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## Tactical Asset Allocation in the Age of ETFs



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**“TAA strategies can offer efficient solutions to the two most pressing issues investors face today: downside protection in a bear market and income generation in a low interest rate environment.”**

## **Executive Summary**

After the financial crisis of 2007-2008, there was renewed interest in Tactical Asset Allocation (TAA) as investors searched for better downside risk management solutions. A new class of TAA managers, often referred to as “tactical ETF strategists,” emerged. They develop tactical strategies aiming to provide downside protection while maximizing the upside potential using exchange-traded-funds (ETFs). Driven by investors’ demand, the tactical ETF strategy segment grew dramatically from 2009 to 2014. In this whitepaper, we compare this new segment to the old-style pre-crisis TAA strategies and examine current issues and trends. Further, we discuss how TAA strategies can offer efficient solutions to two of the most pressing issues investors face today: downside protection in a bear market and income generation in a low interest rate environment.

Tactical Asset Allocation (TAA) emerged in the 1970s, offering a dynamic solution to diversification, downside protection and alpha generation through a tactical and flexible approach. The goal of those TAA strategies was to position a portfolio in the asset classes perceived to have the best return potentials in order to maximize total returns or reduce losses. The strategies shifted investments among stocks, bonds, cash and other asset classes without any constraints, as determined by quantitative models or qualitative views. During the bull markets of the 1980s and 1990s, TAA didn't attract much attention because the demands for protection and diversification were limited. However, the heightened volatility and severe downturns over the last 15 years due to the "tech bubble" and financial crisis forced investors to become more concerned about market risks and seek investment strategies that can potentially protect their capital during severe market distress.

Moreover, looking at the fixed income component of an investor's portfolio, the use of bond exposure to reduce risk and offer diversification becomes less effective in the current ultra-low interest rate environment. Investors need to find a stable return and high-income opportunities outside traditional fixed income securities. A tactical multi-asset income approach may offer such a solution.

Consequently, TAA experienced renewed interest from investors and a surge in demand after the financial crisis. A new class of TAA managers emerged. Often referred to as "tactical ETF strategists," these new TAA managers develop tactical strategies that strive to position portfolios not only in the potentially best-performing asset classes or sectors but also defensively during periods of severe market distress. Their overall goal is to provide downside protection while maximizing the upside potential using exchange-traded-funds (ETFs) as a cost effective way of gaining the appropriate market exposures. The tactical ETF strategy segment grew dramatically from 2009 through 2014. This whitepaper examines the trends, issues, benefits and drawbacks with tactical ETF strategies and reviews the best ways to use them in an investor's portfolio.

### ***Post-crisis Surge in TAA***

The financial crisis of 2007-2008 and the resulting deep bear market challenged conventional wisdoms as well as modern portfolio theory. Strategies such as buy-and-hold suffered significant drawdowns. Table 1 demonstrates market losses or drawdowns and the time it took for investors to earn back the loss during historical severe market conditions. Further, during the market distress in 2008, diversification did not provide enough protection as most asset classes became highly correlated (see Figure 1). Even hedge funds and private equity funds, which claim to offer diversification, suffered significant losses. Consequently, fearing continued market volatility and subsequent downturns, investors searched for solutions that could provide better diversification and downside protection under severe market conditions.

TAA strategies, which have the flexibility of allocating among different asset classes without any constraint, offered a promising solution. Driven by investors' demand, TAA, especially tactical ETF strategies, gained popularity after the financial crisis. As of December 2015, Morningstar tracked 271 tactical ETF strategies. Assets under management and the number of tactical ETF

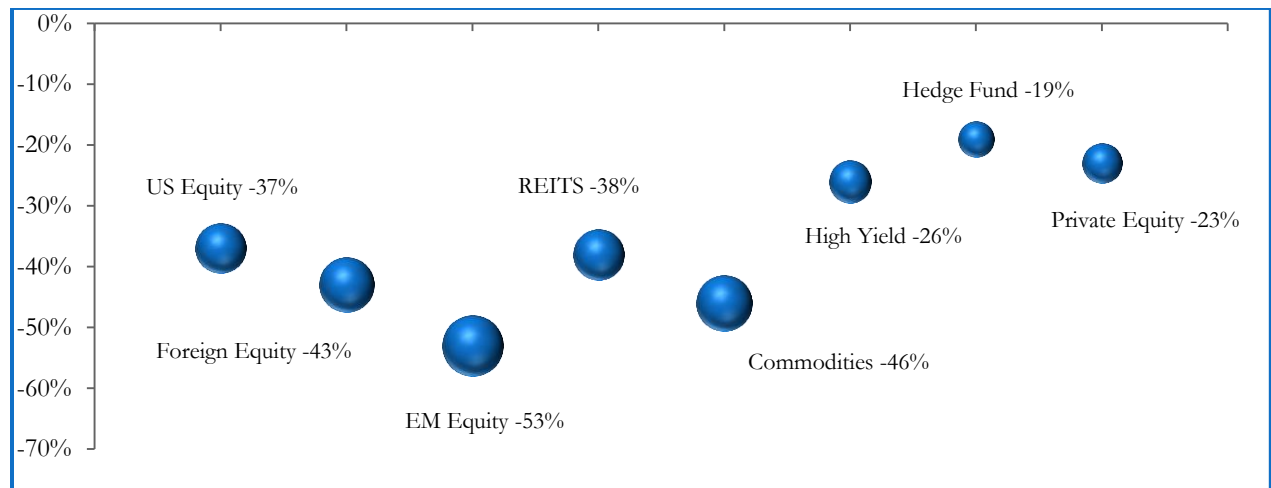
strategies, a subset of all ETF-managed portfolios (excluding hybrid and strategic strategies), tracked by Morningstar grew exponentially between 2011 and 2014, and by December 2015, Morningstar tracked 271 tactical ETF strategies. The total AUM/AUA reached \$46 billion at the end of 2013 (see Figure 2). However, the segment experienced some outflows in 2014 and 2015 as two of the major firms ran into some regulatory and performance issues, which we will address later.

