CAMRADATA

Alternative Risk Premia Whitepaper

Alternative Risk Premia - A panacea for difficult times?

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A Reminder About Our Aims

Alternative Risk Premia (ARP) investing has grown rapidly in popularity in recent years and given this space is still rapidly evolving, some common questions posed by investors considering ARP strategies are:

Which strategies should I allocate to?
How important are strategy design and implementation?
How do I ensure appropriate risk management?
What diversification properties do they bring to a portfolio?

One view is that ARP is gaining popularity as a stand-alone investment because portfolios combining multiple alternative risk premia are among the few investment options that offer not only high return potential, but also meaningful portfolio diversification. Generally lower fees and better liquidity terms than traditional hedge funds further add to their appeal.

But just as with other asset classes, ARP labels can be confusing (some of them being carry, event, growth, liquidity, low beta, low volatility, momentum, quality, reversal, value, short volatility). So careful construction of exposures and an active approach to the risk management of these strategies is critical. One has to look past the labels and study their drivers and return profiles during portfolio construction.

In addition, some ARP have complementary features that are a product of their behavioural drivers. They also have the potential to provide exposures that are un-correlated to most traditional portfolios and provide return generators that are found more commonly in hedge fund strategies…therefore, such a risk/return profile makes ARP a strong choice for an alternatives allocation.

Overriding all of this however, is the fact that alternative risk premia strategies should not be niche investments – they should be implementable and scalable at a reasonable execution price.

The analysis of Fama and French in 1992 is regarded as the starting point of studies on alternative risk premia and at CAMRADATA's roundtable we focused on how ARP can provide diversification and may allow for effective portfolio construction, a key component to delivering truly alternative sources of return.

"ARP can provide diversification and may allow for effective portfolio construction, a key component to delivering truly alternative sources of return"

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Lombard Odier
Company Profile

Lombard Odier Investment Managers is the asset management business of the Lombard Odier Group, wholly owned and funded by its partners since 1796.

We provide a range of investment solutions that are all long-term oriented in their many and diverse ways. Our heritage, and our combination of the best of conservatism and innovation, keeps us well-positioned to create lasting value for our clients. Our investment capabilities span Fixed Income, Convertible Bonds, Equities, Multi-Asset, Alternatives and Impact Investing.

With 135 investment professionals, we are a global business with assets under management of 48 billion USD (as at 30 June 2017).

Marc Pellaud
Senior Portfolio Manager, Commodities and Alternative Risk Premia Strategies

Marc Pellaud is a Senior Portfolio Manager in the 1798 Alternatives Platform team within LOIM, managing the Alternative and Commodity Risk Premia strategies. He is also involved in various research projects for the Systematic Equites & Alternatives team. He initially joined LOIM in June 2007, as an equity portfolio manager. Marc earned a PhD in life sciences from the Swiss Federal Institute of Technology in Lausanne (EPFL) in 2007.

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Quoniam
Company Profile

Quoniam is a pioneer in quantitative asset management. We strive to accomplish first class performance results for our institutional investors and have been specialising in the active management of equities, fixed income and multi-asset strategies for more than 17 years. Using this expertise, we manage over €28 billion for global investors. With managing partners holding a stake and individual employees participating in the firm's success, Quoniam's motivation is aligned with our clients' long-term performance objectives. As a member of Union Investment Group, we have a solid financial foundation, and the freedom to devise creative solutions as an independent investment boutique. With over 110 experienced people in Frankfurt and London, we are focused on continuing to provide successful investment solutions for our clients.

Thomas Kieselstein
CFA, Managing Partner

Thomas is co-founder and Chief Investment Officer of Quoniam Asset Management. As CIO, he oversees Quoniam's Equity, Fixed Income and Multi-Asset investment teams. Prior to Quoniam, Thomas worked for DZ Bank and Dresdner Bank Investment Group. He has been developing quantitative investment processes for multi-factor equity strategies since 1994. Thomas obtained his MSc. in Engineering from the University of Karlsruhe.

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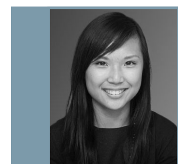
Unigestion
Company Profile

Unigestion is a boutique asset manager with the scale to deliver global tailor-made investment solutions for thoughtful investors.

Their core values – integrity, independence, excellence and guidance – are at the heart of everything they do. They are responsible for managing $23.9bn in client assets across our four areas of expertise: equity, multi asset, private equity and alternatives.

They believe that risk management is an enduring driver of long-term investment performance, and they therefore apply a risk lens to all their strategies. With over half of their assets managed through segregated mandates, they have a proven ability to understand clients' objectives and are trusted by them to design strategies tailored to their needs. In February 2017 Unigestion acquired Akina with the aim of creating a uniquely qualified specialist in global small and mid-market private equity.

With 227 employees from 29 countries, Unigestion has offices around the world. From centres in Geneva, Zurich and London, their presence extends across Europe, North America and Asia.
Data as at 30 June 2017

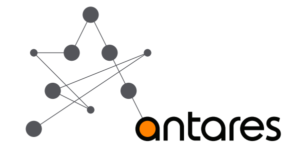


Joan Lee
Vice President

Joan Lee, Vice President, is an Investment Manager within the Cross Asset Solutions team. She joined Unigestion in November 2015. Joan began her career in 2008 as an investment consultant at Deloitte and subsequently, at Russell Investments. In 2012 she joined State Street, where she spent time on equity sales, FX sales trading and prime brokerage desks before joining State Street Associates, State Street's partnership with renowned academics at Harvard and MIT. Joan was responsible for multi-asset quantitative research for institutional investors, with a focus on portfolio construction and risk management methodologies. Joan holds a Bachelor in Mathematics, Operational Research, Statistics and Economics from the University of Warwick and a Masters in Finance from the University of Cambridge. She is also a CFA charterholder.

Participants

Ankit Shah
Investment Manager



Ankit Shah is Investment Manager at Antares Managing Agency. In this role, he is responsible for structuring and implementing overall allocation of Investment portfolios for Antares, ranging from risk mitigation to capital optimised allocation strategies across asset classes as well as keeping it within regulatory and Solvency II framework.

Prior to joining the company, Ankit was working with Qatar Insurance Company, Doha, Qatar (parent of Antares) as Vice President – Investments, overseeing the investment operations and strategic asset allocation across the QIC group. Before this, he was Senior Fund Controller at AXA Investment Managers working on various UK and Pan European real estate funds and Group Financial Controller at UK Capital Investments Group. He trained as an Auditor and worked with Grant Thornton.

Ankit Holds a Bachelors in Accounting & Economics and is a Fellow at ACCA and Institute of Chartered Accountants of India.

