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The Case for Alternative Risk Premia Part 3

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Firm Overview

Versor Investments is a quantitative investment boutique where data, innovation, and market expertise drive every decision. Headquartered in New York, Versor's investment team merges decades of quantitative research with an ethos that fosters ingenuity and innovation.

Leveraging modern statistical methods and vast datasets, Versor Investments works to create diversified sources of absolute returns across multiple asset classes. Alpha forecast models, portfolio construction, and the trading process rely on the ingenuity and mathematical expertise of 40+ investment professionals, which is underpinned by a rigorous scientific, hypothesis-driven framework. Versor implements state of the art technology infrastructure for risk management, portfolio optimization, and trade execution, developed over 250+ human work years.

Versor upholds client interests with 100% employee ownership and substantial co-investment from partners. Versor offers two categories of investment products: Hedge Funds and Alternative Risk Premia. Both product lines are designed to provide superior risk-adjusted returns while exhibiting low correlation to traditional and alternative asset classes.

The Case for Alternative Risk Premia Part 3

Executive Summary

As Versor celebrates its 10th anniversary, we reflect on our decades of expertise in managing Alternative Risk Premia (ARP) strategies. These strategies systematically capture risk-based and behavioral factors across asset classes. When implemented in a market-neutral fashion, they offer institutional investors an efficient way to achieve diversification and enhance portfolio returns.

This paper, the third installment in our "Case for Alternative Risk Premia" series, begins with a brief recap of ARP. As the market for risk premia products has matured, it has become even more important that the investment managers construct sophisticated implementations. 10 years ago, directly applying risk premia ideas published in the academic literature may have been adequate. Today, however, sophisticated implementations are required for attractive returns. Such implementations require hedge fund expertise. Versor's sophisticated approach leverages our extensive experience to optimize ARP strategies for institutional portfolios.

Our analysis demonstrates that alternative risk premia exhibit low correlation with traditional market factors, enabling them to generate attractive returns during challenging market conditions without imposing a performance drag on the overall portfolio during normal periods. This makes ARP particularly valuable for enhancing portfolio resilience in volatile environments.

We conclude that alternative risk premia are valuable components of institutional portfolios due to their:

- Attractive return potential across market cycles.
- Strong diversification benefits, especially during market stress.
- Scalability, which supports seamless integration into large portfolios.

Finally, we illustrate how diversifying a traditional 60/40 portfolio with an allocation to alternative risk premia can significantly improve overall portfolio performance, underscoring the potential impact of ARP on modern institutional investment strategies.

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Contents

1 Introduction

Alternative Risk Premia (ARP) are systematic investment strategies without directional market exposure, "alternative", that earn attractive returns, "premia", but also bear different types of risk.

Most alternative risk premia products trade listed instruments like equities, futures, or options. That makes these strategies fairly liquid. As a result, they are occasionally called "liquid alternatives".

Due to their return characteristics, alternative risk premia are very attractive ingredients for portfolios dominated by equity and bond returns. This is true, even if some of the equity or bond returns are earned via private investments. For example, the long-term return characteristics of public and private equity are much more similar to each other than they are to alternative risk premia.

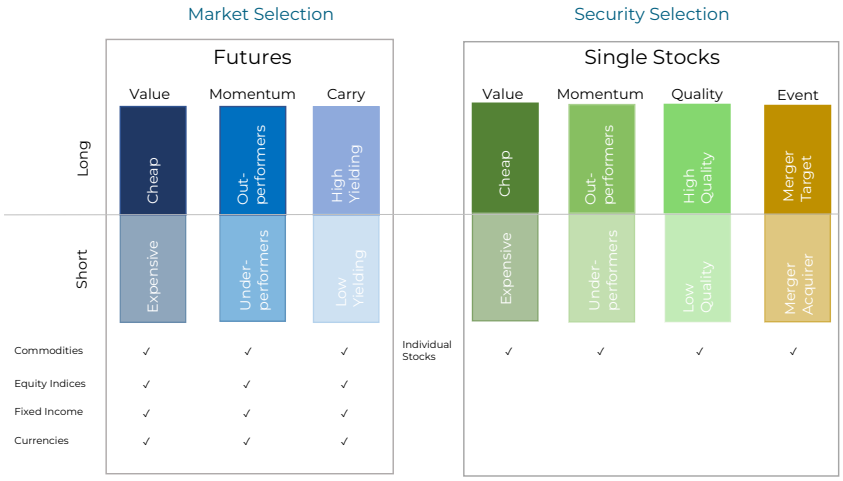
Alternative risk premia are closer to hedge funds than they are to investments in public or private equity or bonds. As a result, excellent alternative risk premia implementations require expertise related to hedge fund strategies. The most important aspect of this is that well constructed alternative risk premia generally eliminate market beta by structuring long-short portfolios with leverage.

The strategies were first commercialized about 10 years ago and have proliferated since then. The good news for investors is that this has created a vibrant marketplace with many choices and fees that are held in check by competition. The bad news for investors is that competition probably has eroded the expected return for generic versions of these products. As for all investment strategies, competitive markets require ongoing enhancements in order to maintain alpha. Unlike many other providers, who consider alternative risk premia static ideas, Versor Investments remains committed to such ongoing enhancements.

While the large number of offerings provides the benefit of ample choice, it can lead to confusion. Figure 1 shows a relatively simple way to outline the most important alternative risk premia.