Table 1: Severe Market Downturns

Market Index	Event	Begin	End	Loss	Time to Recover
S&P 500 Index	Great Depression	Aug-1929	Jun-1932	-86%	22 years
S&P 500 Index	Oil Crisis	Dec-1972	Sep-1974	-46%	6 years
S&P 500 Index	Internet Bubble Burst	Mar-2000	Feb-2003	-44%	5 years
S&P 500 Index	Subprime Crisis	Oct-2007	Feb-2009	-53%	4 years
Nasdaq Index	Internet Bubble Burst	Mar-2000	Sep-2002	-81%	22% Below Peak
Nikkei Index	Housing Bubble Burst	Dec-1989	Apr-2003	-78%	56% Below Peak

Data Source: Bloomberg, Yahoo (As of May 28, 2016).

Figure 1: Asset Class Performance in 2008



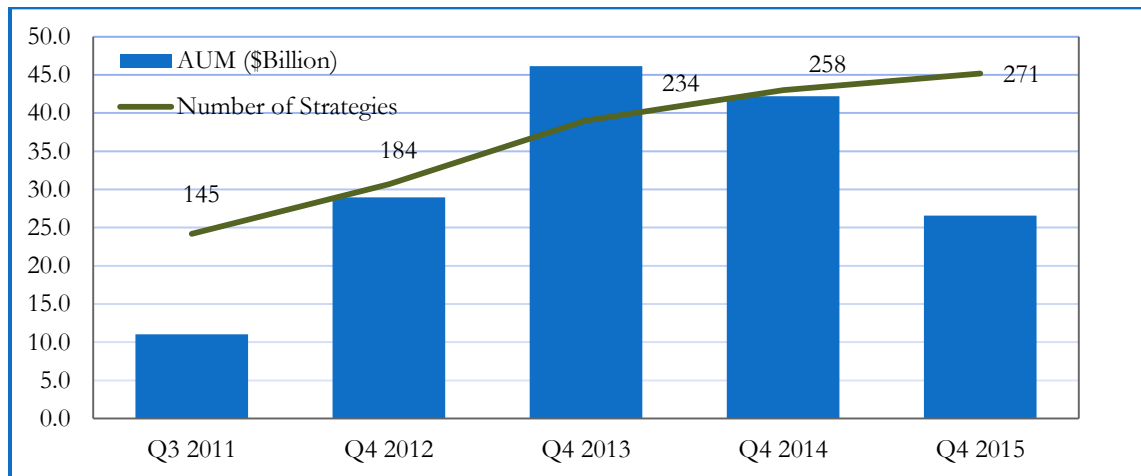
Data Source: Bloomberg, Yahoo, Hedge Fund Research and Cambridge Associates.

Post-crisis TAA strategies had some distinct characteristics as compared to the old-style TAA.

- Post-crisis TAA strategies have more of an emphasis on downside protection than pre-crisis strategies. The painful experiences during the financial crisis have refocused investors on the importance of risk management. Hence, the demand for downside protection dramatically increased after the crisis. To meet the demand, the new class of

TAA managers designed outcome-oriented solutions aiming to protect the downside as the top priority and maximize the upside potential as the secondary objective.

Figure 2: AUM and Total Number of Tactical ETF Strategies\*



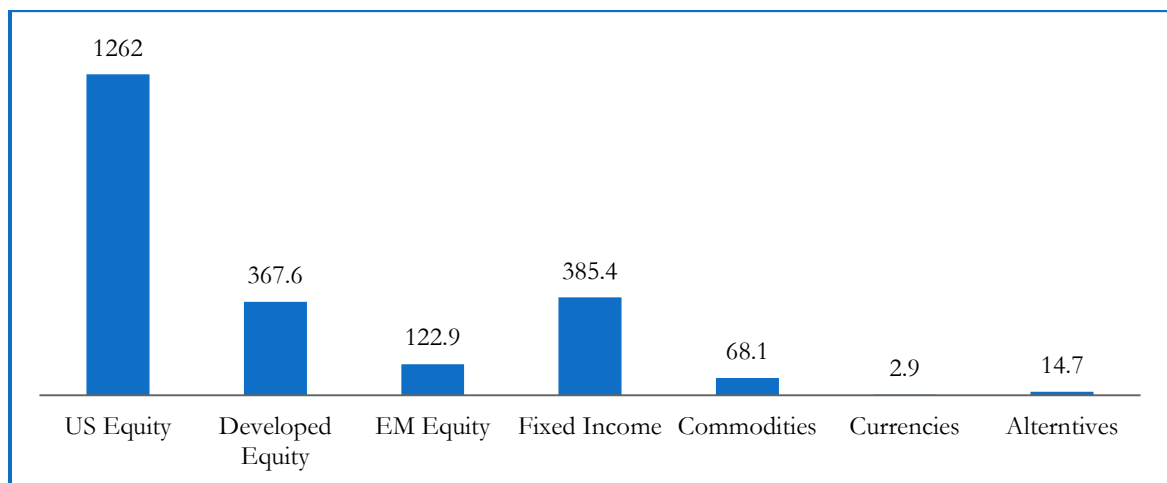
Source: Morningstar. \* The data does not include Strategic and Hybrid ETF strategies.

