Investing in Alternative Risk Premia Strategies

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I. Alternative Risk Premia (ARP): An Alternative to Alternatives

ARP has been an emerging area of interest for investors, academia and practitioners. Here we define ARP and outline why we believe diversified ARP strategies may serve as a replacement for certain hedge fund exposures within a portfolio offering both a lower fee and favorable diversification benefits.

Nordic pension plans were the pioneers in allocating to ARP strategies. The root of interest may be related to a study in 2009 by the Norwegian Ministry of Finance conducted to determine the source of returns within the Government Pension Fund. The study identified certain risks as the primary drivers of return and also posed the prospect of gaining these exposures in the most inexpensive ways.

It was not until 2012 that the annual report for the Second Swedish National Pension Fund (AP2) referenced an allocation to ARP as a new asset class that features – relatively - low risk and low correlation with the global equities. In 2012, Danish pension plan administrator PKA also initiated specific ARP exposures.

There has been continued institutional acknowledgement of ARP strategies since that time. In 2016 the second largest state pension plan in the U.S. created a new asset class called Risk Mitigating Strategies, which included allocations to systematic risk premia and other strategies that may diversify the portfolio's equity exposure.

These are just a few instances of institutional acknowledgement and allocation to ARP strategies. As these references indicate diversified ARP strategies have a limited history, there may not be a common understanding of the investment category. Therefore, below we provide an overview of ARP, and why we believe diversified ARP strategies may serve as a replacement for certain hedge fund exposures within a portfolio potentially offering both a lower fee and favorable diversification benefits.

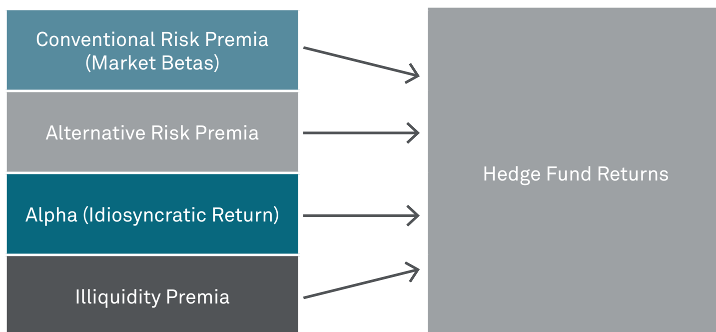
Although it is difficult to ascertain asset growth in ARP strategies, as many hedge fund databases do not categorize the strategies or dependably report assets, we believe the category is still ripe for future growth. Within the U.S., the earliest ARP mutual funds have inception dates from 2012 and while a few funds have launched since that time, there is still less than a dozen with total assets of less than US$4bn primarily concentrated in the top five funds.

II. What is Alternative Risk Premia?

At a basic level ***Risk Premia*** is compensation in exchange for assuming specific investment risk exposure. ***Conventional Risk Premia*** (also referred to as market betas) is represented through liquid long-only investments in conventional asset classes like equity and fixed income. For example, Equity Risk Premium (ERP) is one of the most highly recognized risk premiums representing the additional return received above a proverbial "risk-free" investment in exchange for assuming the risk of investing in equity securities.

ARP is accessed through investment exposures that may be based on conventional asset classes yet contain implementation complexity, such as shorting, derivatives exposure, and leverage, etc. What makes these exposures "Alternative" is that they have typically been accessed through non-traditional investment vehicles such as hedge funds, due to implementation complexity and their relaxed investment constraints.

ARP was previously considered part of the unexplainable component of hedge funds and considered alpha. However, academics and practitioners have since been able to identify and isolate it as compensated systematic risk exposures that can be replicated through trading. Although many individual ARP strategies are long/short in nature, there are exceptions as strategies may be options-based or require temporary exposures to conventional Risk Premia.



There has been an evolution of academic and practitioner work leading up to the increasing number of ARP strategies that are currently available. As factor-based investing and smart beta have a relationship to ARP, it is important to point out some distinguishing elements.

Factor-based investing seeks to isolate performance related to a specific risk or exposure through long and short exposures. In our view, ARP is an extension of this concept, focused on isolating return streams associated with specific risk exposures or characteristics that can be applied across and within asset classes (equity, fixed income, commodities, and currencies). However, ARP is more expansive than just pure factor-based investing based on long/short approaches and can also include additional types of risk premia due to structural and behavioral anomalies (days of the month effect, spinoffs, seasonality, etc.).