As the figure shows, there are two broad areas where one can implement alternative risk premia: market selection and security selection. For market selection, the strategies trade aggregates like equity indices, commodities, or macroeconomic instruments like currencies and bonds. Many of these trades are expressed via futures contracts due to their low transaction costs, liquidity, and built-in leverage. For security selection, the strategies trade individual stocks (and much less frequently bonds).

Figure 1: Alternative Risk Premia Categories



The figure shows an overall classification of alternative risk premia strategies. The classification covers assets classes or markets on the left. These are commonly traded via futures contracts. The classification covers single securities on the right. These are primarily traded via stocks.

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To create an exhaustive, conceptual classification of alternative risk premia strategies, we categorize all trading strategies based on how they profit from future price movements. There are only three possibilities. Strategies that profit from a normalization of prices or mean reversion in returns sensibly can be labeled "value" strategies. Strategies that profit from a continuation of price trends or returns sensibly can be labeled "momentum" strategies. Less obviously, strategies can profit without price movements by earning some type of yield. Such strategies sensibly can be labeled "carry" strategies. These three categories are exhaustive, by construction.

However, especially for security selection, we commonly identify one more category. When profits are contingent upon anticipated events, like the completion of an announced merger, strategies sensibly can be labeled "event" strategies. Although these strategies earn returns from price trends or mean reversion around the event, it can be helpful to separate event strategies into their own category since their return characteristics are slightly different.

Each of these broad categories encompasses a large number of potential constituent strategies. For example, it is possible to measure value based on earnings, cash flows, or book values. For each of these, in turn, it is

possible to construct several sensible variations. Yet, the constituents are conceptually related to each other. The groupings also make empirical sense because the constituents generally have much higher correlations within categories than they do across categories. Due to their lower correlations with other security selection strategies, we prefer to separate event strategies from the other categories.

It seems unlikely that one particular strategy or a small number of strategies best captures the risk premia associated with one of the overall themes. It is much more likely that a material number of expertly constructed implementations is required to capture the risk premia. Moreover, it seems obvious to us that the implementations must vary across asset classes. For example, the most interesting notions of value cannot be the same for stocks, bonds, currencies, or commodities.

Nonetheless, some providers offer essentially the same implementations in all asset classes. While this approach greatly simplifies descriptions of the strategies, it is unlikely to produce excellent results.

Some providers offer a large number of granular strategies. A collection of such strategies may capture the intended alternative risk premium. Unfortunately, this approach shifts the burden of assembling an excellent portfolio of alternative risk premia onto investors. Quite sensibly, most investors have not developed the detailed domain expertise required to assemble such portfolios. We believe that the best alternative risk premia offerings are diversified portfolios built by investment managers. However, for some investors, a limited amount of customization may be appropriate.

As the market for risk premia products has matured, it has become even more important that the investment managers construct sophisticated implementations. 10 years ago, directly applying risk premia ideas published in the academic literature may have been adequate. Today, due to competition in markets, such implementations are much less likely to earn attractive returns. While the underlying themes may have remained the same, the portfolios require more advanced implementations. Without such advances, future returns will likely be overshadowed by extraneous risks and eroded by excessive implementation costs.

The co-founders of Versor Investments helped to create the market for alternative risk premia.[1] Versor Investments has continuously offered market-leading risk premia products for more than a decade. During this time,

[1] See Gurnani and Hentschel (2010) for an early discussion of alternative risk premia and Gurnani and Hentschel (2024) for more recent papers.

Table 1: Market Indices

Asset Class	Index	Data Source
Equity	MSCI ACWI	Bloomberg
Sovereign Debt	Bloomberg Global Treasury Total Return Index Value Unhedged	Bloomberg
High Yield Credit	Bloomberg Global High Yield Total Return Index Value Unhedged	Bloomberg
Inflation Protected Debt	Bloomberg World Govt Inflation-Linked All Maturities Total Return Index	Bloomberg

The table lists the indexes we use to measure returns and market environments for different asset classes.

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Versor Investments has steadily enhanced all aspects of its alternative risk premia products and will continue to do so.

In section 2, we summarize the return characteristics of the main alternative risk premia outlined in figure 1. In particular, we highlight how returns have behaved during different market regimes.

In section 3, we provide an illustration of how diversifying a 60/40 portfolio with an allocation to alternative risk premia can improve the portfolio's return characteristics.

2 Performance Across Market Environments

An intuitive way to gauge diversification with alternative risk premia is to evaluate their performance in different market environments.

2.1 Analysis Methodology

We focus on four asset classes to characterize market environments: global equities, global government bonds, global high-yield bonds, and global inflation protected bonds. These are proxies for equity returns, bond yields, credit spreads, and inflation.

For each of the markets, we divide returns into 5 states of the world (bins) based on quarterly index performance:

- Worse than the 10th percentile (worst performing)
- 10-30th percentile
- 30-70th percentile
- 70-90th percentile
- Better than the 90th percentile (best performing)

Table 2: Alternative Risk Premia Factors

Factor Category	Factor Library	Investible Universe
Global Macro	Factor Class: value, carry, momentum Asset Class: equities, commodities, fixed income, and currencies	100+ contracts across commodities, equities, fixed income and currencies
Stock Selection	Factor Class: value, quality, and momentum Region: US, Canada, UK, Japan, Australia, and Europe	3,000 equities across major developed markets including United States, Europe, United Kingdom, Japan and Canada
Equity Events	Event type: announced mergers Region: US, Canada, UK and Europe	Announced mergers and equity events in US, Canada, UK, and Europe

The table provides a high-level summary of the alternative risk premia factors we use to analyze the performance of alternative risk premia portfolios.

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We think of the middle 40% as typical returns. The adjacent bins are poor or good returns, while the extreme bins are very poor or very good returns in the respective market.