Trudi Boardman, CAIA
Senior Investment Director, Pension Practice

Trudi is a Senior Investment Director and hedge fund specialist based in Cambridge Associates' London office. Trudi is a member of the pension practice and works on the hedge fund portfolios of pension funds, foundations, sovereign wealth and family clients in the U.K, Europe, the Middle East and Africa.

Before joining Cambridge Associates in 2013, she worked as a Portfolio Manager and Research Analyst at Partners Advisers S.A, a Swiss based family office/Hedge Fund of Funds for 7 years focusing on equity oriented hedge fund strategies. Prior to Partners Advisers she was a Vice President at Morgan Stanley & Co. International Ltd, London in Prime Brokerage.

Participants

Matt Gibson
Head of Investment Research

Matt is Head of Investment Research at LCP and is responsible for LCP's manager research and delivering clear advice to clients on their investment management arrangements. He has 20 years' experience analysing and selecting investment managers across all asset classes.

Daniel Banks
Director, Solutions

Daniel joined P-Solve in 2010 from Punter Southall where he worked from 2008. He currently works as an Investment Consultant for both insurance and investment clients between £100m and £2bn, advising on areas including investment strategy, manager selection and liability hedging. In particular, he uses his Actuarial experience from Punter Southall to help clients better understand how their assets interact with their liabilities, allowing them to both mitigate risk and take advantage of opportunities.

Daniel serves on P-Solve's Investment Strategy Committee, Technical Committee, Insurance Investment Committee and Group Investment Committee. Aside from his Consulting work he researches and develops the firm's models for use in investment strategy work. He has been quoted and has written articles for publications such as Engaged Investor and Financial News.

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Participants

Nick Samuels
Director, Manager Research

Nick is a Director in Redington's Manager Research team, where he has primary responsibility for the research, selection and monitoring of equity managers. Nick joined Redington in 2015 from SEI Investments where he led the firm's research of UK, European and Global equity managers, along with being a member of their global Manager Research Committee.

Nick started his investment career as a graduate in 2000 at Schroders, where he worked on the Asia and Emerging Market Equity teams, before moving into manager research roles at the investment consultancy Stamford Associates and Momentum Global Investment Management.

Brendan Maton
Freelance Journalist

A highly experienced financial journalist with an expansive network of contacts in the UK and across Europe. Brendan has written about pension schemes and national welfare systems from Finland to Greece for 18 years and understands the retirement savings industry in each European country.

Brendan has interviewed EU commissioners and national ministers; central bankers; pension scheme heads; insurance chief executives; chief investment officers; actuaries; union officials; professional and lay trustees.He worked at Financial Times Business for eight years, finally as editor-in-chief of all international pensions titles. Brendan has spent the last ten years as a freelancer for a number of publications, including Financial Times, Responsible Investor, Nordic region pensions news and IPE. He is also Chief webcast host for IPE.

Brendan has acted as conference chair for Financial News, the UK National Association of Pension Funds, Dutch Investment Professionals Association (VBA), Corestone, Insight Investment, Marcus Evans, Robeco Asset Management, Sustainable Asset Management (SAM), Towers Watson.

Alternative Risk Premia - A panacea for difficult times?

Alternative Risk Premia (ARP) are of growing interest to pension funds and insurers as they search for strategies that can earn them a return without excessive risk.

In September, CAMRADATA assembled a panel of ARP managers, investment consultants and asset owners to discuss where these strategies fit into overall asset allocation and what role they play. The panel's conclusions were that ARP are a viable diversifier because they rely on a variety of well established sources of return. Accessing risk premia from commodities, fixed income, foreign exchange and equities while avoiding most of the beta of these asset classes increases their appeal alongside traditional long-only strategies. The biggest dilemma for prospective clients may be which ARP manager to select. In a trending sector, there are many me-too products that need to be bypassed in order to find managers with a genuinely sustainable methodology for earning target returns - typically cash + 5-7% - into the future.

Alternative Risk Premia (ARP) strategies are winning business from insurers, pension funds and their consultants. London-based adviser, Redington has directed £1.5bn towards ARP over the last 12 months, says Nick Samuels, who heads up research into liquid strategies at Redington. This followed a major review into 40 ARP strategies.

Antares, a London underwriting syndicate, appointed an external ARP manager two years ago for diversification purposes, according to Ankit Shah, investment manager at Antares Managing Agency.

Asset managers are equally busy. Unigestion, already well known for its Low-Volatilty equity strategies, has conducted 36 meetings on ARPs in the last three months. Quoniam Asset Management continues to see strong interest across the market with pension schemes and insurance companies looking to allocate given the diversification benefits (zero correlation to traditional asset classes) and inherent cost effectiveness.

Lombard Odier Investment Management (LOIM) is on the brink of a major mandate win from Asia and has received a number of enquiries from the US "which is a pleasant surprise for us as Lombard Odier is not a household name in the States," said Marc Pellaud, senior portfolio manager for ARP and commodities, LOIM.

> "The panel's conclusions were that ARP are a viable diversifier because they rely on a variety of well established sources of return"

> "Overall, multi-ARP strategies aim to limit exposure to traditional assets by taking both long and short positions"

Although ARP strategies are trending, they are not yet familiar to all. They introduce another acronym and associated jargon to lay decision-makers at pensions – which doesn't help. So, the first matter for the CAMRADATA panel was to define ARPs. Trudi Boardman, a hedge fund specialist at advisory firm, Cambridge Associates suggested they are "extremely well marketed liquid diversifying strategies."

Equally concise was Joan Lee, an investment manager in Unigestion's cross-assets team: "Systematic long/short strategies that provide well known structural opportunities in low-cost liquid format."

These two definitions elucidate that while these strategies deal in alternatives of some kind, they are not like infrastructure or private equity that require locking up commitments for years. On the contrary, ARP strategies typically have daily dealing and invest in the most liquid kind of derivative contracts – on major securities indexes.

The power of diversification is hinted at by Lee's mention of "long-short". ARP strategies may exploit the most readily tradeable index derivatives but they are not merely relying on buying them in varying quantities: they are shorting as well. Overall, multi-ARP strategies aim to limit exposure to traditional assets by taking both long and short positions. For example, the Unigestion strategy's ex-ante beta limit is +/- 0.3 with MSCI World.

Diversification is not just a matter for equities. Thomas Kieselstein, CIO of Quoniam, added that ARP strategies exploit "groups of assets that can be uncorrelated to equity beta and duration."

This gives different diversifying qualities to most other multi-asset strategies, even Diversified Growth Funds. This is an important feature of Quoniam's strategy as it has no net market exposure and zero correlation to directional risk associated with equity markets and interest rates.