- Many post-crisis TAA strategies use a trend-following or momentum approach. Traditionally, commodity trading advisors (CTAs) and global macro managers use this approach to generate returns uncorrelated to market indices. It usually performed well in the trending markets and had the ability to generate positive returns during prolonged market downturns. Many TAA managers adopted this approach, which is very different from the old-style way of tactical asset allocation that emphasizes return forecasting and asset class valuation.
- Post-crisis TAA strategies use ETFs extensively for market exposures. ETFs offer the ability to succinctly and efficiently gain the desired market exposure. Since the first ETF, SPDR S&P 500 Index (SPY), was launched in 1993, the ETF industry has experienced tremendous growth. As of April 2016, the total number of ETFs in the U.S. reached 1,890 and total asset under management totaled \$2.2 trillion (see Figure 3), becoming a prominent component of many investors' portfolios. The asset classes covered by ETFs range from equity, to fixed income, to commodities, to currencies to alternatives. Meanwhile, the markets represented by ETFs have grown to include most, if not all, U.S. and global markets. The development of the ETF industry has provided TAA managers with a much larger toolbox to manage their portfolios. Consequently – in contrast to the old-style TAA managers who frequently use derivatives, investment funds and individual securities – the new TAA managers have found ETFs to be the most efficient tools to implement their strategies and express their asset class/sector/country views. Therefore,

this new class of TAA managers that extensively uses ETFs is often referred to as “Tactical ETF strategists.” Table 2 summarizes the differences between tactical ETF strategies and the old-style TAA.

- The range of TAA offerings has become much broader. The development of the ETF industry also allowed TAA managers more choices in designing strategies to meet investors’ specific needs. For example, managers can design equity-oriented strategies to complement an equity portfolio to provide potential downside protection during market distress. Managers can also design multi-asset income strategies to deliver high income in the current low-rate environment. In contrast, the old-style TAA normally has a more uniform offering due to the limited number of derivatives contracts and funds available.

Figure 3: Asset under Management (\$billion) of US ETPs\*



Source: Blackrock (As of April 2016).

Note: \*ETPs (exchange-traded products) include ETFs and ETNs (exchange-traded notes).

- Many TAA strategies are offered to investment advisors and individuals through low-cost separately managed accounts (SMAs). In the past, most of the protection-type of strategies like CTA managed futures or global macro funds were available only to high-net-worth individuals (HNWIs) or institutions. The old-style TAA strategies were often offered through expensive mutual funds. With technological advances and innovations such unified managed accounts (UMA) and turnkey asset management platforms (TAMPs), advisors can have an easy access to TAA or any other strategies in an efficient and cost-effective way.



Table 2: Comparison of Tactical ETF Strategies with Old-style TAA

	Tactical ETF Strategies	Old-style TAA
<b>Investment Objectives</b>	Offer downside protection while maximizing upside potential	Total return oriented and outperform a blended benchmark
<b>Investment Approach</b>	Quantitative	Quantitative or/and Qualitative
<b>Investment Technique</b>	Trend following and momentum	Return forecasting and valuation
<b>Implementation</b>	ETFs	Investment funds, stocks and derivatives
<b>Downside Management</b>	Aim to eliminate losses in the bear markets	Aim to reduce losses in the bear markets
<b>Offerings</b>	SMA/UMA	Mutual funds, Private funds
<b>Costs</b>	Low	High

### How TAA Strategies Performed

Although the performance issues associated with some of the largest tactical ETF managers dominated news headlines in the last two years, median TAA strategies performed in line with expectations and their respective benchmarks. Table 3 shows the performance of a median tactical strategist tracked by Morningstar across different categories.

Overall, tactical managers performed in line with their respective benchmarks over 1-year, 3-year, 5-year and 10-year horizons across all the categories. Most notably, median tactical managers outperformed the alternative strategies - HFRI Macro and Barclay CTA indices - over 5-year and 10-year horizons. Many TAA advocates argue that TAA strategies can serve as liquid low-cost complements to macro hedge funds or CTAs for downside protection purpose. This observation supports that argument.

One point to note: Assigning tactical strategies to the right category or benchmark can be rather challenging. Since they have the flexibility of allocating the portfolio to a range of asset classes without any constraint, many TAA strategies have the potential to generate positive returns under all market conditions. It makes sense to use a blended benchmark and/or an outcome-oriented benchmark (i.e. T-Bill/Inflation + X%) for the evaluation of TAA strategies. Meanwhile, because many TAA strategies emphasize downside risk management, it also makes sense to compare them to a risk managed benchmark such as S&P 500 Risk Control Index. Of course, TAA is not a short-term trading strategy. Investors need to maintain a position in their TAA strategies for a long run, preferably a full market cycle to fully enjoy the benefits the strategies provide.