For each bin, we show the average index return and the contemporaneous average return of an alternative risk premium. This graphically illustrates the performance of alternative risk premia in different market environments.

Although we have performed this analysis for all of the underlying, granular risk premia we summarize performance for the composite alternative risk premia in global macro, stock selection, and equity events. These represent the market selection, security selection, and event categories from figure 1.

2.2 Factor Performance: Global Macro

Table 3 summarizes the main characteristics of the global macro alternative risk premium.

The right side of the table provides summary ratings for the returns during negative return periods for the different asset classes. Because global macro is market neutral, the performance holds up very well during periods with negative market returns.

We also provide summary ratings for scalability, cash efficiency, and tradings costs of the global macro alternative risk premium. These are relative to other alternative investment strategies. Global macro trades highly

Table 3: ARP Global Macro Characteristics

Brief Description	Ratings: Poor (1) – Excellent (10)	
Global Macro seeks to take advantage of price differentials between related financial instruments on a beta-neutral basis using macroeconomic-based alpha forecast models across commodities, equities, fixed income and currency markets. The positions are chosen based on 3 major signal classes: carry, value, and momentum.	Overall	8
	Negative Returns	
	Equity	10
	Credit	10
	Treasury	8
	TIPS	8
	Other Characteristics	
	Scalability	10
	Cash Efficiency	10
	Trading Costs	9
Economic Rationale	**Correlations**	
The strategy collects a diverse set of trades from 3 themes with relatively low correlation. There is extensive academic evidence that trades based on the systematic macro theme have generated attractive returns.	Stock Selection	0.04
	Macro	1
	Events	0.03

The table summarizes the global macro signals and their performance characteristics.

The table provides an overall rating and separate performance ratings during negative return periods for equities, credit, government bonds, and inflation protected bonds.

The table also shows sample correlations with other simulated alternative risk premia returns. The sample correlations are based on daily returns in excess of US Treasury bills for the period January 1, 2003 to September 30, 2024.

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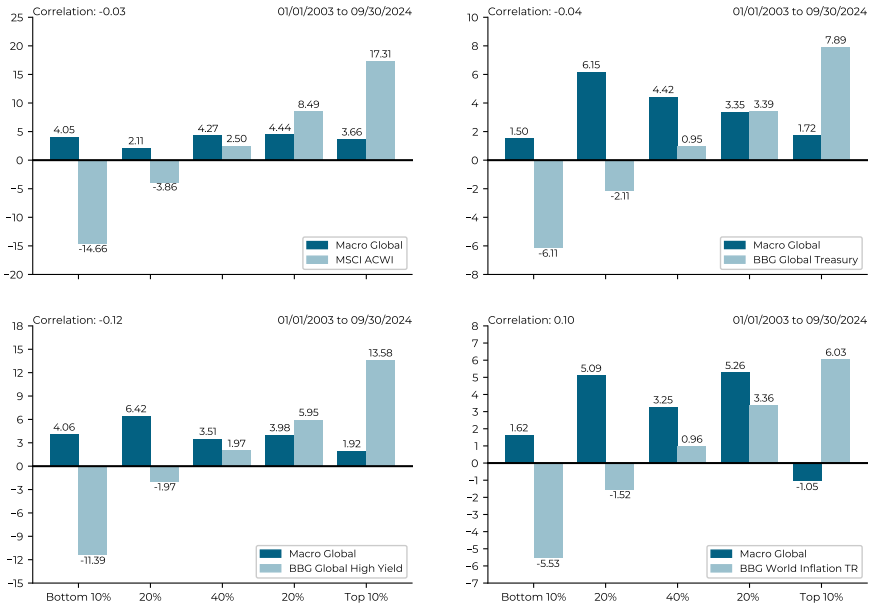
liquid instruments in deep markets and offers large capacity. Similarly, the liquidity of the instruments permits low transaction costs. Due to the leverage inherent in futures contracts, global macro is highly cash efficient.

Market neutral portfolios with diligent risk management requires only modest margins. The liquidity of the traded futures contracts ensures that global macro can be traded at low cost.

The bottom right of the table shows that correlations among the alternative risk premia returns are close to zero.

Figure 2: Global Macro Return Characteristics



The figure shows the performance characteristics of simulated global macro alternative risk premia in different market environments.

Each panel provides evidence for a particular market segment: The top left is for equity markets, the top right is for government bond markets, the bottom left is for credit markets, and the bottom right is for inflation protected bond markets.

In each panel, we divide the quarterly market returns into 5 categories: The bottom 10% of market returns, the next 20% of market returns, the middle 40% of market returns, the next 20% of market returns, and finally the top 10% of market returns. The light blue bars show the average returns for each group of market returns. For each set of market returns, we also show the average of the contemporaneous alternative risk premia returns. This highlights market environments during which the alternative risk premia strategy has performed especially well or especially poorly.

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Figure 2 illustrates the performance of global macro alternative risk premia across different market environments. Due to the market neutral implementation, there is no correlation with equity or credit markets and the strategy returns hold up well in negative periods for those markets.

The right panels show that global macro has positive returns during the worst periods for bond markets. However, those returns are below the overall average for global macro. Hence, we have assigned slightly lower ratings to the negative market characteristics of global macro in table 3.