In fact, ARPs are doing much more than merely going long and short benchmark asset indices. A list of common ARP sub-strategies would include FX carry; sovereign bond carry; credit carry; arbitraging volatility between different regional markets, such as Europe and the US; contango/backwardation in commodities; trend-following or momentum in various asset classes; and macro tail hedging.

There are numerous other forms of diversification within these strategies. Not only are they across asset classes and less directional than markets; but broadly they can be divided into strategies that tend to decorrelate from markets in periods of stress and those such as carry strategies that do well with markets but are subject to heavy losses in periods of disruption. It is the dynamic combination of these two groups, covering left-tail and right-tail risks, that give ARPs their edge.

Sophisticated asset owners will have come across the names of the alternative risk premia from the world of hedge funds. At the start of the century, only proprietary trading desks of some investment banks and hedge funds were exploiting such techniques on behalf of their clients. The risk premia involved might not even have been named as such. But fast forward fifteen years and what was esoteric then is now being towed towards the mainstream and systematised by ARP providers such as Quoniam, LOIM and Unigestion.

"Over time hedge fund alpha has become split between ARP/systematic alpha and that part than cannot be replicated systematically (such as some merger arbitrage and stock selection choices)," says Pellaud.

He gives the example of CTAs, a long-established strategy that profits from price momentum across a range of asset classes. "You can reproduce 80% of what CTAs do with a simple model," claims Pellaud.

All three asset managers at the CAMRADATA roundtable acknowledged the systematic nature of their strategies. That means all three are highly quantitative, with intervention or 'override' only in the event of extreme situations. "We conduct fundamental research on single stocks to filter out any bad eggs," says Lee.

The appeal of quantitative strategies to investors comes and goes over time. Samuels says that some trustees can feel uncomfortable when they learn there is not a portfolio manager making decisions on a daily basis. On the other hand, part of the appeal of ARPs is that because they are systematic, they are much cheaper than hedge funds. This draws investors who accept that there are persistent sources of return in financial markets and understand that models for portfolio construction and algorithms for trading can harvest those returns better than the endeavours of a "hero" portfolio manager or team.

> "All three asset managers at the CAMRADATA roundtable acknowledged the systematic nature of their strategies"

So how do humans contribute to these systematic strategies? Kieselstein explains that an active quantitative house earns its fee for the research it conducts into which factors and inputs work best for all these sources of return, and equally important, which trading strategies are most effective. He points out that new factors and signals are being tested all the time [the Quality risk premia in equities was named as such only a few years ago and its best inputs continue to be debated]. Continuous research and development is necessary because "if the rules of your strategy are too simple, they will simply get arbitraged away," he warns.

Daniel Banks, an investment consultant at PSolve, said his firm is always looking for evidence that managers know how they are going to maintain their competitive edge. "In this era when acquiring and processing data is so important, the organisation it would be interesting to see managing money is Google," he said.

Banks added that some managers PSolve looked at in this area use what he referred to as signals, which are far more numerous than factors or the consequent risk premia. Banks reckoned some quantitative managers use upwards of three hundred signals.

Samuels said that some managers do argue the case that they have access to unusual or rare information "but these tend to go into their premium product, for which you pay accordingly."

So there is a balancing act to be performed between devising a strategy that is robust and has a firm rationale while preventing competitive forces in financial markets diluting your advantage.

> "So there is a balancing act to be performed between devising a strategy that is robust and has a firm rationale while preventing competitive forces in financial markets diluting your advantage"

One could argue that many single-strategy hedge funds have suffered the latter fate, as ARP strategies have moved into their territory and proven that several sources of return, the risk premia, are not as mysterious or hard to capture as the hedgies once suggested. But there is more to ARPs than this. In the past, pension funds and insurers looking to locate lots of alternative risk premia for the sake of diversity would have gone to a fund of hedge funds. This meant dealing with a two-layered structure: the underlying boutiques and the overarching fund of hedge funds. This increased opacity, governance risk and costs. Selecting an ARPs dispenses with the need for two layers, as Samuels explains:

"At Redington we used to use individual hedge funds as building blocks. But why have three strategies when you could have one? The client can target aggregate volatility much more easily with an ARP and it is also better for governance."

If Samuels admits that funds of hedge funds are now a difficult sell, Boardman emphasised that ARPs do not sound the death toll for hedge funds per se. "They have a different structure," she says. "Then there is the range of places where investors can put ARPs. Some investors do not put them in a growth portfolio but as a risk diversifier and have them as a diversifier sitting alongside safe haven assets."

Boardman added that commonly ARPs are compared with global macro, the most versatile hedge fund style, which she described as the "closest, although not perfect, comparison". This brought the panel to the issue of benchmarking ARPs. The question is tricky because as Boardman suggests, different investors employ ARPs for different purposes. What suits one institutional investor might not suit another. On the other hand, there is some commonality in how ARPs present themselves. All three on the CAMRADATA panel had targets of Libor + 5-7%. The LOIM strategy is actually available in at Libor +3%, +7% or +14%. Pellaud said the nature of the strategy meant it was easy to dial risk up and down. The Quoniam strategy is often customised to client specific needs such as minimising SCR for insurance companies.

The problem with Absolute Return targets is that prospective clients and their advisers then need to find other meaningful metrics to understand how the targets are being reached.

"We never use Absolute Return because no one can achieve it," says Samuels.

Boardman, Samuels and Banks all suggested that using several benchmarks could help investors "triangulate" the risks and returns reported by ARPs.

Banks added: "You've got to understand not just what contributed to the strategy's performance but also what is driving the benchmark's performance."

It is a wise remark given that risk premia strategies themselves decompose risks and return beneath sectors and stocks into factors.

Shah noted that some ARPs can cherrypick their comparator, using the HFR index when they have outperformed it, but cash at other times. Kieselstein said that HFR was not an appropriate benchmark.

"The problem with Absolute Return targets is that prospective clients and their advisers then need to find other meaningful metrics to understand how the targets are being reached"

Shah continued that he worried how much difference the manager actually made if the risk premia are well documented. He suggested that the core of all ARPs was the same and that ten years down the line, performance might bear this out.

The asset managers on the panel disagreed. Lee responded that many of the products offered as ARP, including swaps from investment banks, were too simple. She noted that many trend following strategies had got hit this year because they were very long bonds as a result of using simplistic risk metrics.

She said that while alternative risk premia might be well known and documented academically, the dispersion of returns from some sub-strategies evidenced that active managers did produce considerably different outcomes. Unigestion has analysed weekly returns for almost two years from major commodity carry strategies and found considerably different risk-adjusted returns and index correlations.