Smart beta is a term initially developed to refer to long-only strategies that break the link between the price of an equity security and its weighting in a capitalization-weighted index (equal weighting, fundamental weighting, GDP weighting, etc.) Smart beta retains exposure to the broad asset class, while any factor-based performance tilt is just a by-product of the chosen security weighting scheme. Although the history of factor-based and smart beta investing may have been initiated in the equity markets, the concepts can be applied across asset classes.

The example below shows a return breakdown of a hypothetical smart beta approach focused on equity value. This indicates that a true factor-based investment exposure excludes market betas and from this perspective can be considered a form of ARP.

III. Types of Alternative Risk Premia

There is no industry-wide accepted categorization scheme for ARP strategies. However, the table below categorizes those we consider more commonly offered by investment managers. These categories are also considered to be liquid, scalable, and executed through long and short positioning.

		Asset Classes				
		Commodity	Credit	Currency	Equity	Rates
Types	Carry	x	x	x	x	x
	Momentum	x	x	x	x	x
	Value	x		x	x	x
	Volatility			x	x	x
	Low Volatility				x	
	Quality				x	

Source: HFR Bank Systematic Risk Premia Indices, BNY Mellon

As to what these individual ARP strategies represent and how they are implemented, here are a few examples:

	High Level Definition	Implementation Example
Carry	Capturing a return assuming prices remain the same.	In currency markets, going long high interest rate currencies and shorting low interest rate currencies.
Momentum	Tendency for assets with near term positive performance, or negative performance, to continue the performance trend in a similar direction.	In commodities, going long commodities with a positive performance trend and shorting commodities with a negative performance trend.
Value	Tendency for undervalued assets to outperform overvalued assets.	In currency markets, going long currencies with largest discount relative to Purchasing Power Parity, and short currencies with smallest discount to Purchasing Power Parity.
Volatility	Earn premiums available between implied volatility and realized volatility in options markets.	Delta hedged short straddle option strategies on targeted assets.
Low Volatility	Tendency for low beta stocks to outperform high beta stocks. This may be an anomaly as opposed to a risk premia per se, as there is compensation being received for a lower level of assumed risk as opposed to higher level of risk.	Long high beta stocks and short low beta stocks.
Quality	Tendency for companies with low debt, stable earnings growth to outperform companies that are unprofitable, highly leveraged, and poorly managed. Similar to Low Volatility this may be an anomaly as opposed to a risk premia per se, as there is compensation being received for a lower level of assumed risk as sopposed to higher level of risk.	Long equity securities with characteristics of high quality (low debt, stable earnings growth, etc.) and short equity securities with characteristics of low quality (unprofitable, highly leveraged, poorly managed, etc.)

The table above is not all inclusive of ARP strategies. Other hedge fund strategies that may be considered ARP that do not fall explicitly within the categorization above include: trend following (not asset class neutral) and merger arbitrage (can be liquidity constrained). There are also anomalies that may be due to more nuanced regulatory, structural, or behavioral reasons within certain asset classes. However, we have found these ARP types are used more sparingly within diversified ARP strategies.

IV. ARP Strategies are Like Snowflakes

Despite some commonly accepted categories of ARP, there is no agreed upon methodology or benchmark within each type or asset class. So just like snowflakes, no two ARP strategies are the same. For example, there is more than one way to implement the equity value Alternative Risk Premium. While many managers equal-risk weight across categories others believe tactical allocation or tilting is possible and beneficial. Diversified portfolios of ARP have meaningful performance disparity when combining differences across individual ARP implementation, portfolio construction and risk control.

Investment managers can use a diverse set of securities to implement diversified ARP strategies, including individual securities (typically the case within equities or fixed income), futures, options, or even selecting from the menu of swap contracts available from dealers. Many diversified ARP strategies require liberal use of leverage, through derivatives and shorting, to provide a desired level of risk and return. Even if using the same underlying models, targeting a different volatility level can result in different proportional levels of absolute return.

V. Due Diligence Considerations for Alternative Risk Premia Strategies

Given the diversity of implementation approaches and performance in diversified ARP strategies, investment manager selection is likely to include a number of considerations.

Investment managers may allocate to individual ARP types in various ways. Some may equal risk balance, others may consider higher moments of risk, or use tactical allocation approaches. We have seen a number of managers that may further sub-categorize ARP types (academically-based or practitioner-based, economically-linked or behaviorally-linked, level of co-skewness with other asset classes, level of perceived value, etc.) and have a related allocation scheme. Investors should consider in which ways such sub-categorization can impact investment manager's views and implementation.