Table 4: ARP Stock Selection Characteristics

Brief Description	Ratings: Poor (1) – Excellent (10)	
Stock Selection invests in individual equities in a global, market-neutral, long-short portfolio. The positions are systematically chosen based on a large number of characteristics for each stock. We group the characteristics into themes: Value, Earnings Quality, Profitability, Momentum, and Analyst Sentiment. The portfolio hedges net exposures to the market, countries, and sectors in order to focus on individual stocks.	Overall	10
	Negative Returns	
	Equity	10
	Credit	10
	Treasury	10
	TIPS	10
	Other Characteristics	
	Scalability	10
	Cash Efficiency	8
	Trading Costs	8
Economic Rationale	**Correlations**	
The systematic process employs core investment themes that also guide many discretionary investment processes. The strategy employs several signals in each theme in order to reduce the effects of forecasting errors from any one signal. The strategy employs signals from 5 themes with relatively low correlation in order to increase diversification.	Stock Selection	1
	Macro	0.04
	Events	0.05

The table summarizes the stock selection signals and their performance characteristics.

The table provides an overall rating and separate performance ratings during negative return periods for equities, credit, government bonds, and inflation protected bonds.

The table also shows sample correlations with other simulated alternative risk premia returns. The sample correlations are based on daily returns in excess of US Treasury bills for the period January 1, 2003 to September 30, 2024.

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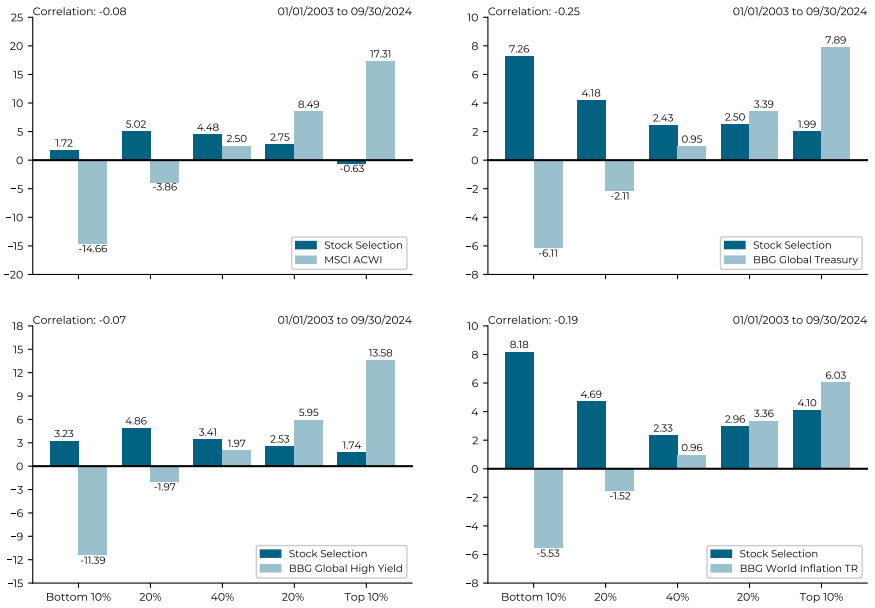
2.3 Factor Performance: Stock Selection

Table 4 provides a brief description of the stock selection signals. These focus on market-neutral implementations of five investment themes: Value, Earnings Quality, Profitability, Momentum, and Analyst Sentiment.

Because stock selection is market neutral, the performance holds up very well during periods with negative market returns, as shown on the right of the table.

Figure 3: Stock Selection Return Characteristics



The figure shows the performance characteristics of simulated stock selection alternative risk premia in different market environments.

Each panel provides evidence for a particular market segment: The top left is for equity markets, the top right is for government bond markets, the bottom left is for credit markets, and the bottom right is for inflation protected bond markets.

In each panel, we divide the quarterly market returns into 5 categories: The bottom 10% of market returns, the next 20% of market returns, the middle 40% of market returns, the next 20% of market returns, and finally the top 10% of market returns. The light blue bars show the average returns for each group of market returns. For each set of market returns, we also show the average of the contemporaneous alternative risk premia returns. This highlights market environments during which the alternative risk premia strategy has performed especially well or especially poorly.

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When implemented globally, stock selection scales well. Market neutral portfolios with diligent risk management requires only modest margins. Finally, global equity markets are highly liquid but some of the stock selection positions may be in less liquid markets or less liquid securities.

Figure 3 shows the average returns for stock selection in different market environments. Stock selection has essentially no correlation with equity markets. In the top left of the figure, the dark blue bars for stock selection returns show no clear pattern corresponding to the light blue bars for

Table 5: ARP Equity Events Characteristics

Brief Description	Ratings: Poor (1) – Excellent (10)	
Equity Events trades stocks around announced corporate actions like mergers. For mergers, the strategy buys shares in the takeover target and shorts an appropriate number of shares in the acquiring firm. The hedge ratio is chosen so there is no market exposure.	Overall	8
	Negative Returns	
	Equity	9
	Credit	7
	Treasury	10
	TIPS	9
	Other Characteristics	
	Scalability	9
	Cash Efficiency	8
	Trading Costs	9
Economic Rationale	**Correlations**	
Corporate actions often trigger selling by the previous owners of the shares because the original reason for holding the shares has been disrupted by the corporate action. At the same time, equity event trades try to purchase these stocks at a slight discount relative to their ultimate value. There is extensive academic evidence that equity event trades have generated attractive returns.	Stock Selection	0.05
	Macro	0.03
	Events	1

The table summarizes the equity event signals and their performance characteristics.

The table provides an overall rating and separate performance ratings during negative return periods for equities, credit, government bonds, and inflation protected bonds.

The table also shows sample correlations with other simulated alternative risk premia returns. The sample correlations are based on daily returns in excess of US Treasury bills for the period January 1, 2003 to September 30, 2024.

