Aon Investment Research and Insights

Alternative Premia, Alternative Price

An introduction to Alternative Risk Premia

February 2018



Table of Contents

Executive Summary	1
What are Alternative Risk Premia ("ARP")	
ARP strategies	2
Role within a portfolio	5
Potential considerations	6
Conclusion	6

About Aon Investment Research and Insights

Aon's robust portfolio of ideas, tools and researched solutions support trustees and sponsors to anticipate their future investment requirements.

By beginning to identify investment research and communicate ideas before they are needed we can shorten the implementation times for our clients and act in a timely way when opportunities are correctly priced.

To learn more and to access other research and insights from Aon's investment experts, visit aonhewitt.com/investment

Executive summary

Alternative Risk Premia ("ARP") strategies have risen to prominence in recent years as investors seek increased diversification and non-traditional sources of return. This paper serves as an introduction into the ARP universe and provides clients with our key thoughts and conclusions.

Our key conclusions are that ARP strategies:

- Have low correlation to traditional sources of returns which may improve portfolio outcomes.
- Employ strategies that are similar to some hedge funds in a systematic manner, meaning fees are often lower.
- Have liquidity terms that are generally superior to traditional hedge funds.
- Can perform well in a variety of market environments.
- Provide a good introduction to non-traditional sources of returns and act as a building block for further alternative strategies.

What are Alternative Risk Premia ("ARP")

Risk Premia can be defined as reward for taking a risk others do not wish to hold or for exploiting persistent market anomalies. The existence of Risk Premia across traditional assets is widely accepted and is likely to already be incorporated into your portfolio. An example of this traditional premia is the excess return earned by investing in stocks above the risk-free rate, known as the equity risk premium.

An Alternative Risk Premia ("ARP") approach is a broad term covering a range of strategies which differ to the traditional definition by offering the ability to go both long (profit if asset rises in value) and short (profit if asset falls in value), rather than just long.

There are two distinct criteria that determine what qualifies as ARP. Many ARP strategies exploit well-documented market anomalies that have persisted for decades and others provide insurance to market participants. Ultimately, the strategies used seek to exploit economically-intuitive and well-understood investment themes.

As a rule most of these strategies will have the following characteristics:

- Intuitive supported by a sound rationale as to why the premia exists
- Well known backed by strong academic evidence
- Scalable offers sufficient liquidity
- Value add provides positive expected return over time
- Persistent demonstrates persistence over time

Most ARP funds employ strategies that display most of the above qualities and invest in a diversified manner across them. ARP funds seek to capture the benefits of active trading strategies whilst retaining many benefits of passive strategies, such as lower cost and greater capacity. The strategies employed are comparable to those used in traditional hedge funds, however, ARP funds aim to extract returns from these premia in a more systematic manner. The approach is similar to one used in the longonly equity space where "factor-based" funds look to capture returns from well-known equity factors such as Value and Momentum.

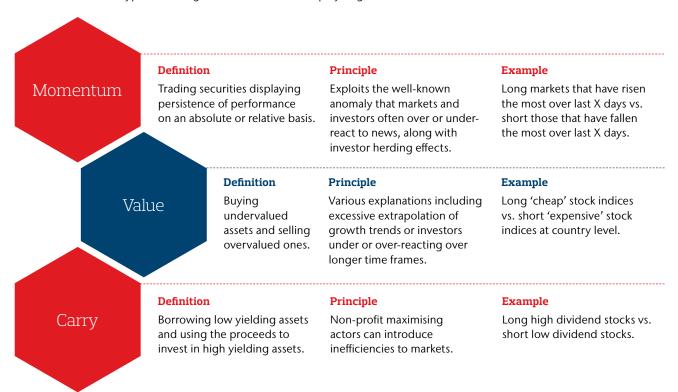
Although different, ARP strategies can work well alongside a traditional factor-based approach. The key differences between the two are:

Alternative Risk Premia ('ARP')	Factor Based Investing			
All asset classes	Mainly applicable to equities			
Long and short strategies	Long-only strategies			
Hundreds of strategies	4-10 main factors			
Low correlation to equity markets	High correlation to equity markets			

The unconstrained nature of ARP has the ability to generate returns that are equity like and significantly uncorrelated to traditional equity markets.

ARP strategies

There are three main types of strategies which ARP funds employ to generate returns:



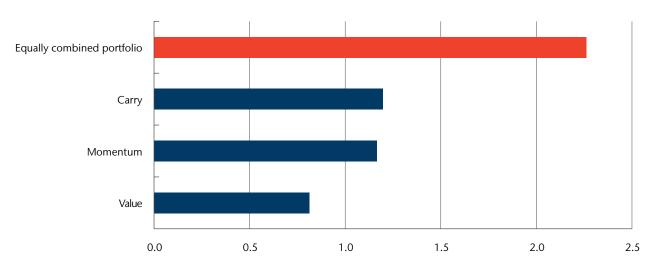
Each of the above strategies can be applied across all major asset classes including equities, currencies and commodities to name a few. There are also a large number of other ARP strategies not covered by the categories above; however, the allocation to these strategies is often small.

