



Risk Premia Strategies

An Anchor to a Diversified Hedge Fund Portfolio

Summary As institutional interest in alternative investments has increased, the goal of alternatives portfolios, and indeed, even the definition of “alternatives,” has evolved over time. This paper discusses the evolution of alternatives portfolios, and proposes the next step in this evolution is the incorporation of risk premia strategies within an alternatives portfolio. Risk premia strategies allow alternatives investors access to a broad diversified set of risks, which often are the ultimate drivers of the potential diversification benefits of alternatives portfolios. This risk premia “core” can serve as a complement to investors’ best hedge fund ideas within an alternatives portfolio.

Given that the diversification benefits of alternatives are often driven in large part by risk premia, complementing existing hedge funds within the alternatives portfolio with risk premia strategies can provide a number of operational and cost benefits, and free investors to focus on their best high-alpha hedge fund ideas. We believe the addition of risk premia strategies is most appropriate as a complement to more liquid types of alternatives – i.e., hedge funds – therefore, in this paper we focus specifically on hedge fund portfolios, and leave aside more illiquid alternatives, such as private equity and real estate.

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Introduction

In the pursuit of improved portfolio outcomes, institutional investors have continued to increase allocations to hedge funds. Public pension funds have been steadily increasing their allocation to the asset class over the past few years, with their mean allocation to hedge funds rising from 7.5% in 2013 to 7.8% in 2014.¹ Hedge funds are typically considered “alternative” investments by institutions, and make up the bulk of alternatives portfolio assets.

As recently as a decade ago, institutional investors were attracted to alternative investments primarily for their absolute return potential. Over time, the focus has shifted, with investors looking to alternative strategies with lower correlation to traditional assets as a means of providing diversification benefits to the overall portfolio. Thus, the structure of alternatives portfolios has also evolved, as investors increasingly look for both diversification and alpha from their alternatives portfolios.

RISK PREMIA INVESTING – A BRIEF OVERVIEW

At the heart of risk premia investing is the idea that investors are not, per se, compensated for investing in assets, but rather they are compensated for assuming risks. Over longer time horizons, an investor’s ability to identify and harvest statistically independent risk-factor exposures (risk premia) can serve to enhance performance outcomes, provided no single risk factor is allowed to dominate a portfolio’s return outcomes.

According to this view, a well-designed risk premia portfolio consists of a collection of assumed risks that respect a basic set of investment principles:

- 1. The assumed risks should be well known, investable and scalable.**
- 2. The risk premia should possess a sound rationale with respect to the returns they have historically provided.**
- 3. The assumed risks should be intuitively and measurably independent.**

4. An investor should seek to include a wide variety of risk exposures.

Investors have access to a wide variety of useful risk premia across asset classes; risk premia that extend well beyond simple “long-only” asset betas to momentum risk premium, commodity-roll risk premium, size risk premium (e.g., SMB: small-minus-big) and currency carry risk premium.

As discussed in previous Janus white papers (*Introduction to Risk Premia Investing*, July 2015, and *Risk Premia Investing: The Importance of Statistical Independence*, July 2015), an investment tool kit consisting of a broadly diversified collection of risk premia is a powerful ally in producing desirable return outcomes. Risk premia investing provides a framework for building discrete portfolios of risk premia in pursuit of that goal.

¹ 2015 Preqin Global Hedge Fund Report.

Evolution of Institutional Alternatives Portfolios

Despite the widespread use of the term “alternatives” by institutional investors, it means different things to different people. This definition has evolved over time,² gradually shifting toward the third definition listed below. Investors have defined alternatives the following ways:

1. By Investment Structure

Regardless of the underlying strategy and risk exposures, if it has the typical features and structure of a hedge fund (a pooled vehicle with significant management and incentive fees) and is referred to as a hedge fund, then by definition the investment is considered alternative.

2. By Investment Style

Long-only investment styles that have been common for some time are considered traditional, and other styles are considered alternative. Equities are traditional, but long/short equities are alternative, because they are not long only. What is considered alternative based on this definition can change over time, as strategies such as emerging market debt, for example, have become more widely adopted by investors.