Research and development is required to make sure ARP strategies stay relevant and produce long-term positive absolute returns so investors should be cognizant of the level of research and development ARP managers are conducting. Research and development is important in determining the on-going relevancy of ARP strategies within portfolios as well as model enhancement and potential discovery of other ARP types.

Although diversified ARP strategies are expected to have a low correlation to Conventional Risk Premia, investors need to be wary of the times when the risks emerge in the form of poor performance and the potential level of loss that can be expected. Broad diversification can provide some protection, yet investment manager risk controls should also be understood. Additionally, the degree to which investment managers conduct overlay hedging to eliminate unintended exposures to Conventional Risk Premia also differs. Therefore, it is important to understand the rationale behind the views applied to such hedging activity or absence of such hedging.

ARP strategies may be targeted to a certain volatility level, so leverage is typically utilized to achieve these levels. Some ARP categories require more leverage than others, so leverage may not be evenly applied across categories. Investors should be aware of the overall level of leverage, its concentration in particular

underlying ARP strategies and the constraints present.

Investors should consider the ways in which the ARP strategies that are implemented in long/short fashion are structured. For instance, in commodities having the same dollar amount long versus short (dollar neutral) may lead to being long high volatility assets and short low volatility assets. This could create a volatility mismatch with painful results in unexpected environments, especially if leverage is applied. Investors should consider how asset class neutrality is achieved in long/short methodologies (beta, dollar, volatility, duration, etc.) so the true risk of an overall strategy is further understood.

Vehicle type and level of exposure customization are also a consideration. Investors can gain exposure to specific ARP strategies through swap agreements through dealers or systematic investment managers. Institutional allocations can represent bespoke custom tailored allocations, while a number of investment managers offer diversified ARP strategies that span the spectrum of asset classes and types. ARP strategies are available in multiple forms, from private vehicles such as limited partnerships to open-end structures such as UCITS and mutual funds.

As many ARP strategies have a limited track record investors may benefit from understanding how strategies may behave in extreme environments, and the relevancy of back-tested results to possible future scenarios.

Given the high turnover and use of derivatives, ARP strategies are not considered tax efficient strategies in some jurisdictions so certain investors may need to take this into consideration.

These are just a few of the items that should be considered in ARP strategy selection, which would be incorporated in a typical manager search and selection due diligence process.

VI. The Relationship Between Alternative Risk Premia And Hedge Fund Returns

With many investors gaining exposure to hedge funds though fund of fund products, it is important to consider the risk and return benefits investors receive through such allocations and if these benefits can be attained through simpler and more cost effective approaches

It is no secret a meaningful amount of hedge fund returns are related to the equity markets as approximately half of the hedge fund universe constituents are equity long/short managers. A simple regression analysis indicates approximately 75% of the return of the HFRI Fund of Funds Index can be explained by the relationship to the MSCI World Index over the trailing 10-year period (through March 2020).

Although benchmarks for ARP are limited we further the regression analysis by adding a proxy for ARP. We selected the Societe General Multi Alternative Risk Premia Index (inception January 2016) which is based on 10 of the largest managers in the category that span asset classes and types. Although the since inception period is relatively short, we do not believe there is a robust peer group that would provide a much longer track record.

Regression results indicate that since inception of the Societe General Multi Alternative Risk Premia Index (through March 2020) a combination of a global equity exposure (represented by the MSCI World Index) and ARP (Societe General Multi Alternative Risk Premia Index) explained over 80% of the returns of the HFRI Fund of Funds Index. This is certainly not an exhaustive replication exercise, but provides some indication that ARP in combination with global equities may explain an overwhelming majority of hedge fund of fund returns.

The remaining components of hedge fund of fund returns not accounted for through the regression may be attributable to the simplicity of our selected regression components, the liquidity risk premium and alpha. The Societe General Multi Alternative Risk Premia Index does have a level of correlation with MSCI World

Index, yet we do not believe it is significant enough to meaningfully impact the results of the regression.