Kieselstein then linked portfolio construction to outcomes. He warned against products that simply added the top decile instruments by one risk premium criteria to the top decile instruments sorted by another risk premium criteria. Such additive portfolio construction might be easier for the client to understand but would not provide proper diversification because it ignores all the other factors found in any building-block instrument – no company for example can be said to be a 100% pure Value stock, without negative impact on other factors. Kieselstein added that these factors vary in time: another reason why portfolio construction must be done transversally, sorting the chosen universe of instruments by every criteria and assessing the validity of the selected instruments on a combination of the factors found therein.

Shah's concern – that the risk premia matter far more than the manager accessing them - will nevertheless resonate with some prospects as so many of the asset manager ARP strategies have less than three years' track record by which to prove their proper worth. "There may be not misunderstanding but misperception by some investors about the draw-down risks borne by these strategies," said Boardman. "Some ARPs are targeting Sharpe Ratios of over 1.0 but we think it is more realistic to see Sharpe Ratios of 0.7 or 0.8. If headline volatility is 8-10% then investors can still face the risk of mid-teens losses in these strategies."

"Some ARPs are targeting Sharpe Ratios of over 1.0 but we think it is more realistic to see Sharpe Ratios of 0.7 or 0.8"

Lee agreed that ARPs have taken off during a fairly benign investment environment, and so have not been tested by the worst of conditions such as a prolonged recession.

Prospects could wait for a full market cycle to know better which strategy to use. But that is not the way investing works. So the CAMRADATA panel was asked what to look for in a prospective manager, given the preponderance of short track records.

Lee said that Unigestion looked to provide 'all-weather' performance by dividing the market cycle into four different regimes: inflationary, recession, market stress and steady growth. Unigestion research suggests different risk premia fare better under different regimes. And so, rather than rely on static allocation, Unigestion adjusts its exposures systematically according to conditions (carry strategies, for example, tend to do badly in times of market stress, as left-tail strategies with negative skew).

Lee explained that in the long run, Unigestion's strategy would expect to generate 25% of its returns from this dynamic allocation on average.

Lee said that Unigestion uses 'nowcasters' to get an indication of where the market is in its regime cycle, rather than rely on headline economic indicators which often lag reality.

Finally, Lee mentioned how volatility was not an apt measure of risk for alternative risk premia. Unigestion prefers expected shortfall over VaR as a metric that includes more dimensions of risk, including the actual shape of losses per strategy rather than an artificially smooth annualised number.

Kieselstein agreed that the return distribution characteristics need to be properly addressed, and that their product avoids tail risk premia. He remained sceptical on the question of tactical allocation techniques – they require high forecasting skills, which are very difficult to achieve and maintain long term.

Expected shortfall is also LOIM's prime risk metric for ARP. It can be increased – but not decreased – by further risks, notably negative skewness, greater correlation to markets during risk-off environments and the trading capacity of any sub-strategy (liquidity risk). Pellaud gave an example of how LOIM adjusts to market shocks. When the Swiss Central Bank unpegged the Swiss Franc in January 2015, many carry strategies were destroyed by the spike in valuation of the currency. Pellaud recalls that LOIM is prepared for such spikes. By increasing the carry currency strategy's expected shortfall measure because of negative skewness and conditional correlation, the strategy was appropriately sized in the portfolio and did not disproportionally affect the overall fund which ended up on the month.

> "Prospects could wait for a full market cycle to know better which strategy to use. But that is not the way investing works"

> "It is an argument for not only a broader range of strategies that cover different market conditions, but an argument for understanding the nature of the risk of each underlying strategy"

On liquidity, Kieselstein noted that during the Great Financial Crisis, one reason equity markets fell so heavily was that banks struggling to meet cash calls chose to sell whichever assets were most liquid. He recalled that lots of specialists were targeting accruals from small and mid-caps: when this strategy suffered, other equities had to be sold to cover positions. Kieselstein's point was that in times of market stress, risk contamination can occur in ways that most models will not figure. These strategies were unexpected sellers of good quality equities.

It is an argument for not only a broader range of strategies that cover different market conditions, but an argument for understanding the nature of the risk of each underlying strategy; and the limits of any premium's diversifying power.

Whatever a backtest might say about the robustness and efficacy of an investment strategy, real life will always be different – and experience tells us how. It was heartening, then, that the ARP managers all concluded that after years as quantitative managers and researchers, the best lesson they had learned was to always halve the Sharpe Ratio from a backtest. That puts any new product on a realistic footing.

It might be a good approach for institutional investors and their consultants to take on Alternative Risk Premia strategies too.

Key investment beliefs

> We also believe that while there are multiple types of Alternative Risk Premia they can ultimately be classified in two categories: Left tail and Right tail strategies.

Written by
Laurent Joué
Senior Portfolio Manager

AND

Marc Pellaud
Senior Portfolio Manager

AND

Clément Leturgie
Client Portfolio Manager

At LOIM, we believe Alternative Risk Premia which have traditionally been used and implemented by hedge fund strategies (such as global macro, event driven, CTA, relative value (RV) and long/short (L/S) equity) can be identified, captured and harvested systematically to deliver absolute returns uncorrelated to traditional asset classes in a transparent, liquid and cost efficient way.

Alternative Risk Premia come from 2 sources: rationale economic and financial risks (such as yield spread carry) and market anomalies. Market anomalies can be differentiated in two kinds: behavioural anomalies (such as momentum) and arbitrage opportunities.

We also believe that while there are multiple types of Alternative Risk Premia they can ultimately be classified in two categories: Left tail and Right tail strategies.

There are multiple ways for investors to access Alternative Risk Premia. Generally, the value added from your provider will lie in research, implementation and combination.

In the following sections, we will provide a summary of LOIM's approach to these 3 major steps in aiming to build a robust and diversified Alternative Risk Premia solution.

1). Research and Selection

As a key investment philosophy, we believe there is a need to be innovative and differentiated in the premia we select and implement in order to:

- **Enhance returns opportunities:** once a premia is discovered, as more capital enters into the same premia, returns tend to diminish. As a result, two options can be considered in order to conserve returns: leverage existing premia or select new premia with higher expected returns
- **Avoid crowding issues:** as the risk premia industry develops and attracts capital, crowding can become an issue. Innovative strategies or differentiated implementation should help mitigate potential crowding issues.

We focus on pure and liquid premia. Therefore, we avoid data mining and over-optimization and also avoid investing in less liquid markets. We believe this can enable us to better understand the premia we use and predict their behaviour in various market environments.