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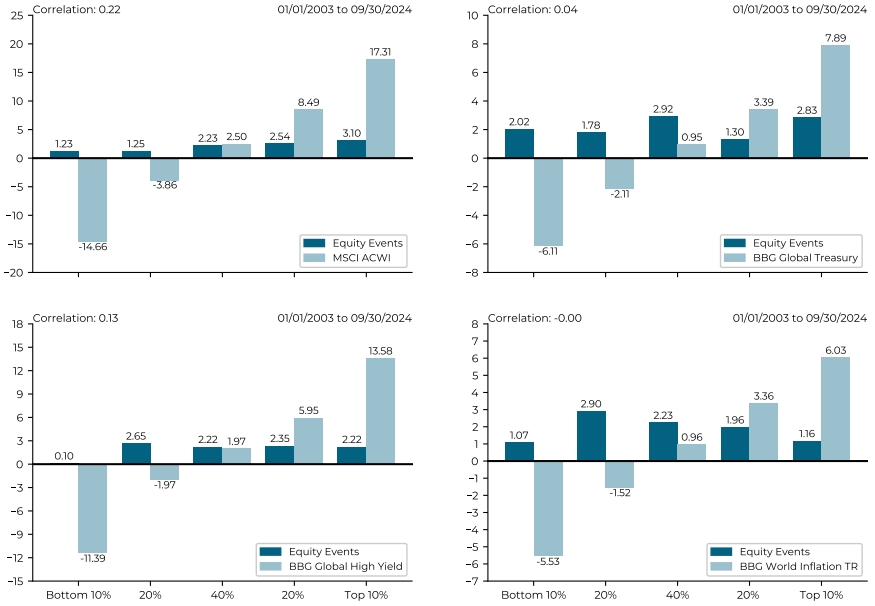
equity market returns. This is also true for high yield market conditions summarized in the bottom left panel. The two right panels show that stock selection has done particularly well when bond markets, both nominal and real, have done poorly.

2.4 Factor Performance: Equity Events

Table 5 shows the main characteristics of the equity events alternative risk premia.

Figure 4: Equity Event Return Characteristics



The figure shows the performance characteristics of simulated equity event alternative risk premia in different market environments.

Each panel provides evidence for a particular market segment: The top left is for equity markets, the top right is for government bond markets, the bottom left is for credit markets, and the bottom right is for inflation protected bond markets.

In each panel, we divide the quarterly market returns into 5 categories: The bottom 10% of market returns, the next 20% of market returns, the middle 40% of market returns, the next 20% of market returns, and finally the top 10% of market returns. The light blue bars show the average returns for each group of market returns. For each set of market returns, we also show the average of the contemporaneous alternative risk premia returns. This highlights market environments during which the alternative risk premia strategy has performed especially well or especially poorly.

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The most interesting alternative risk premia trade liquid instruments. Equity events trades stocks globally and is scalable at low trading costs. When properly constructed as a market neutral portfolio, equity events alternative risk premia also require relative small margins.

Unlike for stock selection and global macro, equity events shows some mild correlation with equity and credit markets, as shown in the left panels of figure 4. Even in very poor environments for equity and credit markets, equity events has delivered positive returns. However, those returns are

Table 6: Alternative Risk Premia Sample Portfolio

Factor Category	Factors Included	Target Risk	Tactical Factor Allocation Models
Systematic Macro	Factor Class: carry, value, momentum Asset Class: equities, commodities, fixed income, and currencies	40%	forecasted returns to carry, value, momentum
Stock Selection	Factor Class: value, momentum, quality Region: US, Canada, UK, Japan, and Europe	40%	forecasted returns to value, momentum, quality var-covariance matrix of factor returns
Equity Events	By region: US, Canada, UK and Europe Event type: announced mergers	20%	merger environment x deal risk, deal spreads, volatility of merger deal spreads

The returns for the Versor Investments diversified alternative risk premia portfolio implementation are based on simulated performance of systematic investment rules.

They are net of simulated transaction, financing and stock borrowing costs, and 0.75% annual management fees and assume the reinvestment of dividends and other income. Certain investors may have higher management fees, depending on the applicable share class. Please see important disclosures at the end of the presentation.

The Versor Alternative Risk Premia Portfolio allocates to Global Macro, Stock Selection, and Equity Events. The simulated portfolio begins on January 1, 2003 and ends on September 30, 2024.

Versor is seeking to offer the Alternative Risk Premia Portfolio, which combines different factors, to its clients. Clients may also choose to invest in one of the standalone factors: Stock Selection, Equity Event, and Systematic Macro. The allocations to each of the component risk premia is done based on the historical volatility of returns and correlations between the strategies, so as to target desired risk contribution from each of the components. The components are rebalanced quarterly, and the total allocation is scaled up to achieve 8-10% volatility on every rebalance.

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lower than during more favorable equity and credit markets. Although the equity events alternative risk premia portfolio is market neutral, it marks to market spread changes that are correlated with equity and credit markets. For example, during large drawdowns in equity markets, the spreads on announced mergers generally widen. Historically, the vast majority of mergers recover from this spread expansion and eventually close under the original terms. Nonetheless, a merger portfolio, even when constructed in a market neutral fashion, is likely to mark some losses during periods of stress for equity and credit markets.

The right panels in figure 4 show that equity events has performed well historically during stress periods for bond markets.

2.5 Proposed Risk Premia Portfolio

A key benefit of alternative risk premia portfolios is that they can diversify across different underlying alternative risk premia. The best allocations to the underlying strategies may differ slightly depending on the composition of each investor's overall portfolio and portfolio objectives.