3. By Investment Risk

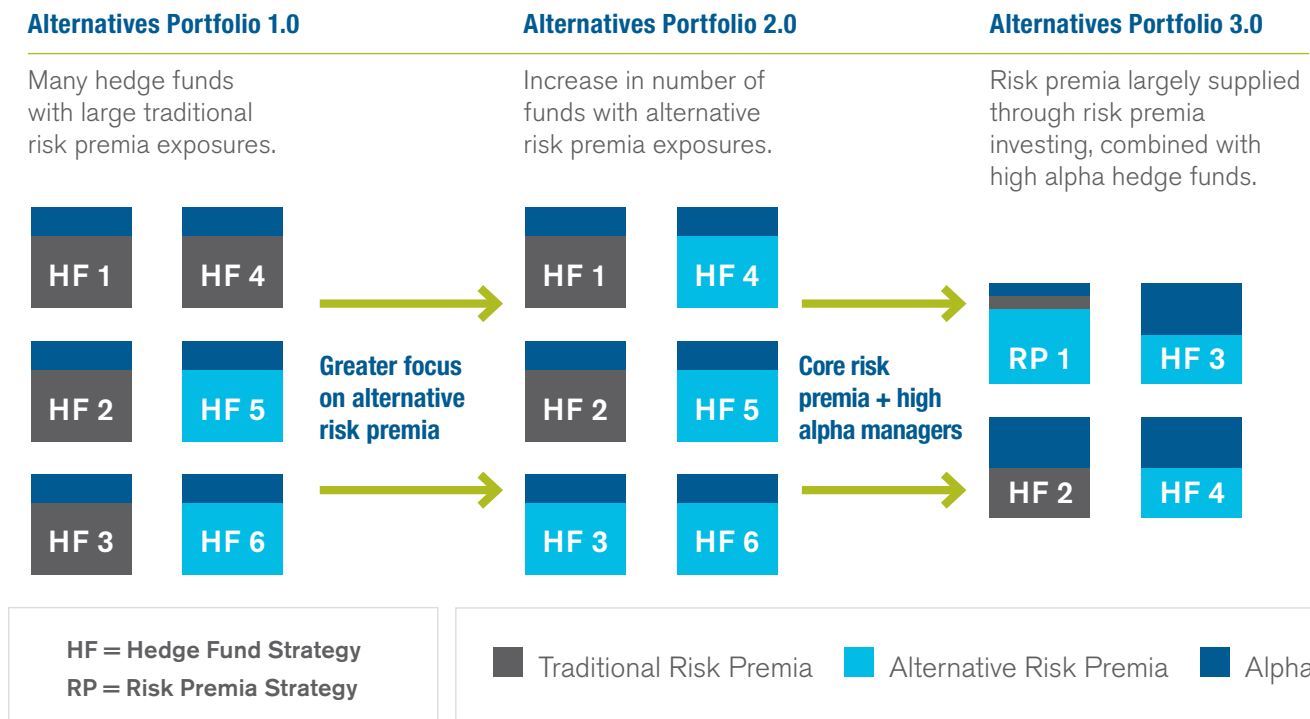
Investments with returns largely driven by traditional risk premia are considered traditional, and all other investments are considered alternative.

Though the last definition is a more natural one than the first two, it is still problematic in some respects: When defining alternatives based on risk premia, it is still necessary to determine which risk premia are considered traditional. Typically, equity risk (long a diversified basket of equities), interest rate duration risk, and possibly also credit risk already present in institutional portfolios are considered traditional risk premia. With this definition in hand, hedge fund returns can be broken down the following way:³

$$\text{Hedge Fund Returns} = \text{Traditional Risk Premia} + \text{Well-Documented Alternative Risk Premia} + \text{Undocumented Risk Premia} + \text{Alpha}$$

Initially, institutions investing in alternatives portfolios were more focused on alpha and undocumented risk premia (hereafter collectively referred to as alpha). Such portfolios were largely comprised of hedge funds, and

EXHIBIT 1: THE EVOLUTION OF LIQUID ALTERNATIVES PORTFOLIOS



These portfolios are hypothetical and used for illustration purposes only.

