ASPEN PARTNERS
ASPEN MANAGED FUTURES BETA INDEX

*A Thoughtful Approach to Investor Portfolio Diversification*

The Aspen Managed Futures Beta Index ("Aspen MFBI" or "Index") ended 2016 with a slightly negative return of -1.43%. However, this return for 2016 masks a number of unusual swings over the course of the year, which are discussed below.

For comparison purposes, note that the Barclay BTOP50 managed futures benchmark returned -4.91%, while the Morningstar Managed Futures mutual fund category return average was -2.75% in 2016.

**"V-Bottom" Recoveries Early in the Year**

Market activity in 2016 began with what seemed to be a delayed negative reaction to the Federal Reserve's interest rate hike in December 2015. By January 20th, the S&P 500 was down nearly 9% for the year. The Aspen MFBI began the year somewhat risk-off, and the Index's positioning became more and more strongly short risk as the market drawdown evolved. By January 20th, the Aspen MFBI was up more than 4.5% for the New Year, and model positioning was substantially net short risk assets such as equities, commodities and commodity currencies, and long sovereign fixed income futures.

One of the characteristics of the Aspen MFBI is that it is capable of taking on significant risk exposure in times of elevated market volatility, in order to provide a strong offset to investor portfolio losses in the event of a major crisis. However, the flipside of this design feature is that the Index is susceptible to so-called "V-bottom" market rallies, wherein volatile drawdowns give way to rapid relief rallies in equities and other risk markets. Such was the case in mid-to-late January, when a strong rally in the S&P 500 and other equity markets was sparked by a renewed commitment to accommodative measures by the European Central Bank. Because the Aspen MFBI's positioning had evolved to near-maximum short risk exposure in advance of the rally, the Index gave back all of its gains to post a small loss for the month of January.

Amazingly, that pattern repeated in February. At the beginning of February, when the model's short-risk positioning had been reduced but not eliminated, the markets actually reentered a drawdown phase. By February 11th, the S&P was down 5.5% and the Aspen MFBI was up 5.8% for the month—demonstrating the magnitude of the potential crisis offset offered by the Index once it has adopted risk hedge positioning. However, similar to January, the situation reversed as risk assets again snapped back. By mid-March, the Aspen MFBI was down approximately 2.6% for the year; the model's positioning capitulated to the rally, after which the Aspen MFBI and most global equity markets rose in tandem through mid-April, at which time "Brexit" considerations began to surface.

**Brexit: Modest Alpha in a Mini Crisis**

For much of the year, markets had been discounting or ignoring the possible consequences of the United Kingdom's June vote on whether or not to leave the European Union. As voting drew closer, though, polling data began to indicate greater odds that the UK might vote to leave the EU. In response, the markets started to punish risk assets, in particular European risk assets. This punishment was enough to create short trends in the Aspen MFBI's European equity exposures and strong long trends in European fixed income, but not robust enough to move the model out of its long commodity positioning. In addition, this market movement also caused the Index's Broad Risk Indicator (BRI) model to increase, reducing the Counter-Trend sub-model exposure and increasing the Trend sub-model exposure within the Index's portfolio.

The week of the Brexit vote produced some curious crosswinds as well. Partly in response to the killing of a pro-EU MP, polling leading up to the vote began to swing back in favor of a Remain victory. Markets rallied, causing the Aspen MFBI Trend model to reduce some of its risk-off positions, although that reduction was partially reversed by the BRI-driven increase in the amount of Trend in the portfolio. Throughout the day of the vote on June 23rd, exit polling seemed to confirm a Remain victory, and markets had priced in such an outcome to a very high degree by the end of the market day.

But, of course, the markets and the exit polls were wrong, and the victory for the Leave camp resulted in an extremely volatile two-day response to the vote. The volatility was strong enough that even though the aforementioned crosswinds had led the Aspen MFBI into only moderately risk-off positioning, the Index was still able to post significant profits, +2.25% over those two days.

An interesting question up for debate is whether this two-day return constitutes "crisis alpha" as we and others in the managed futures industry have defined it. Generally speaking, a two-day drop in equity prices is well outside the bounds of a tradable crisis for a trend-following system, as we discuss in our research note, *Crisis Alpha: What it Is and Isn't*. On the other hand, most such short-lived shock events can occur with no prior warning, and thus there is no possibility of a related trend forming in advance of them. The Brexit event was unusual because it was a volatility-inducing event that investors could see coming, and the successful short-risk trend positioning that the Aspen MFBI model held was certainly due to the upcoming Brexit vote. Then again, the pre-Brexit crosswinds meant that the Aspen MFBI model was by no means fully engaged in risk-off mode by the time the votes were counted.