2). Implementation

Once a premia/strategy has been identified as fitting our selection criteria, the strategy is tested for implementation in order to analyse the below factors:

- If the identified premia can be innovative and differentiated in our implementation process to improve the premia and avoid crowding issues
- The options available in order to implement the strategy effectively
- The methods available in order to minimize costs

Strategies are systematic and are designed in-house

3). Combination

Combination is an essential part of the alternative risk premia offering.

LOIM aims to provide a diversified access to alternative risk premia. A portfolio construction methodology that allocates risk instead of capital is used to combine individual premia. Additionally, daily dynamic leverage management is applied at the strategies and global portfolio levels.

Our combination process has three key components:

a) Categorize premia as left tail or right tail

b) Evaluate the risk of individual premia based on our proprietary risk metric

c) Ensure the resulting portfolio meets the risk (volatility) target objectives

a) Categorize premia as left tail or right tail

As mentioned previously, for combination purposes, we identify premia based on their return distribution profile:

LEFT TAIL STRATEGIES:

- Tend to be market neutral, typically income/carry strategies
- Tend to exhibit low volatility but negative skew and therefore can be exposed to large losses/gap risks and to suffer during risk-off scenarios
- Exhibit insurance seller profile

RIGHT TAIL STRATEGIES:

- Tend to be relatively directional (long or short), typically trend/momentum strategies
- Tend to exhibit positive skew with the potential to deliver large returns during prolonged periods of trends (negative or positive). Will suffer in trendless markets and sharp reversals
- Exhibit insurance buyer profile

We believe these categories offer complementary sources of returns. For example, while left tail (such as carry) strategies might exhibit positive correlation to equities during equity risk off periods, right tail (such as trend) strategies can exhibit negative correlation to equities and therefore compensate for potential losses of left tail strategies.

We allocate risk equally between these two categories of premia. We do not believe in timing premia and rely on our proprietary risk allocation process designed specifically for the strategy. By combining them, we target smoother returns in different market conditions which are less exposed to drawdowns and to specific risks linked to individual strategies. This process aims to generate a better risk/return profile than would be achievable from the individual strategies.

> We do not believe in timing premia and rely on our proprietary risk allocation process designed specifically for the strategy.

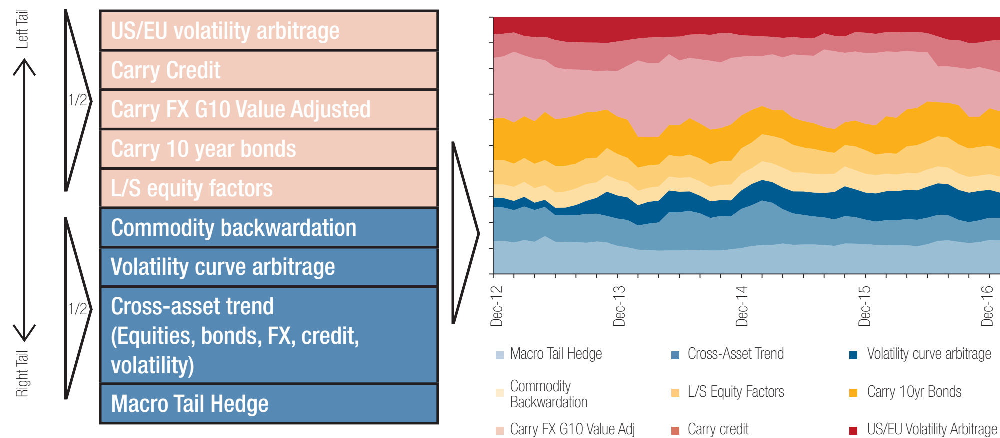
b) Evaluate the risk of individual premia based on our proprietary risk metric

We believe a simple Equal Risk Contribution (ERC) combination process based on volatility and correlations is not appropriate for long/short strategies and alternative risk premia. Therefore, we have developed a proprietary risk measure that we believe addresses key concerns and negative biases of simple alternative risk premia.

In our opinion, alternative risk premia solutions should offer low correlation to traditional risk premia, notably during periods of stress. They should also aim to be very liquid in different scenarios. Therefore, the risk measure we use in the combination process will penalize premia which are exposed to large tail risk, tend to re-correlate to equities during periods of stress and which are exposed to liquidity risks.

The resulting portfolio is well balanced in terms of exposure to Left Tail and Right Tail strategies (50/50) and well balanced between strategies, notably in terms of risk, but also in capital as exhibited by the below example:

> Because the Alternative Risk Premia space is still new, investment processes and premia are not normalized and therefore supplier's returns are heterogeneous. As a result, investors need to carefully select their manager



Note: Allocation is subject to future changes
Source: LOIM for illustration purposes only. Past performance is not a guarantee of future results

c). Ensure the resulting portfolio meets the risk (volatility) target objectives

Once the combination process is finalized, the overall portfolio exposure to the market is managed aiming to keep volatility within a defined target.

To conclude, we strongly believe that the development of Alternative Risk Premia is a natural (r)evolution for the asset management industry. This is not a fad and we believe the space will continue to attract a growing number of investors. We see Alternative Risk Premia solutions as a complement to a hedge fund allocation, with investors increasingly using Alternative Risk Premia as core alternative exposure and alpha focused hedge funds as satellites. Because the Alternative Risk Premia space is still new, investment processes and premia are not normalized and therefore supplier's returns are heterogeneous. As a result, investors need to carefully select their manager and, we believe, tend to favour managers with experience in the space and an existing live track record.

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Alternative Risk Premia

From theory to effective implementation

Given the low interest rate environment, investors will be further forced into increasingly risky investments to achieve their required investment returns. However, too often they merely increase exposure to the same risk types, instead of diversifying or reallocation. Alternative Risk Premia provides access to new and diversifying sources of income.

> Alternative Risk Premia provides access to new and diversifying sources of income

In response to the low interest rate environment, investors have increasingly invested in corporate bonds – and have also extended their equity exposure as much as possible. Although both measures usually mean globalising the portfolio, they also have the tendency to increase risk in absolute terms. Additionally, investors have moved into significantly less liquid asset classes, such as real estate and private equity. By doing so, higher demand causes the effective liquidity of these assets to diminish further. The approach known as the "Alternative Risk Premia" (ARP) provides an alternative to these developments. Based on alternative risk premia, the strategy combines a balanced risk profile with attractive returns ordinarily achieved via highly liquid instruments.