Table 3: Performance of Median Tactical Strategies (Gross %)

Name	2015	3-Yr	5-Yr	10-Yr
Global All Asset Tactical	-3.25	3.10	4.08	5.32
Blended Benchmark <sup>1</sup>	-4.31	2.45	3.17	4.86
Global Balanced	-1.94	4.02	4.99	4.52
Blended Benchmark <sup>2</sup>	-1.87	4.66	4.74	5.53
Global Equity	-2.53	7.00	6.17	5.40
Morningstar Global Equity <sup>3</sup>	-1.53	8.48	6.79	5.73
Global Fixed Income	-1.52	-0.18	3.11	3.61
Barclay Global Agg. ex USD <sup>4</sup>	-2.54	-1.17	1.34	3.97
US Balanced	-3.34	4.00	4.44	6.23
Blended Benchmark <sup>5</sup>	1.02	9.52	8.89	6.74
US Equity	-3.40	11.08	9.29	6.41
Morningstar US Market <sup>6</sup>	0.69	14.80	12.31	7.54
US Fixed Income	-0.50	1.58	3.16	9.00
Morningstar Core Bond <sup>7</sup>	0.98	1.67	3.45	4.73
HFRI Macro Index (net of fees)	-1.26	1.25	-0.00	3.51
BarclayHedge CTA Index (net of fees)	-1.50	1.48	-0.01	3.08

Source: Morningstar (As of December 31, 2015).

Notes: 1. Global All Asset benchmark = 55% Morningstar Global Equity + 17.5% Morningstar Core Bond MCBI + 17.5% Barclay Global Agg ex USD + 10% Morningstar Long-only Commodity; 2. Global Balanced Benchmark = 60% Morningstar Global Equity + 20% Morningstar Core Bond MCBI + 20% Barclay Global Agg ex USD ; 3. Global Equity Benchmark = Morningstar Global Equity GR; 4. Global Fixed Income Benchmark = Barclay Global Agg ex USD; 5. US Balanced Benchmark = 60% Morningstar US Market + 40% Morningstar Core Bond MCBI; 6. US Equity Benchmark = Morningstar US Market; 7. US Fixed Income = Morningstar Core Bond MCBI

## The Good and Bad of TAA

Investment objectives, approaches and investable universes vary among TAA strategies. TAA managers are a diverse group of firms with very different backgrounds and approaches. Some use a quantitative approach; while others are more qualitative in nature. Some quantitative managers practice trend following or momentum-based approaches and some build econometric forecasting models. However, the most common goals are the same for all the strategies.

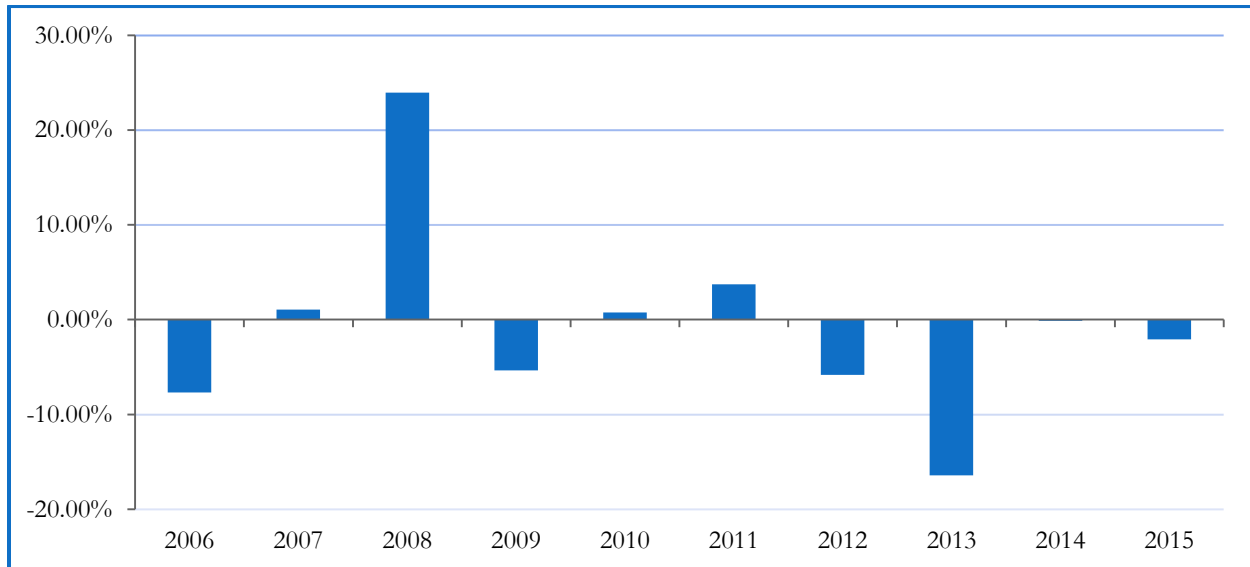


- **Downside Protection.** Many TAA managers try to identify market environment – bull or bear market (risk on or risk off) – by utilizing quantitative models or qualitative research so they can accordingly position the portfolio in the best performing asset classes. Typically, TAA managers allocate the portfolio to “safe haven” assets such as treasuries and cash to preserve capital once the bear market or risk-off environment is identified.
- **Diversification.** TAA managers also try to deliver a return stream which has low correlation with traditional assets by investing in a variety of asset classes and tactical positions. Some asset classes such as commodities or currencies have low correlation with equities and bonds. Tactical positions also reduce correlation over a full market cycle. For example, when TAA managers overweight equity in a bull market, the strategy may have a high correlation with equity; when bonds are over-weighted in a bear market, the strategy might have a high correlation with bonds. However, over a full market cycle, the average correlation with both equities and bonds is moderate.