² For the purposes of this paper we do not consider real estate or private equity investments, though many investors consider those alternatives as well.

³ Others have explored risk-based benchmarks for hedge funds, see: Fung, William, and David A. Hsieh. “Hedge fund benchmarks: A risk-based approach.” *Financial Analysts Journal* (2004): 65-80.

the typical hedge fund style resulted in a relatively large equity risk premium exposure. Thus, as investors became focused less on alpha generation, and more on achieving diversification benefits, equity-reliant hedge fund portfolios may have achieved their alpha generation goals, but likely fell short in terms of diversification benefits.

In recognition of this, there has been a continuing evolution among alternatives investors to seek greater exposure to a broader array of risk premia in their alternatives portfolios. This shift is evident from the increased interest in less equity-sensitive managers such as Commodity Trading Advisors (CTAs) and Global Macro managers.⁴

We believe that investors can take the next step in this evolution by incorporating risk premia portfolios as a complement to hedge funds within their broader alternatives portfolios (shown in Exhibit 1) – what we call “Alternatives Portfolio 3.0.” This approach would allow investors to directly target diversified exposure to alternative risk premia – separating that allocation decision from their pursuit of alpha. Investors now have access to various ways to capture risk premia,⁵ which frees them to focus on high-conviction hedge fund managers who seek to deliver alpha. Other potential benefits include reduced costs and complexity, as well as improved transparency and daily liquidity.

Alternatives 1.0

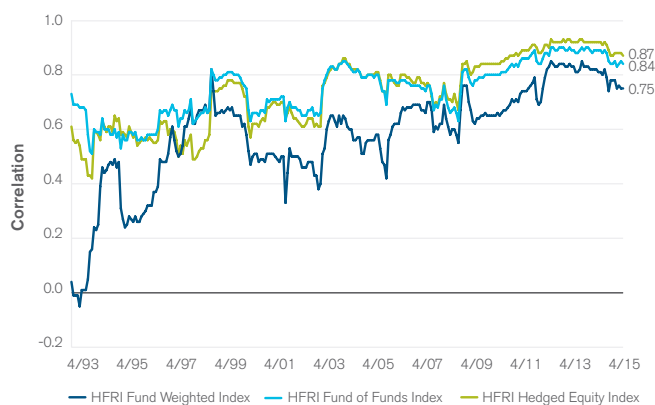
Before discussing this potential next step in the evolution of alternatives investment portfolios, it is worth considering the path alternatives investors have taken to this point. Hedge funds were originally considered absolute return vehicles, theoretically seeking returns regardless of market direction. Given the focus on alpha, there was somewhat less attention paid to the diversification benefits of the alternatives allocation in relation to the broader portfolio. However, many alternatives managers who rely heavily on traditional risk premia exposures, such as long/short equity managers,⁶ have been, and remain, among the most prevalent hedge fund styles preferred by investors.⁷ Thus, aggregate hedge fund returns have historically contained a large element of the equity risk premium.

Funds of funds, while more diversified than broader indices, have also heavily relied on managers with traditional risk premia exposures in aggregate.

A simple way to visualize this is via correlations of hedge fund indices to the equity market. Exhibit 2 shows rolling

EXHIBIT 2

Rolling Three-Year Correlations with the S&P 500 Index



Source: Hedge Fund Research Inc., Bloomberg.

correlations of HFRI fund weighted, hedged equity, and fund of funds indices. Not only have these correlations been relatively high, but they have also crept upward over time. The fund-weighted benchmark correlations have consistently mirrored hedged-equity correlations, and are currently very close to one compared to broad market equities. Fund of funds correlations, which are likely more representative of actual institutional investors' experience, have been somewhat lower than the broader fund-weighted index historically, but this gap has narrowed more recently.