For illustration purposes, we assemble a diversified portfolio that allocates 40% to global macro, 40% to stock selection, and 20% to equity events. These allocations partly reflect the overall ratings we provided in the characteristics summaries. Table 6 outlines the composition of the illustrative diversified alternative risk premia portfolio.

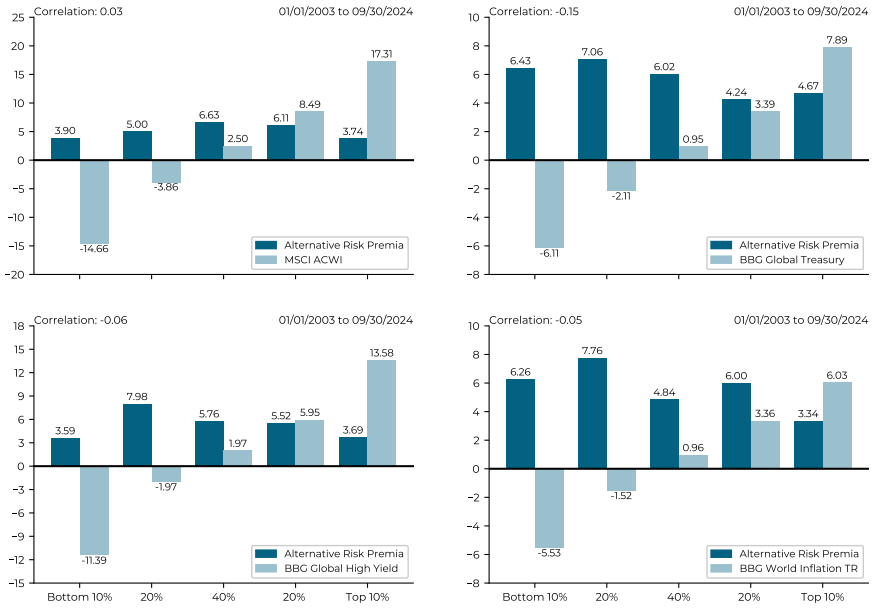
This diversified portfolio blends the characteristics of global macro, stock selection, and equity events. Figure 5 confirms this. For the diversified portfolio, there is no clear correlation with equity or credit markets. This happens because equity events has a slightly smaller allocation than the other strategies. As the right panels in figure 5 show, the diversified portfolio has produced above-average results during periods of bond market stress. Across all four asset classes, the alternative risk premia portfolio offers excellent diversification.

Figure 5 shows that diversified alternative risk premia returns are not concentrated during periods of market stress. They accrue in all market environments. In that sense, alternative risk premia are not insurance strategies that have high payoffs only in adverse market environments and lose money during other periods. Many investors find such insurance strategies very difficult to maintain, given long periods of losses. In contrast, the diversification of alternative risk premia is not a steady drag on overall portfolio returns.

Figure 6 plots cumulative returns for the diversified alternative risk premia portfolio and each of the four market indices we used in previous figures. For illustration, the figure uses the same the same ARP portfolio in all four panels. The portfolio targets 10% annualized risk. That risk is comparable to the 4 asset classes, but materially lower than equity risk and slightly higher than risk in the other markets.

As the figure shows, the simulated alternative risk premia portfolio has excellent performance, net of estimated transaction costs and fees. Part of the strong performance stems from diversification across many alternative risk premia. However, diversification alone does not produce strong performance. The underlying alternative risk premia must be carefully constructed and

Figure 5: Alternative Risk Premia Return Characteristics



The figure shows the performance characteristics of the simulated diversified alternative risk premia portfolio in different market environments.

Each panel provides evidence a particular market segment: The top left is for equity markets, the top right is for government bond markets, the bottom left is for credit markets, and the bottom right is for inflation protected bond markets.

In each panel, we divide the market returns into 5 categories: The bottom 10% of market returns, the next 20% of market returns, the middle 40% of market returns, the next 20% of market returns, and finally the top 10% of market returns. The light blue bars show the average returns for each group of market returns. For each set of market returns, we also show the average of the contemporaneous alternative risk premia returns. This highlights market environments during which the alternative risk premia strategy has performed especially well or especially poorly.

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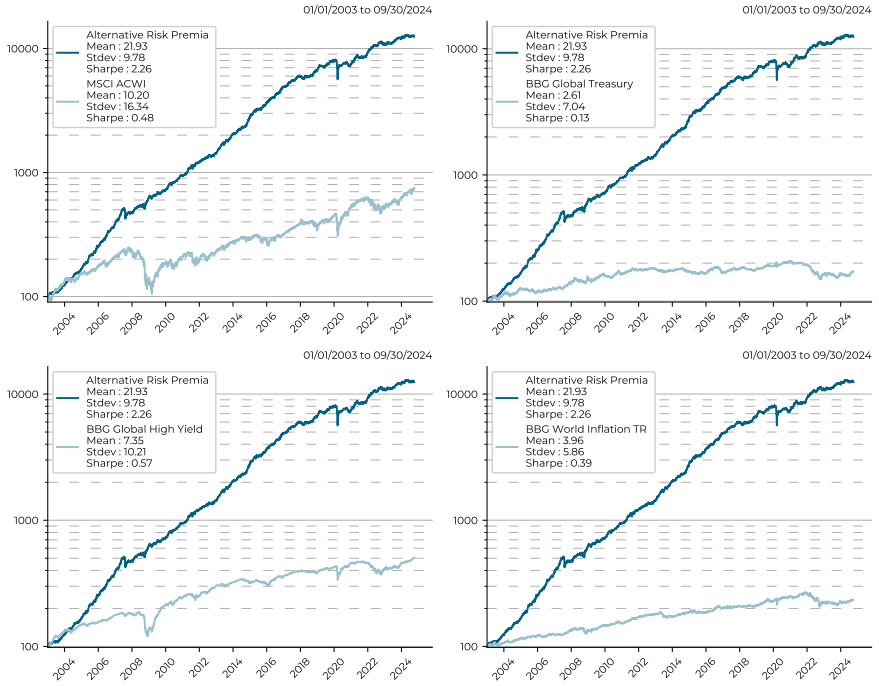
efficiently implemented. Both aspects are material points of differentiation across providers. In this sense, alternative risk premia certainly are not generic.