Figure 4 demonstrates that TAA strategies helped limit the downside risk and provided diversification over the past ten years. The graph shows the excess returns of the median tactical ETF strategy relative to MSCI World Equity Index. During the last downturn in 2008, the median TAA manager outperformed the general market significantly. This is exactly what the TAA strategy is supposed to deliver. Figure 5 shows that the median TAA strategy still cumulatively outperformed MSCI World Equity Index despite the equity bull market we have experienced during the past seven years. Over a full market cycle, TAA strategies have the potential to outperform general markets.

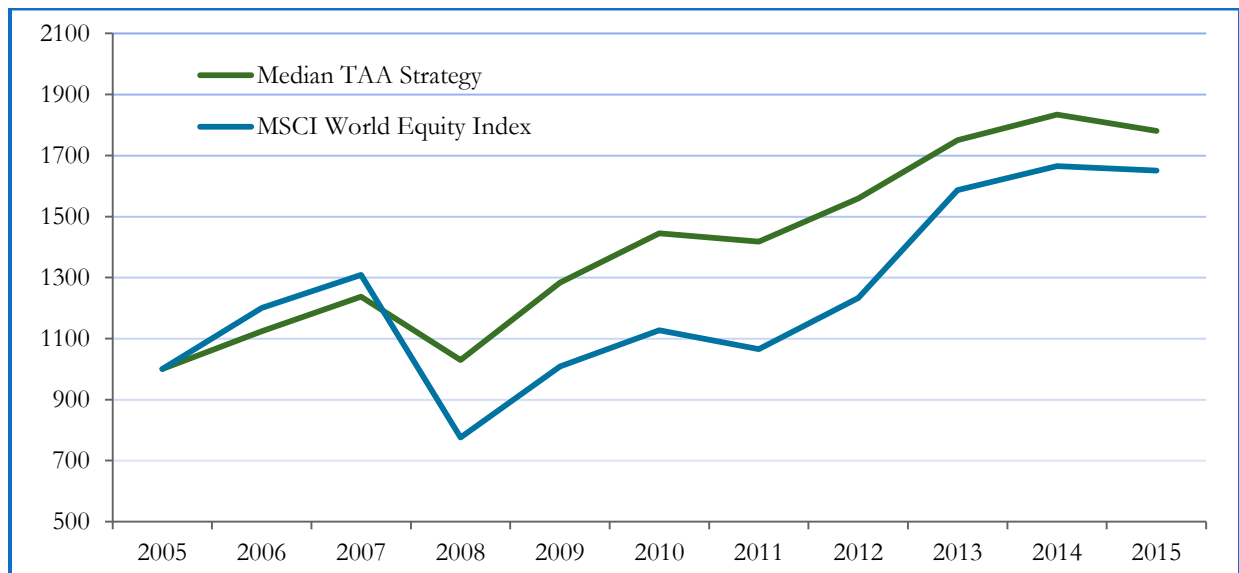
Most of today’s TAA strategies, especially the ones created after the financial crisis, have relatively short track records. To get a hint of how tactical strategies would have performed in different parts of the market cycle, we show the historical performance of CTA managed futures and global macro hedge funds in Figure 6. Many TAA managers have similar investment objectives and utilize similar approaches. The major difference is that CTAs and global macro managers normally employ leverage and shoring while TAA is traditionally a long-only strategy without use of leverage or shorting. Usually, the TAA, managed futures and global macro strategies outperform in strong trending markets, especially during the period of a significant downward trend. Figures 4 and 6 demonstrate that all three types of strategies had strong outperformance against the equity market during the bear markets in 2000-2002 and 2007-2008.

Figure 4: Excess Return of Median Tactical Strategies Relative to MSCI World Index



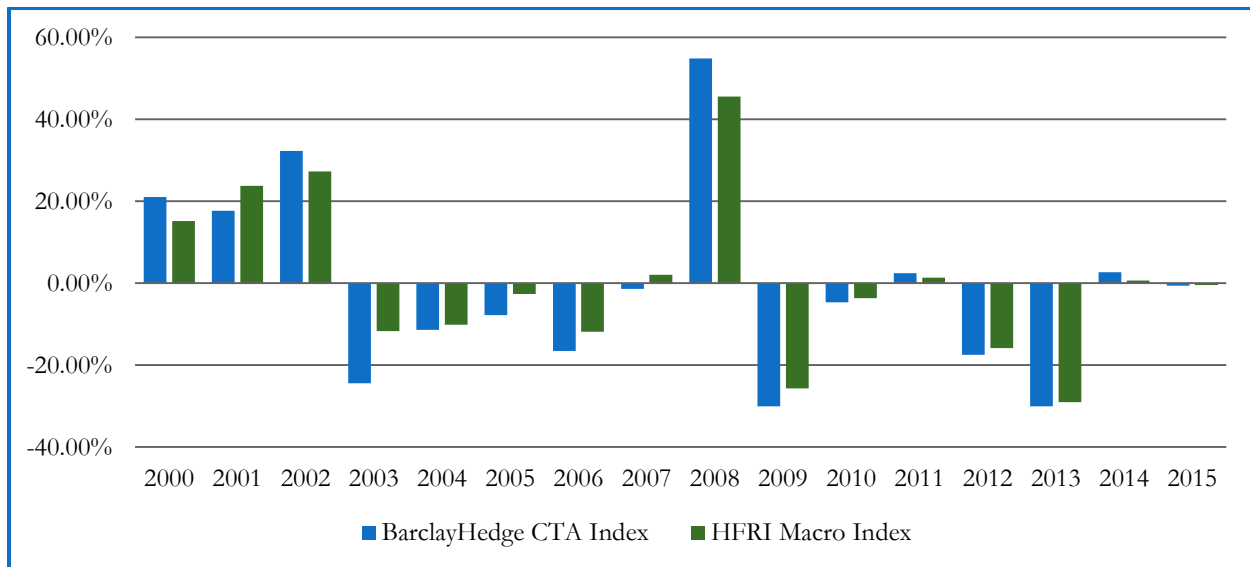
Source: Morningstar, Bloomberg (As of December 2015).