Alternatives 2.0

Many sophisticated investors have started looking to reduce equity risk in their alternatives portfolios (and hence lower alternatives correlations with equities), in order to achieve greater diversification benefits when combined with traditional assets. Investors looking to reduce equity risk in their alternatives portfolios have become increasingly interested in hedge fund strategies with low correlations to equities. Two such popular hedge fund categories are Global Macro and CTA strategies. As shown in Exhibit 3, historically these investment styles offered much greater diversification benefits than more common hedge fund allocations, given their relatively low correlations to equity markets. Investors seeking diversification as well as alpha from their alternatives portfolios may achieve portfolio benefits by increasing allocations to these strategies.

⁴ 2014 Preqin Global Hedge Fund Report; Wall Street Journal, "Hedge Funds Get Stung by Slow Markets," June 12, 2014.

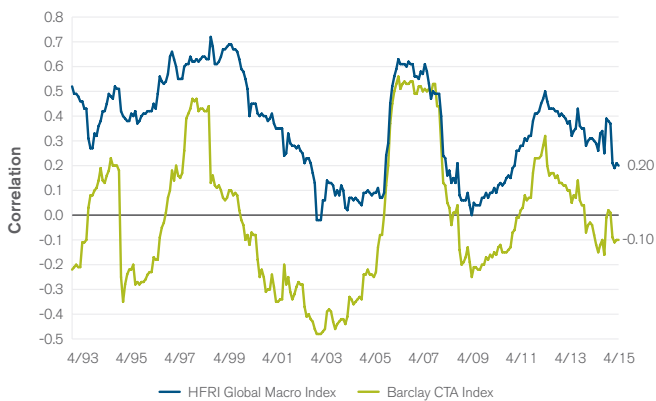
⁵ Briand et al. "Portfolio of Risk Premia: a new approach to diversification." MSCI Barra Research Insights (2009).

⁶ Fung, William, and David A. Hsieh. "The risk in hedge fund strategies: Theory and evidence from long/short equity hedge funds." *Journal of Empirical Finance* 18.4 (2011): 547-569.

⁷ Source: BarclayHedge Alternative Investment Database

EXHIBIT 3

Rolling Three-Year Correlations with the S&P 500 Index



Source: Hedge Fund Research Inc., BarclayHedge, Bloomberg.

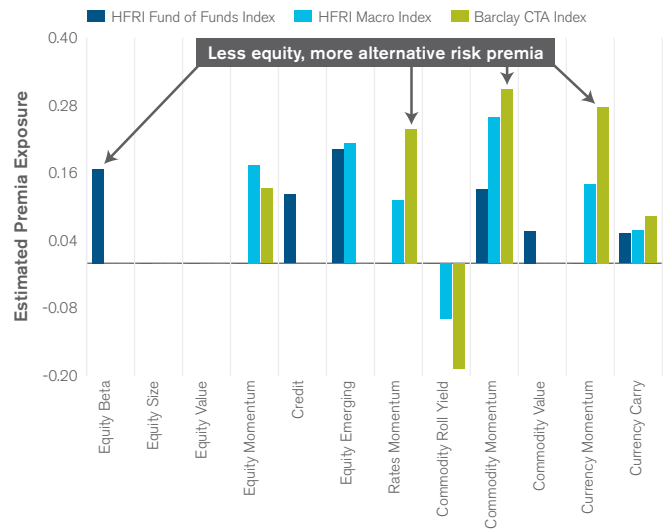
But while shifting the structure of the alternatives allocation in this way may help investors achieve the diversification goals of their alternatives portfolios, the approach may yet be suboptimal. To the extent that Macro/CTA hedge funds are simply providing access to alternative risk premia, as opposed to alpha, they represent a potentially expensive and illiquid way to access these return streams. In the past, investors may not have had the tools to estimate how much hedge fund returns were driven by alternative risk premia vs. alpha. Even where investors had such tools, investing in alternative risk premia was predominantly the province of hedge funds. Now however, institutional investors have both the means to estimate risk premia exposures as well as invest more directly in them.