Written by
Dr Markus Ebner,
Team Manager - Multi-Asset

Risk premia can enhance diversification

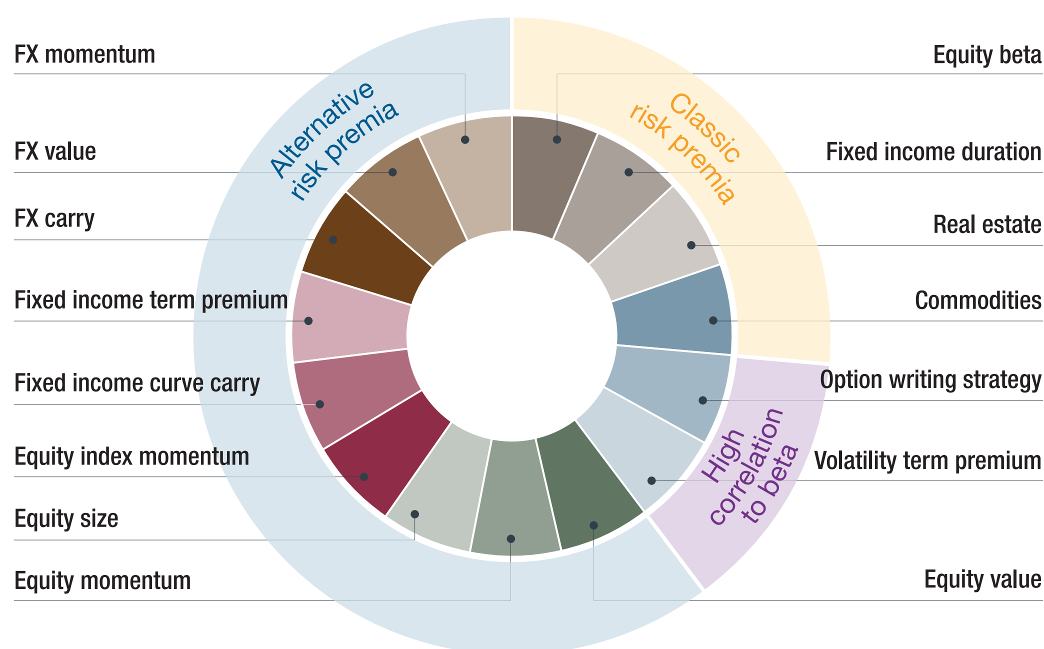

Figure 1: In addition to traditional risk premia for fixed income and equities, a wide variety of risk premia has been identified and can be implemented. Source: Quoniam

RISK PREMIA vs. ASSET CLASSES

The best-known risk premia is the 'equity premium', i.e. the additional return that equities provide when compared to money market returns. It is the reward for assuming systematic equity market risk. In this case, there is no difference whether investors look at this additional return on an asset class level or on the level of risk premia. However, certain equities show anomalies to the capital market theory that promise systematic outperformance compared to the wider equities market. These effects can be encapsulated and used as individual sources of performance. One example is the fact that momentum equities show a higher long-term performance than the market as a whole. Exploiting this effect in a traditional approach based on asset classes would require an additional mandate. As a result, equity risk rises significantly, but the specific momentum premium is relatively small. Investments in momentum equities are also common in the universe of risk premia, but the equity market risk is hedged. This allows for a significantly higher exposure to the momentum premium to be realised. Also, the relationship between overall equity market premium and momentum premium can be managed independently, and more efficiently. As a result, the ARP strategy encapsulates individual risk premia in various asset classes and reallocation them.

IDENTIFYING AND REALISING RISK PREMIA

There are various possible ways to identify and realise risk premia, regarding the selection of instruments applied as well as indicators used for the identification of suitable securities. Equity premia can be mapped by way of portfolio swaps which are generally based on an equity index. However, apart from the comparatively high costs, the frequency of reallocation is very low in indices, i.e. their composition rarely changes. As a result, many securities within the index – and hence also the equity swap – which fitted the investment style in the past may no longer be appropriate. In addition, often a small number of indicators are used for identification. In the case of momentum premia it is mostly just pure price momentum. Many scientific studies however demonstrate that – apart from price momentum – various other momentum factors exist, potentially leading (on a long-term horizon) to excess returns. Identifying suitable factors and mapping risk premia through individual securities is thus essential for risk premia management.

LIQUIDITY

While investors in risk premia are prepared to run risks in order to achieve positive returns, they require the ability to liquidate their investment in times of crisis without disproportionately high costs. Therefore, they only invest in highly liquid assets such as equities, bonds, futures, and foreign exchange forward transactions, excluding investments like portfolio swaps or private equity funds.

> Only invest in highly liquid assets… excluding investments like portfolio swaps or private equity funds

AVAILABILITY OF VARIOUS RISK PREMIA

In theory, more than 20 different risk premia are evident across various asset classes. They can be assigned to the following factors - beta, carry, value, size and momentum. In order to be part of a portfolio, a risk premium has to fulfil the following three criteria:(i) the premium must be evidenced on an economic, scientifically-proven basis; (ii) a positive payout has to be historically evident; and (iii) the premium has to be cost-efficient and viable within a special fund that complies with the guidelines. Within these conditions, 15 different risk premia have been identified and have been implemented in the Global Risk Premia strategy. The ARP strategy selects only non-market-related premia.

PREMIA SELECTION AND WEIGHTING

To offer a true added value to those investors who are already exposed to equities and bonds, we selected 9 out of 15 premia that are not linked to the market risk of equities and bonds. Their interaction creates the perfect supplement to the overall portfolio, which is typically dominated by equity and interest rate risks. The weightings of the individual premia are determined by allocating the same risk budget to every premium. This allocation is based on balancing risks equally, and avoids the dilemma of timing or forecasting: the forecasting quality on the level of risk premia is significantly poorer than on asset-class level. This makes the ARP strategy an approach that can be described as free of any forecasting.

SUPERIORITY IN PERIODS OF MARKET STRESS

The absence of forecasting in the approach, and the liquidity of the instruments, enables us to compile a substantiated back-test of the strategy. In comparison to equities and bonds, it shows the best Sharpe ratio. It is also notable how the strategy performed in the most recent periods of market stress. During these periods the strategy clearly demonstrated that it achieves the goal of offering an alternative to conventional investments, with the smallest possible market correlation.

RESULTS

We have compiled a live track record of the ARP strategy since February 2015. It is managed with a volatility target of 7% per annum, an anticipated Sharpe ratio of about 1 and the average expected return is approximately 7% per annum. As of 31 July 2017, the strategy's assets under management are EUR 700 million.