We would argue that conventional risk exposures within the hedge fund of fund returns are not alluring for hedge fund investors. Rather it is the remaining return components (ARP, liquidity risk premium, and alpha) which are compelling. It is worth noting in the output of both regressions, the alpha component (intercept) was not statistically different from zero, indicating the true alpha component may also not be terribly compelling, on average. We believe ARP strategies provide access to a beneficial diversification component of hedge fund returns that can now be directly allocated to, while excluding alpha uncertainty, common market beta exposures, , and lack of liquidity.

VII. Fee Advantages of ARP

As fees present a performance drag to any hedge fund strategy, it is important to consider fee levels relative to the risk exposures provided. ARP strategies may be a more cost effective diversification tool as they often feature lower fees relative to hedge fund of funds while excluding direct exposures to Conventional Risk Premia.

Within the eVestment (a U.S.-based data provider) Fund of Funds universe the average management fee is approximately 1.1% and average incentive fee is approximately 7.2%. As these fees do not even include the underlying manager fees, a diversified allocation to hedge funds can be costly. Within the eVestment Alternative Risk Premia universe the average base management fee is 0.85% and average incentive fee is approximately 3.4%. This data indicates the average base management fee for the ARP category is less expensive than the average hedge fund of funds by approximately 23%. As volatility levels can differ between strategies, on a volatility-adjusted basis the fee reduction is even more attractive.

We believe hedge fund of fund investors are paying this higher fee for a meaningful exposure to broad global equity markets that can be potentially gained through cheaper means, or pre-existing within other areas of investor portfolios. Conversely ARP strategies provide an exposure that is typically less correlated to the broad equity markets at a less expensive fee level, and may be the more attractive diversification component within hedge fund returns. However, there are a number of considerations that must be deliberated when making an allocation to ARP.

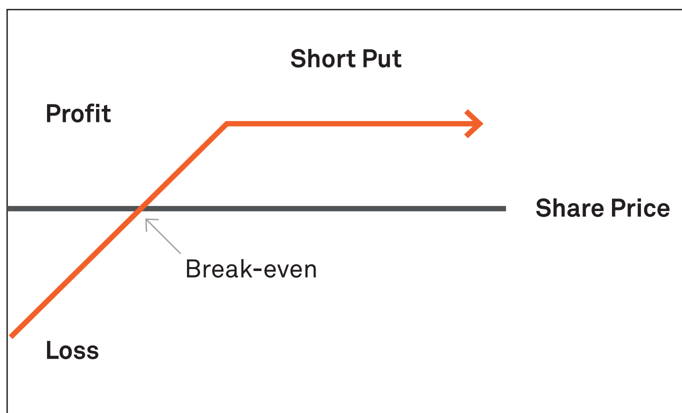
VIII. Performance Expectations

Targeted volatility levels of diversified ARP strategies can be custom tailored for large institutional clients, yet U.S. retail mutual funds are typically in the range of 6% to 10% based on what is believed to be a comfortable level of volatility for investors. As volatility can be targeted, performance expectations from investment managers are typically in the form of an estimated Sharpe Ratio.

Expected Sharpe Ratio levels have been seen to be in the range of 0.65 to 0.90. These expectations are typically based on back-tested results of each manager's preferred implementation, but is also comparable to the Sharpe Ratio of 0.7 for the HFRI Fund of Funds Composite (10-years through June 2019). Based on the range of expected Sharpe Ratios and targeted volatility levels, we would expect absolute returns within the category in the range of mid- to high- single digits over longer-term periods.