In fact, the mixed mode portfolio actually worked out in the Aspen MFBI's favor, because the Brexit-related equity drawdown reversed in an astonishingly rapid fashion. Within a week, the world's equity markets (including the UK's FTSE index) had recovered to their pre-Brexit levels. Obviously, such a recovery would have all the earmarks of another painful V-bottom recovery, but in this case the mixed signals in the Trend portfolio actually enabled the Aspen MFBI to post small profits in the recovery period as well. In particular, the Aspen MFBI posted profits in equities and fixed income during the drawdown, and also posted profits in commodities and fixed income during the subsequent rally. Obviously, the common thread in both cases was the increase in fixed income valuations—a pattern that has held for years, in broad terms.

**Doldrums and Slow-Drip Losses for Trend, but Counter-Trend Strength**

Following the Brexit recovery, the markets entered a prolonged period of trendless, low volatility behavior. Such (lack of) activity lasted from July through October. Low-vol backdrops are often difficult for trend-following systems. They do not generate sizable losses the way a V-bottom risk rally can, but they can produce extended periods of small, slow-drip losses, and that was what occurred over that four-month timeframe.

On the other hand, the Aspen MFBI's Counter-Trend model, is designed to do well, on average, when market volatilities are in fact low. In practice, this expectation was borne out as positive Counter-Trend attribution mitigated the losses from the Trend model allocation in each of those four months. (Positive contributions from Counter-Trend reduced the overall Aspen MFBI model loss for the entire year as well.)

Another notable market occurrence was that the extremely strong fixed income uptrend that culminated in the post-Brexit period began to unwind in July as interest rates continued slowly rising through October. There were even several indications that the long running cycle of central bank accommodation and increasingly negative interest rates may be coming to a gradual close. One indication that things had changed was the Bank of Japan's surprise switch at the end of September from their previous pattern of increased QE and negative short-term rates to a long-term interest rate target.

**Riding the Trump Rally**

By early November, the Aspen MFBI's Trend model positioning had gone long equities and short fixed income across the board. In the middle of the night on November 8-9, it appeared that the new positioning might suffer election-related losses, as the surprise of Donald Trump's victory initially caused a risk-off panic, with U.S. equity futures down 5% or more in the overnight session. However, in arguably one of the most interesting single-day market moves of all time, opinion reversed rapidly; U.S. equities were back to about flat by the time markets opened for the morning session, and they closed the day up more than 1%—a single-day trough-to-peak swing of over 600 basis points (making the previously astonishing one-week post-Brexit recovery look almost slow by comparison). Fixed income made an opposite move, and both equities and fixed income continued those trends over the course of the "Trump rally" for the remainder of November and through the first half of December. The equity rally, fixed income decline, and related strong dollar moves all benefitted the Aspen MFBI, resulting in a 3% gain for the Index in November.

Notably, many managed futures competitors sustained losses—in some cases substantial losses—in November, and consequently November was the primary driver behind the Aspen MFBI's 2016 outperformance of various managed futures category averages. In the past, we have analyzed the 2013 "Taper Tantrum" and other rising-rate periods as evidence of the fact that many CTAs' trend-following models find it much easier to be long and harder to be short fixed income than does our model. While that positioning has often proven beneficial as fixed income markets continued higher for years following the Global Financial Crisis, we would argue that they reduce the diversification benefit that a traditional investor (who presumably already has a fixed income portfolio) can expect from a managed futures allocation. The November backdrop is perhaps the best example yet of this fixed income diversification concept.

Model gains continued in early December, and the Aspen MFBI actually touched positive year-to-date territory on December 15. It was unable to hold that position, primarily due to the Counter-Trend giving back some of its gains as the year closed out. Looking at things another way, the wild ride of the first eleven and a half months of 2016 proved to be a complete wash, and sadly, the small annual loss was attributable to just the last few trading sessions of the year.

**Summary Review and Outlook**

Despite the lackluster returns for the Aspen MFBI and for managed futures in general, 2016 was illustrative of some positive features of the Index's approach to systematic trend following:

- Despite the subsequent losses from V-bottom rallies, the early-year activity demonstrated the ability of the Aspen MFBI's trend following model to serve as a meaningful hedge in deepening equity drawdowns.