Figure 5: Cumulative Return of Median Tactical ETF Strategy vs. MSCI World Index



Source: Morningstar, Bloomberg.

Figure 6: Excess Return of CTA and Global Macro Strategies Relative to MSCI World Index



Source: BarclayHedge, Hedge Fund Research and Bloomberg (As of December, 2015).

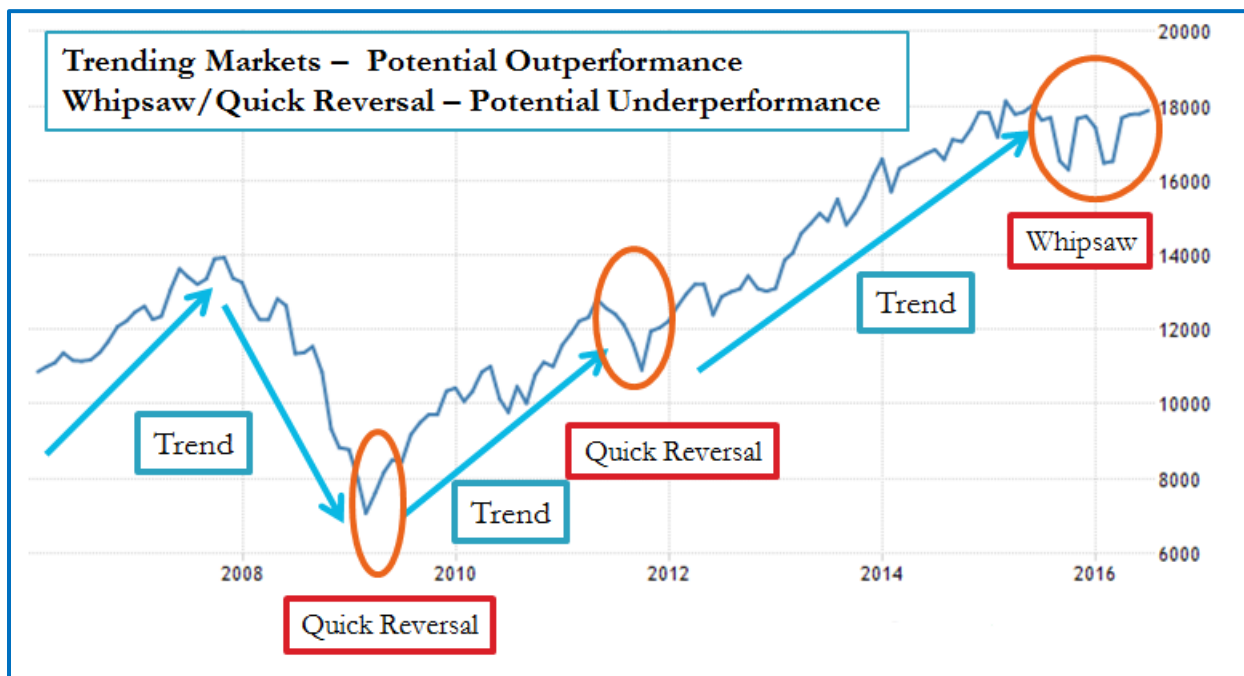
To a certain degree, the success of TAA strategies depends on how often and how strong the markets trend, upward or downward. In reality, the markets do exhibit identifiable trends quite frequently. There are three major reasons:

- The economy and monetary policies usually move in cycles. Economy follows a business cycle, moving between expansion and contraction. To manage the economy, the Fed normally adopts a loose monetary policy in a contraction and a tight monetary policy in an expansion, therefore creating a liquidity cycle between “tightening” and “loosening.” Accordingly, the equity markets trend up and down, following a boom and bust cycle.
- Investors tend to overreact or underreact to fundamental changes. Behavioral finance has taught us that human beings are not always rational. At the early stage of market direction changes, investors tend to underreact and the new trend slowly develops. At the late stage of a trend, investors tend to overreact and extend the market trend beyond what fundamentals justify.
- It takes time for investors to digest new information and take actions. Markets are not perfectly efficient to immediately price in all the relevant information. The market participants need time to gather, process and act on new information. Sometimes this process can be exceedingly slow. As a result, the market extends its existing trend for a period of time.

