquidity is restricted; there may be no secondary market for units in managed futures strategies and such units may be subject to restrictions on transfer;
- Fees and expenses can be substantial and will reduce trading profits and investment returns;
- Trading advisors may receive quarterly incentive fees, without regard to the overall performance of any of the funds; and
- Profits earned by managed futures funds will be taxable to an investor even though distributions will not be paid to investors.

## INDEX DESCRIPTIONS

The indexes are unmanaged and do not include any expenses, fees or sales charges. It is not possible to invest directly in an index. Any index referred to herein is the intellectual property (including registered trademarks) of the applicable licensor. Any product based on an index is in no way sponsored, endorsed, sold or promoted by the applicable licensor and it shall not have any liability with respect thereto.

**HFRI Fund Weighted Composite Index** – The HFRI Fund Weighted Composite Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in US Dollar and have a minimum of \$50 Million under management or a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

While the HFRI Indices are frequently used, they have limitations (some of which are typical of other widely used indices). These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and the index may omit funds, the inclusion of which might significantly affect the performance shown). The HFRI Indices are based on information self-reported by hedge fund managers that decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe, and may be biased in several ways. Index performance is not illustrative of fund performance. HFRI indices are presented net of fees as reported by the hedge fund managers.

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**S&P 500 Total Return Index** – The S&P 500 Total Return Index (“S&P 500 Index”) consists of 500 stocks (consisting of 19.8% Information Technology, 15.7% Financials, 14.7% Health Care, 10.6% Consumer Staples, 7.4% Energy, 10.2% Industrials, 12.3% Consumer Discretionary, 2.8% Materials, 3.6% Utilities, and 2.9% Telecommunication Services) chosen for market size, liquidity and industry group representation. The weights of the stocks in the portfolio reflect the stocks’ total market capitalization as of September 30, 2016. The S&P 500 Index is a market value weighted index with each stock’s weight proportionate to its market value. The S&P 500 Index accounts for approximately 80% coverage of U.S. equities as of September 30, 2016. The S&P 500 Index is one of the most widely used benchmarks of U.S. equity performance. The performance of the S&P 500 Index does not account for any management fees, incentive compensation, commissions or other expenses that would be incurred pursuing such strategy. Total return provides investors with a price-plus-gross cash dividend return. Gross cash dividends are applied on the ex-date of the dividend.

**Bloomberg Barclays Aggregate Bond Index** – The Barclays Aggregate Bond Index covers the U.S. dollar-denominated, investment-grade, fixed-rate, taxable bond market of SEC-registered securities. The index includes bonds from the Treasury, Government-Related, Corporate, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS, and CMBS sectors.

**Bloomberg Barclay BTOP50 Index** – The BTOP50 Index seeks to replicate the overall composition of the managed futures industry with regard to trading style and overall market exposure. The BTOP50 Index employs a top-down approach in selecting its constituents. The largest investable trading advisor programs, as measured by assets under management, are selected for inclusion in the BTOP50 Index. In each calendar year the selected trading advisors represent, in aggregate, no less than 50% of the investable assets of the Barclay CTA Universe. In 2016 there are 20 funds in the Barclay BTOP50 Index. The index is presented net of fees as reported by the managers.

**Bloomberg Barclay Systematic Traders Index** – An equal weighted composite of managed programs whose approach is at least 95% systematic. In 2016 there are 454 systematic programs included in the index. The index is presented net of fees as reported by the managers.

**Bloomberg Barclay Discretionary Traders Index** – An equal weighted composite of managed programs whose approach is at least 65% discretionary

or judgmental. In 2016 there are 114 discretionary programs included in the index. The index is presented net of fees as reported by the managers.

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