- As was the case during the Taper Tantrum, the Aspen MFBI's unbiased long/short methodology in fixed income proved beneficial during the significant rate rise that occurred in the wake of the presidential election.

As the year drew to a close, there were some hopeful signs for trend followers. For the first time since the end of the GFC, it seems plausible that the prevailing pattern of ever-increasing central bank accommodation and volatility suppression (which has been highly problematic for systematic trend following models) may finally start to be unwound, however slowly or unevenly. As we discuss in our *Managed Futures and Rising Rates* research paper, rising interest rate backdrops tend to be beneficial for managed futures trend following strategies (at least for those strategies that have not adopted sizable long fixed income model biases), both on an absolute basis and especially relative to other investment categories, most of which tend to post worse performance when interest rates are on the rise. And more generally, if reduced central bank interventionism were to allow markets to return to more normal volatility levels, that would likely be beneficial for trend following systems as well.

Whether or not the end of the central bank accommodation phase is beginning, the long-run characteristics of an unbiased, diversified managed futures program such as the Aspen Managed Futures Beta Index remain a beneficial addition to an investor's portfolio.

## *Important Disclosures*

*Past performance is no guarantee of future results.*

*All Aspen MFBI monthly returns shown do not include transaction cost, but are net of 1.50% for estimated fees and other expenses. An investor cannot invest directly in an index.*

*This document does not constitute an offer to sell or solicitation of an offer to buy any security. The information contained herein is provided for educational purposes only and is not intended to solicit interest in any investment opportunity.*

*Data has been obtained from reliable sources. Aspen Partners believes the information herein to be reliable; yet no warranty or guarantee is made as to its accuracy or completeness.*

## *Benchmarks & Indices*

*The Aspen MFBI is constructed using a quantitative, rules-based model designed to replicate the trend-following and counter-trend exposure of futures markets by allocating assets to liquid futures contracts of certain financial and commodities futures markets. The index therefore seeks to reflect the performance of strategies and exposures common to a broad universe of futures markets, i.e., managed futures beta.*

*"MMF" represents the Morningstar Managed Futures Category, these funds typically take long and short positions in futures options, swaps, and foreign exchange contracts, both listed and over-the-counter, based on market trends or momentum. (A long position is a bet an investment will gain in value, while a short position is a bet that an investment will decline in value.) A majority of these funds follow trend-following, price-momentum strategies. Other strategies included in this category are systematic mean-reversion, discretionary global macro strategies, commodity index tracking, and other futures strategies. More than 60% of these funds' exposure is invested through derivative securities*

*"Barclays AGG" represents The Barclays Capital Aggregate Bond Index is a market capitalization-weighted index, meaning the securities in the index are weighted according to the market size of each bond type.*

*"BTOP50 Index" represents the Barclay BTOP50 Index, an index of the largest investable CTA programs, as measured by assets under management.*

*"Euro Stoxx 50" represents a stock index of Eurozone stocks designed by STOXX, an index provider owned by Deutsche Börse Group and SIX Group. It is made up of fifty of the largest and most liquid stocks.*

*"Goldman Sachs Commodity Index," also known as the S&P GSCI, is a long-only index of commodity returns.*

*"S&P 500" represents the S&P 500 Total Return Index, a widely recognized, unmanaged index of common stock prices.*

*"SG CTA Index (formerly, the Newedge CTA Index)" provides the market with daily performance benchmarks of major commodity trading advisors (CTAs).*

*The Barclays AGG, BTOP50 Index, Euro Stoxx 50, S&P GSCI, SG CTA Index, and S&P 500 are unmanaged and do not represent the attempt of any manager to generate returns on an investment. These benchmark indices do not include transaction costs and other expenses.*

## *Definitions*

*Compound Annual Growth Rate: The year-over-year growth rate of an investment over a specified period of time.*

*Forex: A commonly used abbreviation for "foreign exchange," it is typically used to describe trading in the foreign exchange market by investors and speculators.*

*Maximum Drawdown: The greatest peak-to-trough decline during a specific period of an investment.*

*Sharpe Ratio: A measurement of risk-adjusted performance which subtracts the "risk-free" rate of return from an investment's performance.*

*Standard Deviation: A measurement of the annual rate of return's dispersion from its mean, indicating an investment's volatility.*