However, trendless markets could be tricky for TAA strategies, as well as CTA-managed futures and global macro strategies. Tactical strategies have the potential to underperform during the periods of trendless markets or quick reversals. The situation is often called “whipsaw” when the markets are rapidly changing direction, up and down. During those periods, models that drive TAA strategies have a difficult time determining the market directions. Figure 8 illustrates how those market environments look like using Dow Jones Industrial Average as an example. The trendless and volatile markets usually occur in the following situations:

- The economy, monetary policies and market start changing direction. In those periods, the uncertainties create high levels of volatility, and investors have no strong conviction about the market directions either way.
- External events and shocks. Political and economic events domestically or internationally, as we saw with the European debt crisis and the Arab Spring, often generate high levels of volatility in the markets. This makes it challenging for TAA managers to determine whether those events will have lasting effects on the markets.

Figure 7: Illustration of Trending and “Whipsaw” Market Environments  
Using Dow Jones Industry Average as an Example



Data Source: Tradingeconomics.com

## Not All Managers Are the Same

Median TAA managers did deliver downside protection and diversification in the long run, as shown in the last section. However, the recent performance of some major tactical ETF managers was disappointing. To help achieve investment success, we offer some insider suggestions on how to select good TAA managers.

- **Understand the theory behind the “secret sauce.”** Any reasonable TAA model needs to have strong economic theoretical foundation. Otherwise, the model will be just a data-mining exercise, which will have little chance of success in the long run.
- **Back tests need to cover various market cycles.** Many tactical managers do not have long-term track records; instead they show back-test performance. Drawbacks of back tests such as data-fitting and hindsight benefits need to be well understood. Further, some managers only offer back tested data for short periods of time. This is usually not sufficient to prove the legitimacy of the model. Investors need to see how the model performed over a few complete market cycles and understand when and why the model outperformed, as well as when and why it underperformed.
- **Team experience.** Many tactical managers, especially some ETF strategists, came to the market without long-term investment management experiences. Although they may be brilliant in developing quantitative models, they would likely face difficulties when market conditions start to change and the model underperforms. To build long-term success, the TAA models need to continuously improve and adapt to ever-changing market conditions, and in those efforts, experience will prove to be utmost important.
- **Track record.** A long-term track record is important in evaluating tactical managers. A good long-term record is an indication of the manager’s past success. As we all know, past performance is not a guarantee of future results, especially in the tactical management space. There are numerous examples of successful managers who had to close their funds due to later poor performance in this industry. Investors should evaluate the performance record in the context of managers’ investment models, philosophies and edges.
- **Research capability.** Tactical investing is not an easy task. TAA managers need to constantly improve models and develop new strategies. The firms that allocate more resources to research will have a better chance to deliver superior returns in the long run.

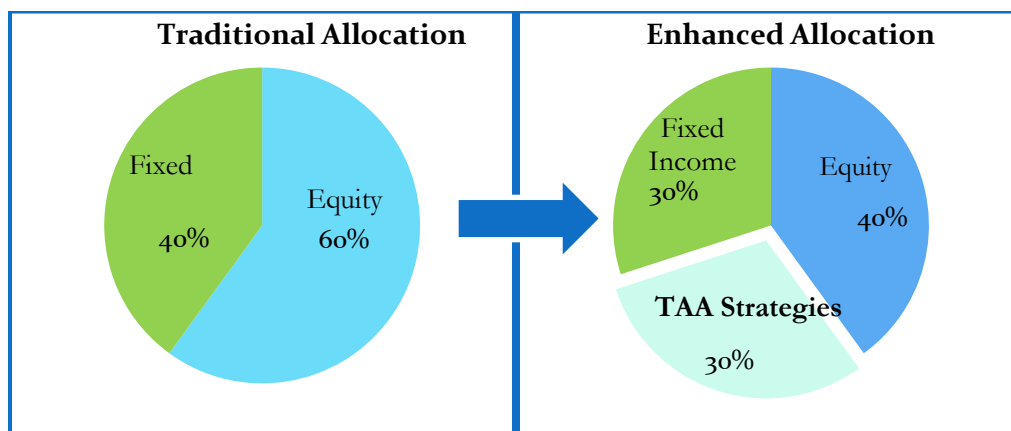
## Lessons from the Regulatory and Performance Issues of Two Major Tactical ETF Strategists

In the past two years, two of the largest tactical ETF strategists experienced serious issues. One firm with \$28 billion of AUM/AUA at its peak was fined by the SEC and subsequently went bankrupt. Another firm with more than \$10 billion of AUM/AUA at its peak suffered a significant performance drawdown in 2014 and lost the majority of its assets.

As a result, some investors lost confidence in tactical strategies. The tactical ETF strategy segment suffered significant asset outflows due to those issues (see Figure 2). In our opinion, the issues were related to specific managers, not the strategy as a whole. As we have highlighted, TAA strategies in general did offer downside protection as well as diversification benefits. However, there are some important lessons we can learn:

- The need for more rigorous due diligence. In addition to understanding the investment approach, investors need to review independent third-party-verified GIPS-compliant live performance records and back test results.
- Diversification across different tactical managers. Each strategy has its own model or strategy-specific risk. By investing with two or more high-performing strategies, the strategy-specific risk can be mitigated.
- Tactical strategies should be used to enhance a portfolio, and not be the entire portfolio. In the early days, some investors allocated their whole portfolios to a certain tactical strategy or strategies. Once the strategy or strategies underperformed, the investors' portfolios suffered. In our opinion, 20-30% allocation to tactical strategies is reasonable (see Figure 8 for an example).