3 ARPs in an Institutional Portfolio

To illustrate the benefits of incorporating alternative risk premia in institutional portfolios, we compare the performance of two simulated portfolios. The first portfolio allocates 60% to equities and 40% to bonds, representing a traditional 60/40 allocation. The second portfolio reduces these allocations

Figure 6: Simulated Alternative Risk Premia Returns



The figure compares cumulative returns for the simulated diversified alternative risk premia portfolio, in dark blue, to different market indexes, in light blue.

The vertical axes use logarithmic scales.

Each panel provides evidence for a particular market segment: The top left is for equity markets, the top right is for government bond markets, the bottom left is for credit markets, and the bottom right is for inflation protected bond markets.

The Versor Alternative Risk Premia Portfolio allocates to Global Macro, Stock Selection, and Equity Events. The simulated portfolio begins on January 1, 2003 and ends on September 30, 2024.

The returns for the Versor Investment's implementation are based on simulated performance of systematic investment rules. They are net of simulated transaction, financing and stock borrowing costs, and 0.75% annual management fees and assume the reinvestment of dividends and other income. Certain investors may have higher management fees, depending on the applicable share class. Please see important disclosures at the end of the presentation.

Versor is seeking to offer the Alternative Risk Premia Portfolio, which combines different factors, to its clients. Clients may also choose to invest in one of the standalone factors: Stock Selection, Equity Event, and Systematic Macro. The allocations to each of the component risk premia is done based on the historical volatility of returns and correlations between the strategies, so as to target desired risk contribution from each of the components. The components are rebalanced quarterly, and the total allocation is scaled up to achieve 8-10% volatility on every rebalance.

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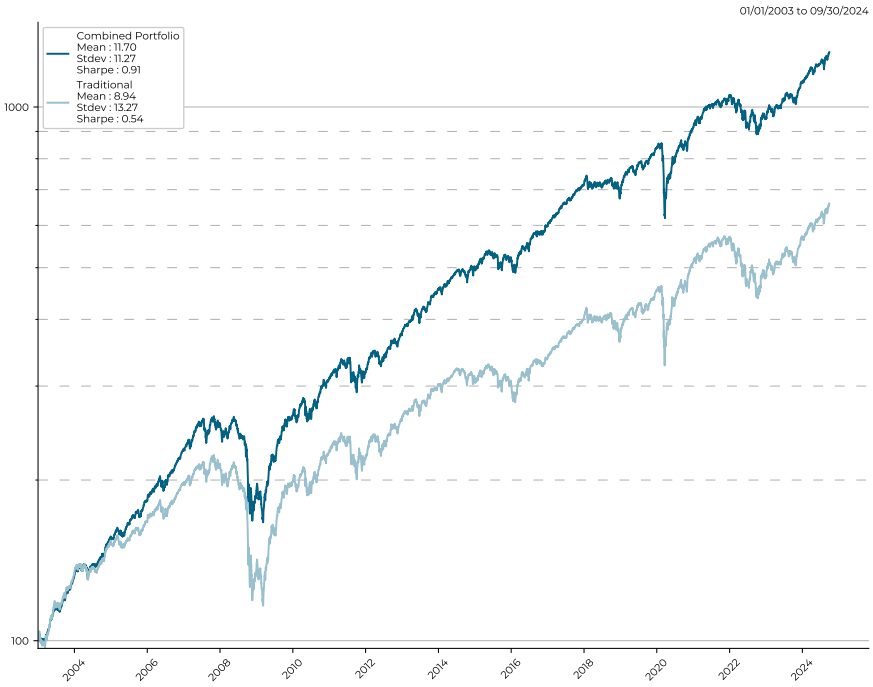
Figure 7: Simulated Portfolio Returns



The dark blue line shows cumulative returns for a simulated portfolio that allocates 20% to the Versor Investments diversified alternative risk premia portfolio, 50% to global equities, and 30% to global bonds. For comparison, the light blue line shows cumulative returns for a portfolio that allocates 60% to global equities and 40% to global bonds.

The vertical axis uses a logarithmic scale.

The Versor Alternative Risk Premia Portfolio allocates to Global Macro, Stock Selection, and Equity Events. The simulated portfolio begins on January 1, 2003 and ends on September 30, 2024.

The returns for the Versor Investment's implementation are based on simulated performance of systematic investment rules. They are net of simulated transaction, financing and stock borrowing costs, and 0.75% annual management fees and assume the reinvestment of dividends and other income. Certain investors may have higher management fees, depending on the applicable share class. Please see important disclosures at the end of the presentation.