As per the chart below, in addition to traditional risk premia for fixed income and equities, a wide variety of risk premia has been identified and can be implemented;

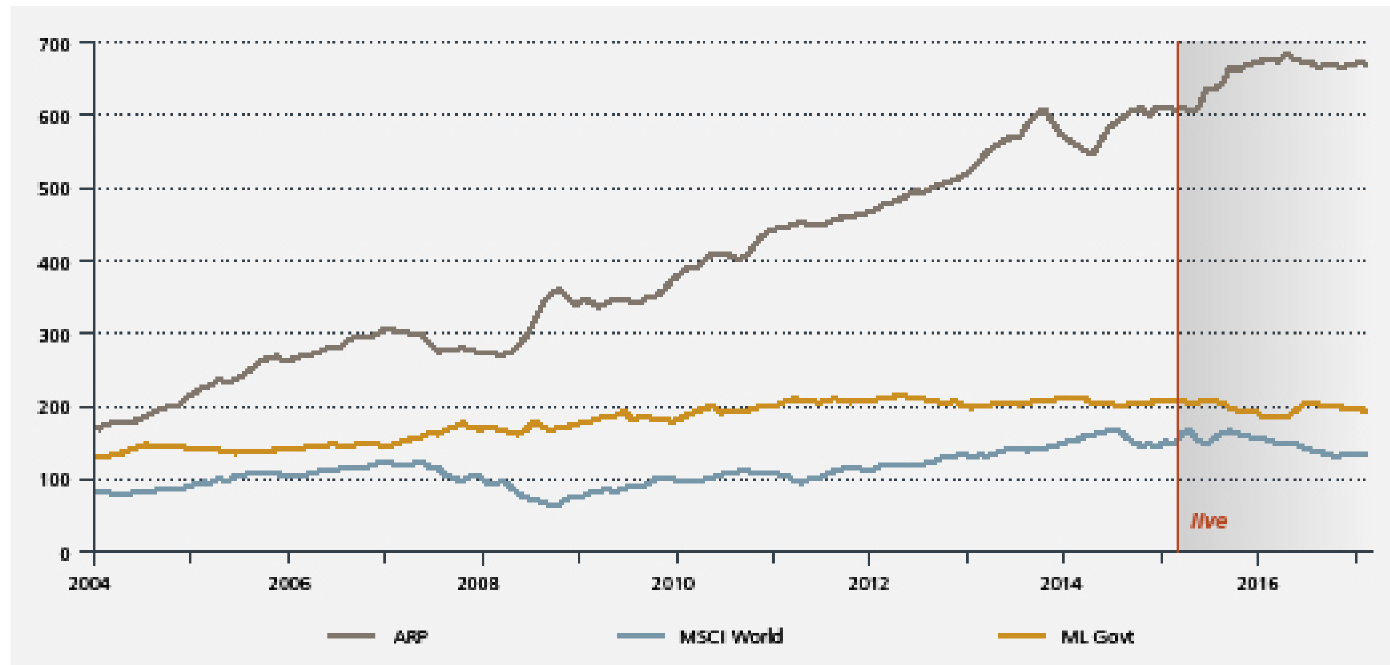

Figure 2: Live track record since 5 Feb 2015*
Source: Bloomberg, calculations: Quoniam as of 07/2017

> "Allocation is based on balancing risks equally and avoids the dilemma of timing or forecasting"

	ARP	MSCI World	ML Govt
Performance p.a.*	4.0%	6.0%	1.8%
Volatility p.a.*	4.5%	11.9%	6.3%
Max Drawdown (m)	–2.8%	–13.2%	–9.0%
Sharpe ratio	0.98	0.42	0.44

Figure 3: Source: Bloomberg, calculations: Quoniam as of July 2017

*The performance between January 2007 and May 2017 is based on a simulation portfolio (the simulation portfolio reflects the realisation of past risk forecasts for the risk premia taken into account, and is therefore representative). The performance since February 2015 belongs to a representative client portfolio. Amounts shown are mn/bn EUR gross amounts.

CAMRADATA

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Incorporating Change, Driving Potential

Grocers' Hall, Princes Street, London EC2R 8AD

30 November 2017
9.00 - 16:00: Including lunch and drinks

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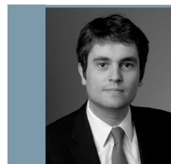
Alternative Risk Premia investing

From theory to practice

“Alternative risk premia can significantly improve the risk-return profile of multi asset portfolios”



Written by
Olivier Blin
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Investment Manager

AND

Joan Lee
Vice President
Investment Manager

1. Theory and principles

Introducing risk premia: the reward for taking risk

Alternative risk premia investing has grown rapidly in popularity in recent years, what exactly does it involve, and what should investors look for when considering which alternative risk premia strategies to invest in?

Traditional risk premia, such as the equity risk premium are well known by investors. However, over the years it has become increasingly apparent that these are not the only ones that investors can exploit.

Academics and practitioners have identified similar patterns across other asset classes. Together, these strategies constitute the family of alternative risk premia.

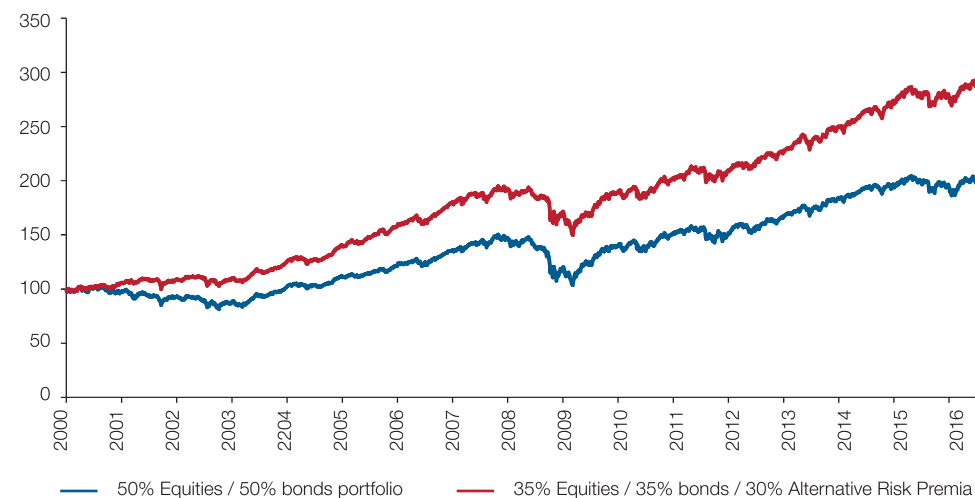
Why invest in alternative risk premia?

Investing in alternative risk premia can provide two main advantages.

First, an allocation to alternative risk premia can significantly improve the risk-return profile of a multi asset portfolio. Indeed, they should increase diversification given their low correlation with traditional risk premia, but can also act as return enhancers, notably in a low-yield environment where long-only exposure to traditional risk premia is less likely to be rewarding.