Figure 8: How to Use Tactical Asset Allocation Strategies



## Efficient Solutions to Today's Market Concerns

In today's markets, investors face two significant challenges: how to protect the downside during market downturns and how to generate high and stable income in the current low interest rate environment. As the current bull markets have been ongoing for more than seven years, many investors have become more concerned about potential market downturns. Due to this concern, we expect investors' demand for downside risk management solutions to continue to increase. While some investors may look to other options for downside protection, they all have their own risks or drawbacks relative to TAA strategies. Other options include:

- **Buy high quality bonds.** This is the most straight-forward choice. High-quality corporates and Treasuries often perform well in the bear markets. However, under the current low interest rate environment, the return expectation of high-quality bonds is diminishing. Holding high-quality bonds for the long run may not be able to meet investors' goals. TAA strategies could offer a solution of higher expected returns than high-quality bonds over the long run.
- **Buy put options.** This is another natural way to hedge downside risk. However, options are prohibitively expensive. Unless you purchase put options with excellent timing, buying options is almost a sure way to lose money. Most options expired worthless.
- **Invest in managed futures or global macro funds.** Hedge funds are expensive, normally charging a 2% management fee and 20% performance fee. The after-fee returns of hedge funds have not been as attractive as those of TAA strategies (see Table 3). Moreover, hedge fund strategies are mostly opaque and hard to understand.

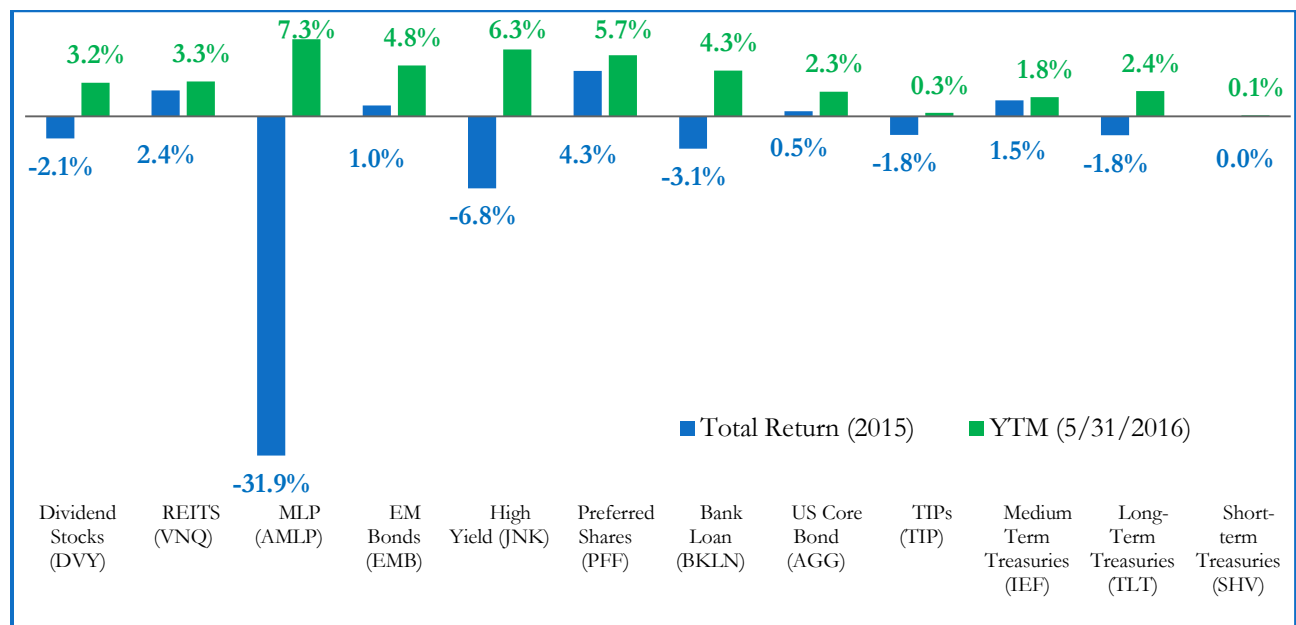
Compared to these three options, TAA strategies offer cost-effective solutions that could provide better upside potentials. Investors should consider TAA strategies as complements to other downside protection strategies.

Investors face an additional problem when it comes to generating income in the current low interest rate environment. Many investors have been searching for higher yields outside traditional fixed income investments and venturing into alternative income-generating asset classes such as REITs, emerging market bonds, bank loans, MLPs, preferred shares and dividend stocks. However, those asset classes are quite volatile and risky. The most recent examples are MLPs and high-yield bonds, which usually offer 6-9% income, lost a significant amount of principal as oil prices collapsed in 2015 (see Figure 9). To meet investor demand for high and stable income, many TAA managers have designed multi-asset income strategies aiming to provide both high income and capital preservation by tactically positioning across all the income-generating asset classes. In our opinion, this type of strategy will continue to grow over



the next few years as the Fed continues the path of increasing interest rates and traditional fixed income investments may not be able to generate attractive returns.

Figure 9: Total Returns of Income-Generating Assets in 2015 and Their Respective Yield as of 5/31/2016



Source: Yahoo.

In conclusion, TAA strategies can offer efficient solutions to two of the most pressing issues investors face today: downside protection in bear markets and income generation in a low interest rate environment. This segment will continue to grow despite recent hiccups. From an investor's perspective, the best way to utilize TAA strategies is to allocate part of his/her portfolio to high-performing TAA strategies along with other strategies.

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## Disclosure

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