

# Managed Futures as a Crisis Risk Offset Strategy

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While equity markets and other asset prices have generally retraced their declines in the years following the Global Financial Crisis, the fear of another sharp downturn à la 2008 has yet to subside. Crisis alpha or crisis risk offset are the latest terms used to describe a group of strategies that seek to perform well in the event of an equity market collapse. Allocation to such non-correlated strategies has the potential to dampen the impact of equity market volatility and enhance the expected risk-adjusted returns of an investor's portfolio. It is important to note that there is no guarantee that these objectives may be met. Qualified investors considering these strategies should carefully research them so that they gain a clear understanding of their investment risks, objectives and processes. Investors are also encouraged to consult with their financial advisor prior to investing.

In the immediate aftermath of the 2008 market shock, tail risk funds were popular crisis risk offset strategies.<sup>1</sup> These funds are generally composed of a combination of long equity index put strategies. Because the cost of buying and holding equity puts can be very expensive, the performance of many tail-risk hedging

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<sup>1</sup>"Preparing for the Next 'Black Swan'", *The Wall Street Journal*, August 21, 2010.

funds tends to be negative in between periods of steep equity market declines. In recent memory, tail risk funds indeed demonstrated positive performance on select individual days, such as August 24, 2015 when the Dow Jones Industrial Average closed 588 points lower. Still, investors generally have not favored these investments that were designed to perform primarily in periods of equity market weakness, and many tail risk funds have closed or experienced substantial outflows.

Investors seeking a strategy with some characteristics similar to tail risk funds may want to consider managed futures.

In contrast to tail risk funds, asset managers of managed futures strategies buy and sell a wide variety of financial and commodity futures, futures options and/or forward contracts on broad asset classes in an attempt to generate profitable returns in a variety of market environments. These managers are referred to as commodity trading advisors (CTAs) as a result of their regulatory oversight by the Commodity Futures Trading Commission (CFTC). Such contracts are traded in sectors such as agriculture, precious metals, industrial metals, foreign exchange, interest rates, equity indices and energy. CTAs often employ systematic quantitative investment strategies that can establish short positions as easily as they can long positions and generally harbor no bias in positioning.<sup>2</sup> There are approximately 1,000 registered CTAs today, each with its own unique method of managing assets.<sup>3</sup>

Even this brief description of managed futures, which is not all inclusive, suggests that a managed futures portfolio is dissimilar to a securities-based portfolio of stocks and bonds and, as such, may perform differently albeit with the additional risks described below. Indeed, historical analysis over multiple time

## DISPLAY 1

### Morgan Stanley Managed Futures

Correlation Analysis (January 1990 – September 2018)

	BARCLAY BTOP50 INDEX (MANAGED FUTURES)	S&P 500 TOTAL RETURN INDEX	BARCLAYS AGGREGATE BOND INDEX (BONDS)	HFRI FUND OF FUNDS COMPOSITE INDEX (HEDGE FUNDS)
Barclay BTOP50 Index (Managed Futures)	1.00	-0.10	0.26	0.18
S&P 500 Total Return Index	-0.10	1.00	0.10	0.54
Barclays Aggregate Bond Index (Bonds)	0.26	0.10	1.00	0.07
HFRI Fund of Funds Composite Index (Hedge Funds)	0.18	0.54	0.07	1.00

**Past performance is no guarantee of future results.** Indices are unmanaged and generally their returns do not include sales charges or fees, which would lower performance. It is not possible to invest directly in an index. The index results above are not intended to predict the performance of any specific investment. See disclosure page for index definitions.

Source: Bloomberg, Morgan Stanley Investment Management

frames tends to bear this out. *Display 1* shows that over the period January 1990 through September 2018, overall correlation between managed futures indices and long only equities is -0.10, to bonds +0.26 and to their hedge fund siblings, +0.18. These statistics all indicate that managed futures have been non-correlated to these three financial indices.