Versor is seeking to offer the Alternative Risk Premia Portfolio, which combines different factors, to its clients. Clients may also choose to invest in one of the standalone factors: Stock Selection, Equity Event, and Systematic Macro. The allocations to each of the component risk premia is done based on the historical volatility of returns and correlations between the strategies, so as to target desired risk contribution from each of the components. The components are rebalanced quarterly, and the total allocation is scaled up to achieve 8-10% volatility on every rebalance.

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to 50% equities, 30% bonds, and allocates the freed-up 20% to a diversified portfolio of alternative risk premia. The alternative risk premia portfolio is the one we discussed in the previous section.

As shown in figure 7, the traditional 60/40 portfolio achieves a historical Sharpe ratio of 0.54. By contrast, introducing a 20% allocation to alternative risk premia significantly enhances the Sharpe ratio to 0.91.

The risk statistics in the legend show that diversification with alternative risk premia is very successful in this case. The allocation to alternative risk premia reduces the historical portfolio risk from 13.3% to 11.3%. This accounts for nearly half of the improvement of the Sharpe ratio. Naturally, such risk reduction also reduces drawdowns during periods of market stress.

Well-constructed alternative risk premia also earn attractive average returns. The simulated alternative risk premia returns are slightly higher than the 60/40 portfolio returns. This accounts for the remainder in the Sharpe ratio improvement. Achieving attractive returns in market-neutral portfolios clearly is not generic and should be a primary consideration when selecting an alternative risk premia provider.

This example highlights that a well-executed alternative risk premia strategy can meaningfully reduce portfolio drawdowns and enhance risk-adjusted returns, underscoring its value as a diversification tool in institutional portfolios.

4 Conclusion

Alternative risk premia strategies represent a compelling addition to institutional portfolios, offering superior risk-adjusted returns, scalability, and low correlation with traditional asset classes like equities and bonds. These characteristics enhance portfolio diversification but also improve performance during periods of market stress, addressing key concerns for institutional investors.

While alternative risk premia strategies are now broadly available, they are far from generic. Their successful implementation requires deep expertise, particularly in constructing long-short portfolios, a domain where hedge fund experience is invaluable. Furthermore, like other active investment approaches, ARP strategies demand ongoing innovation to maintain their efficacy in evolving markets.

Our analysis demonstrates that when incorporated into institutional portfolios, ARP strategies reduce drawdowns and enhance overall risk-adjusted performance. This success stems from balanced allocations to many ARP signals, a focus on those that historically perform well even in challenging environments, and tactical adjustments driven by bottom-up insights.

At Versor Investments, we pride ourselves on being pioneers in alternative risk premia investing. Our differentiated product offering, supported by a superior investment process and a strong alignment of interests with our clients, underscores our commitment to delivering exceptional results. We believe ARP strategies will continue to play an essential role in the future of institutional portfolio management.

Past performance is not indicative of future results. Performance results reflect the reinvestment of income. Commodity interest trading involves substantial risk of loss. These results are based on simulated or hypothetical returns that have inherent limitations. No representation is being made that any account is likely to achieve results similar to those shown. Please see additional important disclosures in the back.

5 References

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The **SG Trend Index** includes managers employing the Systematic Diversified CTA strategy. Systematic Diversified CTA managers typically employ an investment process designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies utilize quantitative processes which focus on statistically robust or technical patterns in the return series of the asset, and typically focus on highly liquid instruments.

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The **Barclays CTA Index** (BARCCTA Index) provides a benchmark of representative performance of commodity trading advisors (CTAs). In order to qualify for inclusion in the Index, a CTA must have four years of prior performance history.

A combination of HFRX Macro: Systematic Diversified CTA Index and BARCCTA Index is used as the benchmark index for the Trend Following risk premia strategy returns. BARCCTA Index (monthly) returns are used for the period January 1990 to December 2008. HFRX Macro: Systematic Diversified CTA Index (daily) returns are used from January 2009 onwards. Combination index used

due to availability of daily return data from HFRX Macro: Systematic Diversified CTA index (from January 2009 onwards).

The **Barclays Global Aggregate Index** provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment grade 144A securities.

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The **S&P GSCI™Total Return Index** measures a fully collateralized commodity futures investment that is rolled forward from the 5th to the 9th business day of each month. Currently the index includes 24 commodity nearby futures contracts. The Total Return is significantly different than the return from buying physical commodities.

The **S&P 500** index covers the 500 largest companies that are in the United States. These companies can vary across various sectors. The S&P 500 is one of the most important indices in the world as it widely tracks how the United States stock market is performing.

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The **SG Multi Alternative Risk Premia Index** calculates the daily rate of return for a group of the largest ten multi-asset, multi-alternative risk premia programs managed by investment managers. These managers often trade equity indices, fixed income, currencies, commodities, and single name equities. Managers aims to systematically capture a diversity of discrete risk premia, including value, carry, momentum, and equity style premia. The index is equally weighted, and reconstituted and rebalanced on an annual basis.

The **Russell 1000 Value Index** measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values. The index was developed with a base value of 200 as of August 31, 1992.

The **Russell 2000 Value Index** measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values. The Russell 1000 Growth Index measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values. The index was developed with a base value of 200 as of August 31, 1992.

The **Russell 2000 Growth Index** measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

The **HFR Bank Systematic Risk Premia Indices** are a series of benchmarks designed

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HFR Bank Systematic Risk Premia Commodity Index: A composite of all Bank Systematic Risk Premia Commodity styles.

HFR Bank Systematic Risk Premia Credit Index: A composite of all Bank Systematic Risk Premia Credit styles

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Refer to the HFR, Société Générale, Barclayshedge, MSCI, Barclays, Russell, and S&P websites for more details on the respective index construction methodology.