Second, they can provide investors with access to part of the return stream provided by hedge funds, but generally with better liquidity and at lower costs. That said, they cannot provide the alpha that the most talented hedge fund managers produce and thus will not post as high risk-adjusted returns.

Exhibit: The effects of adding alternative risk premia (ARP) to a diversified portfolio



Source: Bloomberg, Unigestion. Monthly gross total returns measured in USD, from January 2000 to July 2016. Sharpe ratio is the ratio between the excess returns over cash returns and volatility. For illustrative purposes only. Equities are proxied by the MSCI All Country World Index in USD, and bonds by Bloomberg Barclays Global Treasury Total Return USD-hedged. Alternative risk premia are proxied by a simulation that allocates to a mix of trend-following, carry and equity factors.

2. Practical considerations

How to select alternative risk premia

Each risk premium should systematically generate positive expected returns over the long run, and the reason for its existence should be readily understood. It must also be investable in practice, and economically meaningful.

While we all may agree with the above principles, differences in interpretation can lead to very different outcomes in practical implementation.

The devil is in the detail: putting alternative risk premia into practice

We believe it is important to consider the definition of each alternative risk premium. While everyone would agree that Value is one of the most important equity factors, simplistic definitions, such as those based on the price-to-book ratio, are not applicable across all sectors and can lead to concentrated portfolios with a persistent overweight in financials.

More generally, there is a perception that alternative risk premia with the same name give similar outcomes. At Unigestion, our analysis shows that risk premia of the same name can have significant differences in risk-adjusted returns and correlations with the underlying market.

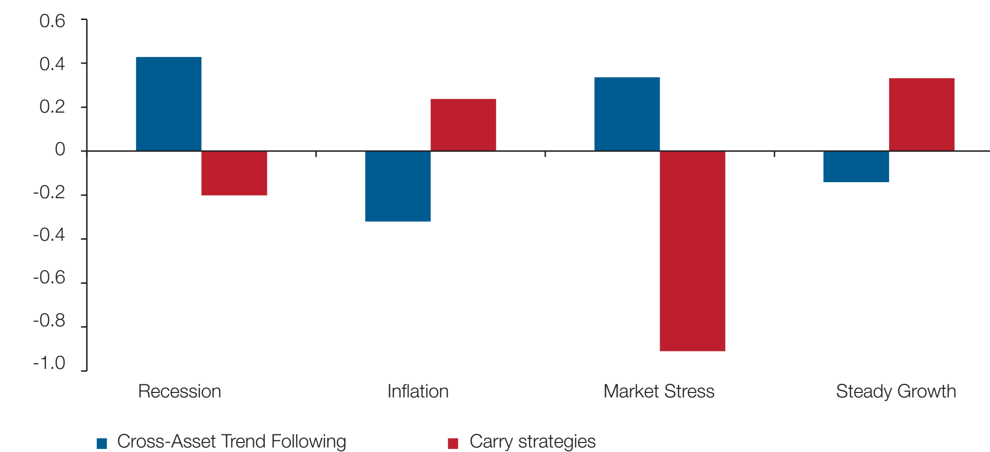
Finally, flexible construction methodologies are vital if alternative risk premia are to be harvested successfully in the long term. Execution should be optimised for expected performance, not for ease or perceived simplicity alone.

How to allocate between alternative risk premia

Combining alternative risk premia in a single portfolio can result in lower costs through the netting of trades. It also reduces risk through diversification. This offers the advantage of a potential significant improvement in risk-adjusted returns.

As regards to portfolio construction, while Equal Risk Contribution (ERC) is a good starting point, it can lead to false diversification in some periods. One of Unigestion’s core convictions is that the performance and risk characteristics of alternative risk premia are dependent on the prevailing economic regime. The chart below highlights examples of this dispersion in performance across regimes.

Exhibit: Excess sharpe ratios of ARP strategies under different regimes (relative to the long run)



Source: Unigestion. Return figures are based on hypothetical backtest simulations from 31 December 2000 to 31 October 2016 in USD, gross of fees.

“Performance of alternative risk premia is dependent on the prevailing economic regime”

To achieve true diversification, investors should choose a risk budget within their strategic allocation which is consistent with their long-term investment policy, and dynamically change their risk allocations on the basis of different factors. While we acknowledge that “timing” markets or alternative risk premia is a difficult task, we think that nowcasting economic regimes and adapting the risk budget to the current environment is a worthwhile exercise.

Measuring risk in an alternative risk premia portfolio: beware of volatility

The standard approach of using volatility as a measure of risk is not suitable. It is unable to take into account the fact that the return distributions of some alternative risk premia can be significantly asymmetric. A negative skew can expose investors to worse losses than would be expected from their volatility, especially during major downturns.

We believe that Expected Shortfall is a more appropriate measure of risk. First of all, it

relates to potential losses on capital, which is the true risk that investors face. Further, from a portfolio construction standpoint, it makes it possible to include more dimensions of risk than volatility alone. In our model, for example, assets with low carry, high volatility, negative skewness, high tail risk and poor liquidity are penalised.

3. A passing fad or a real solution for investors?

> "Investors should choose their alternative risk premia strategy with considerable care"

Alternative risk premia are, in our view, one of the best liquid alternatives to make a strategic allocation to in a balanced portfolio. However, investors should choose which strategy to invest in with considerable care: in particular, different strategies with the same name can provide very different return streams. They should also pay attention to how the strategy is designed and implemented, as a simplistic approach may lead to unwelcomed surprises.

While a static approach might seem like the lowest-risk option, such a choice is actually an active decision in itself, as different alternative risk premia behave differently in different market or economic regimes. This means that an active approach to allocation is vital if investors wish to maximise the return potential and minimise the risk of their allocations to these strategies.

This is the approach we take at Unigestion with our key added value offering to investors aiming to:-

- Provide enhanced definitions for each risk premia
- Systematic dynamic allocation based on our proprietary Nowcasting methodology
- Holistic risk management approach which focuses on down side protection

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> "CAMRADATA Assisted Search added a new dimension to our tender process. We were able to narrow the field in terms of the service we were after and gain interest from a wide range of market participants. A bonus was the help we received in coordinating a presentation day and providing a central neutral location at which to meet."
>
> **Peter Beaumont, Finance Director, Cornish Mutual**

Below highlights just some of the asset classes CAMRADATA Assisted Searches have covered over the past quarter:

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Emerging Market Equities
Euro Corporate Bond Funds
Fixed Income SRI
Global Equities SRI
Emerging Market Small Cap Equities
UK Equities SRI
Multi Sector Fixed Income
Active UK Government Fixed Income

If you would like us to carry out an assisted search, please contact us now

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