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;

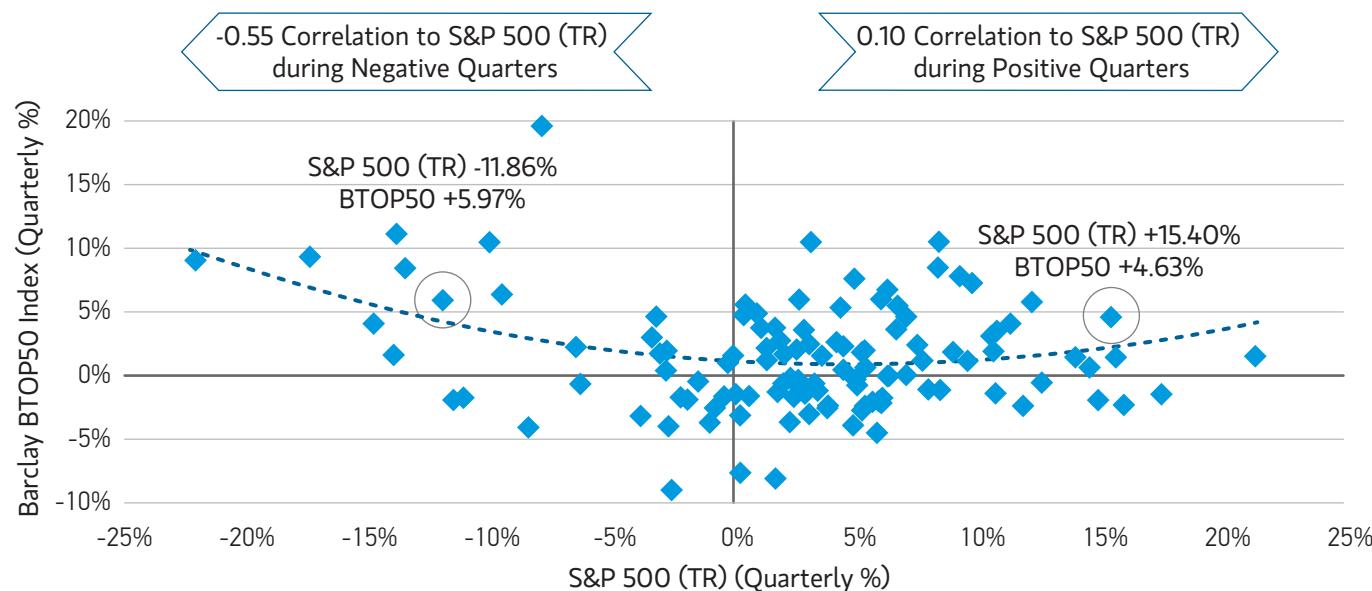
- Strategies may trade on non-U.S. exchanges and in the over-the-counter market which are not subject to regulation by the Commodity Futures Trading Commission;
- Liquidity is restricted; there may be no secondary market for units in managed futures strategies and such units may be subject to restrictions 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.

<sup>2</sup> BarclayHedge, Ltd.

<sup>3</sup> BarclayHedge, Ltd.

**DISPLAY 2****Managed Futures: Not Just a "Put"**

This graph plots quarterly non-overlapping returns of the Barclay BTOP50 Index versus S&P 500 (TR) from January 1990 to September 2018



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Source: Morgan Stanley Investment Management

**So what does this mean in practice?**

In 1996, The Center for International Securities and Derivatives Markets (CISDM) authored a study, "Managed Futures and Hedge Fund Investment for Downside Equity Risk Management," that analyzed the statistical relationship between the performance of managed futures indices and stock indices.<sup>4</sup> The authors observed that in periods of equity market declines, managed futures tended to perform like a long equity put position, or using today's popular term, a crisis risk offset strategy.

Based on this observation, our team examined the quarterly returns of managed futures and stocks over a 30-year period to determine how they moved relative to each other across time.<sup>5</sup> The results are presented

in the graph above. The returns of the S&P 500 (TR) are noted along the horizontal axis and range between -25% and +25%. The returns of managed futures strategies, represented by the Barclay BTOP50 Index (BTOP50), are noted on the vertical axis and range between -10% and +20%. To assist in interpreting the chart, two data points are circled. The encircled diamond on the right shows a quarter during which the S&P returned approximately +15%. During that same quarter, managed futures returned approximately +5%. If we look at the encircled diamond to the left, we observe a quarter in which the S&P 500 returned approximately -12%. During that same quarter the BTOP50 returned approximately +6%. You can interpret all other data points accordingly.

If we subject these observations to a statistical regression calculation, the table in *Display 1* notes an overall correlation coefficient of -0.10 between the S&P 500 (TR) and the BTOP50 indices. Yet, more insightful are the boxed notations on top of the chart in *Display 2* which show a -0.55 correlation in quarters when equities declined and a +0.10 correlation when equities increased. This is statistically significant non-correlation and suggests that the addition of managed futures to an equity portfolio has been a good diversifier of equity risk.<sup>6</sup>

With respect to the academic paper, three points counter the notion that managed futures behave in the same manner as a long equity index put. First,

<sup>4</sup> Thomas Schneeweis, Richard Spurgin and Mark Potter, "Managed Futures and Hedge Fund Investment for Downside Equity Risk Management", *Derivatives Quarterly*, vol. 3, no. 1 (Fall 1996): 62-72.