To highlight the impact of risk premia on alternatives portfolios, Exhibit 4 shows the estimated risk premia exposures of the HFRI Fund of Funds Index compared with the HFRI Macro Index and the Barclay CTA Index. Portfolios that incorporate a larger allocation to Macro/CTA funds clearly achieve broader exposure to risk premia than many hedge fund investors have had historically. As shown in Exhibit 4, the HFRI Fund of Funds Index has a relatively large estimated exposure to equity beta. The size of the bar actually underestimates the effect this exposure has on portfolio volatility, as equity beta is one of the more volatile risk premia.

In contrast, Macro and CTA funds (as proxied by indices) have much larger relative estimated premia exposures to alternative risk premia, such as momentum premia. This helps to explain the typically limited correlations to equity markets of these strategies shown in Exhibit 3.

EXHIBIT 4

Estimated Risk Premia Exposures



Source: Hedge Fund Research Inc., BarclayHedge, Janus.

01/01/01 – 12/31/14. Estimate of Risk Premia Exposure prepared by Janus Liquid Alternatives Analytics by analyzing returns of the indices shown (returns data source: Bloomberg). Risk Premia are defined by Janus, based on how Janus has structured its liquid alternatives program. Janus classifications will vary from standardized classifications.

As mentioned previously though, the benefits shown in Exhibit 4, alternative risk premia exposures that drive low correlations, are not without cost. Diversified Macro/CTA strategies that deliver on their alpha objectives may be justified in terms of cost, but those that do not end up simply providing very expensive access to alternative risk premia. Just as investors should not pay “2 and 20” for access to the equity risk premium, in our view they should not pay high fees simply to access other well-documented risk premia such as commodity momentum⁸ or currency carry.⁹

The Role of Risk Premia

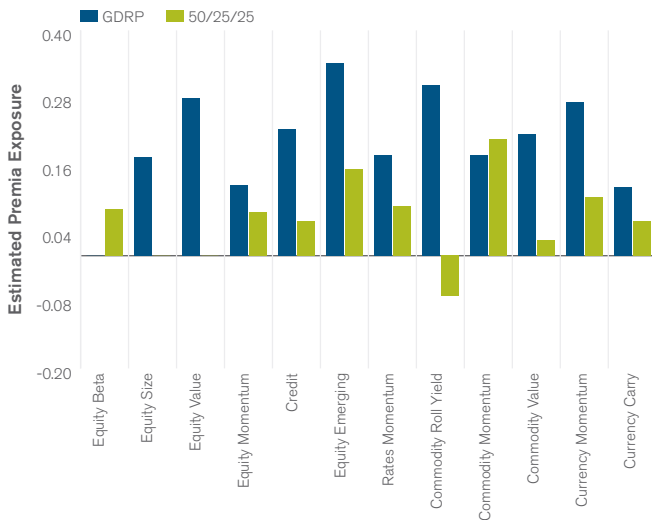
Investors who restructure their alternatives portfolios to invest in less correlated hedge fund styles are either explicitly or implicitly accepting diversified risk premia exposure. Put another way: Given our analysis demonstrates alternative risk premia explain a large percentage of the variability of Macro/CTA returns, investors who rebalance away from long/short equity managers toward these managers are likely seeking diversified risk premia exposure as well as alpha. While it clearly makes sense to include hedge funds in the alternatives portfolio with the potential to generate

⁸ Bhardwaj, Geetesh, Gary B. Gorton, and K. Geert Rouwenhorst. Fooling some of the people all of the time: The inefficient performance and persistence of commodity trading advisors. No. w14424. National Bureau of Economic Research, 2008.

⁹ Pojarliev, Momtchil, and Richard M. Levich. Do Professional Currency Managers Beat the Benchmark?. No. w13714. National Bureau of Economic Research, 2007.

EXHIBIT 5

Estimated Risk Premia Exposures



Source: Janus, Hedge Fund Research Inc., BarclayHedge.