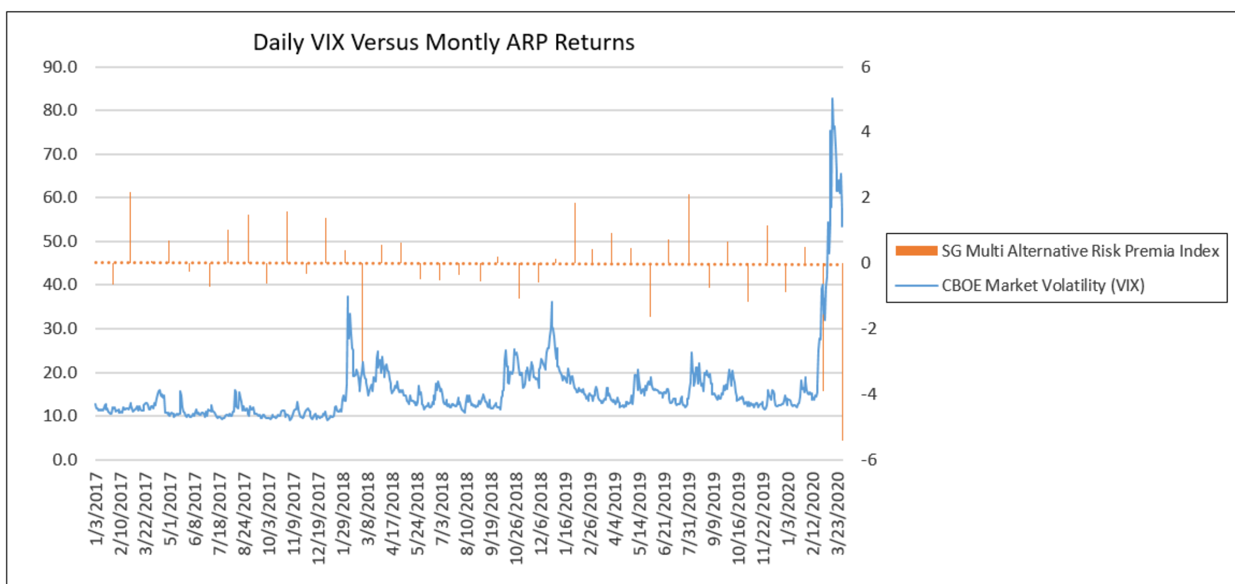
Given the poor performance of many ARP strategies in recent periods, particularly calendar year 2018 as well as the first quarter of 2020, we think this environment provides context for level-setting performance expectations over the short-term. Live track records for many strategies are limited, while we believe most diversified ARP strategies have provided disappointing performance over the trailing three-year period.

As with all investments there is no free lunch, and as the payoff structure of an ARP is conceptually expected to be similar to a short put position (diagram below) it is important to realize losses can occur.



Source: BNY Mellon

Although individual ARP types are expected to have a relatively low correlation to broad asset classes, and to each other, low correlation does not mean no correlation. So periods of poor performance for individual ARP types can coincide with periods of poor performance for traditional asset classes and other individual ARP types. As many individual ARP strategies are expected to provide returns to compensate for assuming risk, it is perhaps when the market reassesses the price of holding such risks that poor performance can result. This was certainly the case during the first quarter of 2020 and although it may be difficult to see in the chart below, there is a negative correlation between the level of VIX and the subsequent month's return of the SG Multi-Alternative Risk Premia Index. Therefore, typically when the VIX increases there is a decrease in ARP returns.



Source: CBOE, Societe Generale, BNY Mellon

It is important to note a few individual ARP types conceptually and in practice have negative correlation to periods of market stress, such as low volatility equity alternative risk premium and quality equity alternative risk premium. Certain trend-following strategies may also have offsetting performance, yet may not be widely used in all diversified ARP strategies.

As many ARP types are based on isolating strategies implemented by hedge funds over long periods of time, diversified ARP strategies are similarly expected to provide a positive return over the long-term. In our view, it is difficult to say the economic and behavioral rationales supporting certain ARP types have fundamentally changed over such a short period of time; yet we concede this is possible over much longer periods of time. Diversification of ARP across asset classes and types, along with risk oversight are lines of defense against such periods.

IX. Summary

ARP provides exposure to a source of returns typically only available through hedge funds with a potentially lower fee and benefit of portfolio diversification. Compared to hedge fund of funds exposure, an allocation to ARP strategies may allow for a more precise and fee effective allocation to risk premia.

A direct allocation to ARP may also increase portfolio diversification through the removal of direct allocations to Conventional Risk Premia exposures present through funds of hedge funds. At the same time it can potentially provide latitude for a more targeted allocation to investment managers that have indications of true idiosyncratic returns (alpha).

As ARP strategies are not all created equal it is important to understand what the allocation is intended to provide in light of the various due diligence considerations of the competing strategies. Based on the initial interest of Nordic institutional investors, there has not been a long period of time for this emerging category to fully develop and gain widespread use. Therefore, we expect continued institutional interest and believe the on-going evolution of relevant benchmarks and live strategy performance will continue to provide insight into the asset class. Although institutional investors may have been the earlier adopters of ARP strategies, we believe retail investors can also benefit from the diversification benefits as investment strategies for smaller investors continue to become available and build track records.

Investors should be cognizant of how an allocation to a diversified ARP strategy may overlap with existing portfolio exposures, while larger institutional clients may seek bespoke approaches that make these considerations and target alternative risk premia of higher conviction.

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