<sup>5</sup> Managed Futures returns represented by the Barclay BTOP50 Index and stock returns represented by the S&P 500 total return index.

<sup>6</sup> Diversification does not eliminate the risk of loss.

when equity markets decline, associated equity index puts will increase in value whereas managed futures may increase OR decrease in value. This scenario is illustrated in the left side of the chart. Second, when equity markets rise, associated equity index puts will decline in value, whereas managed futures may increase OR decrease in value. This scenario is illustrated on the right side of the chart. Third, while both strategies require an outlay of cash to invest, a managed futures investment has potential positive expected return in BOTH rising and declining equity market conditions, while a long equity index put strategy has potential positive expected return only in a declining equity market. In this light, managed futures is perhaps a more

palatable diversifier to equity strategies than a long equity index put strategy.

It is important to note that there have been quarters in the past, and will indeed be years in the future, when managed futures has performed negatively regardless of positive or negative performance in the equity market and those times are illustrated on the bottom portion of the graph in *Display 2*. The point is that there is no absolute predictability in that relationship, and that is the definition of non-correlation. Different time-frames of analysis or the use of different indices will alter these outcomes, as would be the case with any historical performance analysis.

This presentation is not intended to be a comprehensive analysis of the relative benefits or drawbacks of employing a managed futures strategy versus a long equity put strategy. Instead, it seeks to highlight that managed futures strategies have in the past generated positive returns in both up and down equity markets.<sup>7</sup> This independence from broad equity market moves speaks in favor of managed futures as a crisis-risk offset strategy. Once again, you should talk with your financial advisor to help you determine whether a managed futures fund strategy is suitable for you given your investment objectives, risk tolerance, and investment timeline.

<sup>7</sup> Past performance is not necessarily an indication of future results.

**INDEX DESCRIPTIONS**

The respective indices used in this presentation are the S&P 500 Total Return Index, Barclays Aggregate Bond Index, Barclay BTOP50 Index, and HFRI Fund of Funds Composite Index.

The S&P 500 Total Return Index is based on a portfolio of 500 stocks. The S&P 500 Total Return Index is a market value weighted index with each stock's weight proportionate to its market value. The S&P 500 Total Return Index accounts for approximately 80% coverage of U.S. equities as of June 30, 2016. Total return provides investors with a price-plus-gross cash dividend return. Gross cash dividends are applied on the ex-date of the dividend.

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.

The Barclay BTOP50 Index seeks to replicate the overall composition of the managed futures industry with regard to trading style and overall market exposure. The BTOP50 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. In each calendar year the selected trading advisors represent, in aggregate, no less than 50% of the investable assets of the Barclay CTA Universe. For 2016 there are 20 funds in the Barclay BTOP50 Index. The BarclayHedge indices are presented net of fees as reported by the managers.

HFRI Fund of Funds Composite Index – Fund of Funds invests with multiple managers through funds or managed accounts. The strategy designs a diversified portfolio of managers with the objective of significantly lowering the risk (volatility) of investing with an individual manager. The Fund of Funds manager has discretion in choosing which strategies to invest in for the portfolio. A manager may allocate funds to numerous managers within a single strategy, or with numerous managers in multiple strategies. The minimum investment in a Fund of Funds may be lower than an investment in an individual hedge fund or managed account. The investor has the advantage of diversification among managers and styles with significantly less capital than investing with separate managers. HFRI indices are presented net of fees as reported by the hedge fund managers.

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. All indices are unmanaged. It is not possible to invest directly in an index. Indices are unmanaged and their returns generally do not include sales charges or fees, which would lower performance. It is not possible to invest directly in an index.

**IMPORTANT INFORMATION**

Diversification does not eliminate the risk of loss.

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This piece has been prepared solely for informational purposes and is not an offer, or a solicitation of an offer, to buy or sell any security, instrument or investment strategy or to participate in any trading strategy.

Any person subscribing for a managed futures investment must be able to bear the risks involved and must meet the specific suitability requirements relating to such investment. Such suitability requirements may vary depending on the nature of the offered investment. An offer or solicitation with respect to any managed futures investment may only be made pursuant to a current prospectus and/or offering document. This presentation is for informational purposes only.

**PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.**

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.

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