01/01/01 – 12/31/14. Estimate of Risk Premia Exposure prepared by Janus Liquid Alternatives Analytics by analyzing simulated returns of the hypothetical portfolios shown, through the retroactive application of a model. Risk Premia are defined by Janus, based on how Janus has structured its liquid alternatives program. Janus classifications will vary from standardized classifications.

These portfolios are hypothetical and used for illustration purposes only. The securities in these portfolios were selected with the full benefit of hindsight. It is not likely that similar results could be achieved in the future.

significant alpha, we believe that complementing portfolios with risk premia investments can better achieve the goal of diversifying the portfolio risk allocation.

To illustrate, Exhibit 5 shows the estimated risk premia weights of a simulated risk premia portfolio as an example of a risk premia fund, compared with a 50/25/25 portfolio of the HFRI Fund of Funds Index, the Barclay CTA Index, and the HFRI Global Macro Index. Just glancing at Exhibit 5, there is a rough visual similarity between the two investments in that there is exposure across a number of risk premia. Notably, however, the estimated premia weights for the risk premia portfolio are more balanced, as they are explicitly allocated based on estimated relative risk contributions. Additionally, there are no negative premia weights as all risk premia theoretically have positive expected returns, and there are a number of risk premia present in the risk premia portfolio that are absent from the 50/25/25 portfolio.

In sum, when purely discussing risk premia and not alpha, there are clear potential diversification benefits to risk premia investing as opposed to approximating it via hedge funds. From an investment perspective, investors can potentially increase the number of risk premia they invest in, and achieve greater balance across these premia. From an operational perspective, risk premia investing can be implemented in a simpler,¹⁰ more liquid, more transparent, and cheaper¹¹ way than through a typical hedge fund.

Alternatives 3.0: The Next Evolution of Alternatives Portfolios

Of course, when constructing alternatives portfolios, institutions are seeking to optimize both diversification as well as alpha. Given these goals, the past evolution of alternatives portfolios, and the objective of risk premia investing, there are steps institutions can take to restructure their alternatives portfolios:

1. Focus less on, and potentially decrease alternatives portfolio allocations to, strategies that have large weights to the equity risk premium (e.g., long/short equity). This does not mean such strategies are not worth researching or investing in. Rather, to the extent “alternatives” means “alternatives to equities,” equity-sensitive strategies should be de-emphasized in alternatives portfolios. One approach that some investors have taken is to evaluate long/short equity managers as alpha strategies within the context of a global equity portfolio.

2. Utilize risk premia investing to target greater total portfolio diversification, and more broad, balanced premia exposure. For many alternatives investors, risk premia investing can serve as a complement to a well-researched hedge fund portfolio. For smaller investors, or those with limited alternatives expertise, risk premia strategies can potentially act as a core “alternative” investment within a broader portfolio.

3. Focus hedge fund investments on managers who offer exposures to less-liquid risk premia as well as high-conviction alpha managers. Two options are:

- ▶ Managers who target alpha via less-liquid risk premia exposures, such as arbitrage managers.¹²
- ▶ High alpha managers of any strategy type.

While there are many specialized hedge fund strategies that can potentially provide alpha, proper due diligence is essential. There are strategies that may appear to provide alpha, but merely restructure cash flows into nonlinear

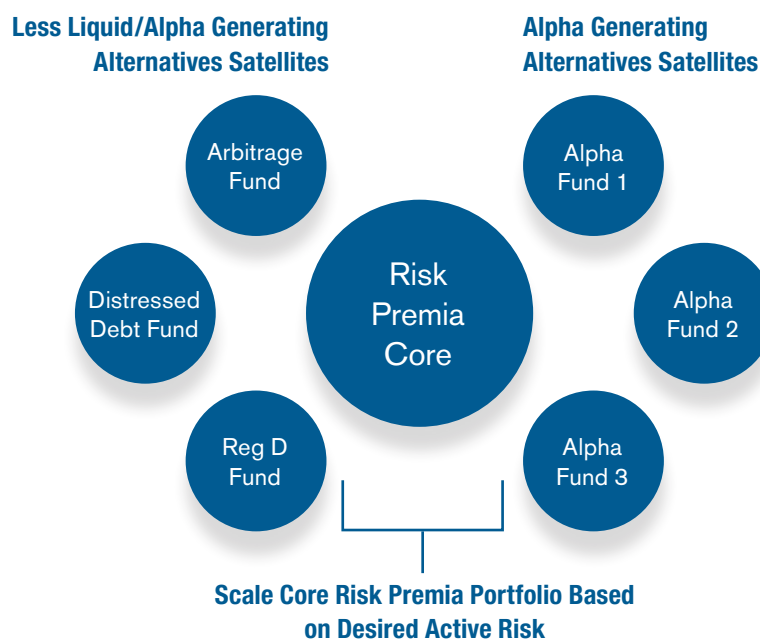
¹⁰ Brown, Stephen, Thomas Fraser, and Bing Liang. “Hedge fund due diligence: A source of alpha in a hedge fund portfolio strategy.”

¹¹ Ibbotson, Roger G., Peng Chen, and Kevin X. Zhu. “The ABCs of hedge funds: alphas, betas, and costs.” *Financial Analysts Journal* 67.1 (2011): 15-25.

¹² Illiquidity can be an important feature of hedge fund returns. Investors should take time to understand the liquidity profile of both the fund and underlying assets for any hedge fund investment they make. For more on illiquidity and hedge fund returns, see: Getmansky, Mila, Andrew W. Lo, and Igor Makarov. “An econometric model of serial correlation and illiquidity in hedge fund returns.” *Journal of Financial Economics* 74.3 (2004): 529-609.

EXHIBIT 6

The Evolution of Liquid Alternatives Portfolios



These portfolios are hypothetical and used for illustration purposes only.

payoff profiles. For example, investment managers can theoretically provide any target consistency of returns through option selling, only to have these returns wiped out in subsequent market crashes.¹³ Further, as recent headlines make clear, managers who appear to provide alpha may potentially source this outperformance from unethical behavior.

Exhibit 6 shows a stylized version of how a core satellite alternatives portfolio may be implemented in practice. Using a risk premia “core” potentially allows sophisticated investors greater leeway in pursuing high conviction, alpha generating hedge fund strategies. Once these funds are selected, instead of adding additional lower conviction hedge funds to diversify returns, the investor can scale the relative size of the core risk premia investment based on desired active risk: alternatives investors with high targets for both alpha and risk can shrink the risk premia core relative to the active hedge fund portfolio; whereas investors targeting broadly diversified alternatives returns with less risk can grow the risk premia portfolio relative to hedge funds.

Another potential benefit of this approach is that it may enable institutions to increase their overall alternatives allocation. In a recent survey of institutional investors

conducted by Ernst & Young, three of the top reasons listed as the “biggest obstacle to allocating a greater proportion of assets to hedge funds” were fees, liquidity needs, and transparency.¹⁴ Given that a risk premia approach to alternatives investing may result in higher liquidity, greater transparency, and lower fees, the core satellite structure highlighted in Exhibit 6 could allow investors to increase their overall alternatives allocation.

Conclusion

Alternatives have gone from little utilized to broadly accepted by institutions over the course of the last decade. Throughout this time, knowledge and understanding of alternatives have grown, and the structure of institutional portfolios has evolved in response to this changing knowledge. Risk premia investing represents the next step in this evolution. Investors can now separate their decisions to allocate to alternative risk premia and seek alpha. Risk premia investing offers the potential to construct more liquid, more transparent, and lower fee alternatives portfolios, while still acting as a complement to stand-alone hedge fund allocations, if desired.

¹³ Weisman, A. “Informationless Investing and Hedge Fund Performance Measurement Bias.” *The Journal of Portfolio Management*, Vol. 28, No 4 (Summer 2002).

¹⁴ Ernst & Young, “2013 Global Hedge Fund and Investor Survey”

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