And | Research and Insights Alternative Premia, Alternative Premia

The chart below shows the individual Sharpe Ratio of examples of these three key strategies over the past 26 years. The Sharpe Ratio is a measure used for calculating risk-adjusted return. It is calculated by dividing excess return (versus risk-free rate) by the standard deviation of the asset return.

This figure then provides a unit of excess return per unit of risk. The higher a portfolio's Sharpe Ratio, the better a portfolio's return relative to the risk it has taken on. All strategies have a significantly positive Sharpe Ratio over the period¹, indicating that each has added value.

Sharpe Ratios of various ARP strategies and portfolios



Source: AQR, Aon. Examples of each strategy shown.

As can be seen in the chart above, creating a portfolio of strategies can produce much higher risk-adjusted returns than individually allocating to any single strategy. In addition, the correlation between these individual ARP strategies and more traditional asset classes is extremely low.

The lower the correlation, the greater the increase in Sharpe Ratio (all else being equal) and hence combining a number of strategies with low correlation and a positive Sharpe Ratio can create a portfolio with a much higher Sharpe Ratio overall.

Historical correlations (to March 2016)

	Value	Momentum	Carry	ARP portfolio	Equities	Bonds	60/40 portfolio ²	Hedge funds ³
Value	1.00							
Momentum	-0.50	1.00						
Carry	-0.13	0.26	1.00					
ARP portfolio	0.25	0.51	0.75	1.00				
Equities	0.01	-0.03	0.24	0.15	1.00			
Bonds	-0.19	0.06	0.13	0.00	0.31	1.00		
60/40 portfolio	-0.03	-0.01	0.25	0.14	0.98	0.50	1.00	
Hedge funds	0.03	0.15	0.26	0.29	0.75	0.14	0.72	1.00

Source: AQR, Aon.

³ HFRI fund weighted composite index.

¹ The returns, correlations and Sharpe Ratios above are simulated over 26 years and do not represent actual trading. They are gross of fees and trading costs.

² 60/40 mix of equities and bonds, with equities represented by the MSCI World Index and bonds by the Barclays Global Aggregate Bond Index.

Most ARP funds will employ a range of ARP strategies, which aids portfolio diversification and increases the possibility of higher risk-adjusted returns. Including a number of different strategies increases the ability to generate returns within a wider range of scenarios and economic environments. We believe a Sharpe Ratio of 0.5-1.0 is achievable, equating to excess returns above LIBOR of 3-8% p.a.⁴

Historic track records for ARP funds are limited; however there are a number of reputable managers who have been operating ARP funds for between one to five years. In general, we would expect these managers to target excess returns of 3-8% p.a.⁵ with a target volatility of 5-10% p.a. The chart below shows how these returns compare against other absolute return strategies.

Risk / return spectrum of absolute return strategies

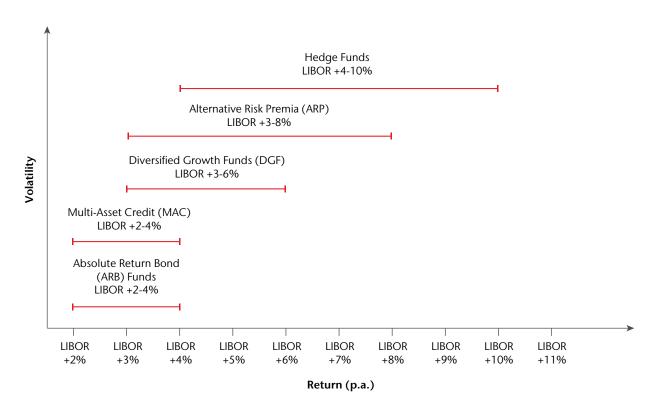


Chart shown is for illustrative purposes only. Returns from each asset class can vary significantly depending on the type of approach within the asset class and on the investment manager. These returns are indicative of the asset class and do not necessarily reflect our house views. If you would like more information on our return assumptions for each asset class please contact your consultant.

And | Research and Insights Alternative Premia, Alternative Price

⁴ Although long track records of these strategies are limited there are reputable managers operating in this area with track records of one to five years. Realised Sharpe Ratios have been between 0 and 1.2 with annualised returns of 0% to 10% and realised annualised volatility of 5% to 10%. The difference between the simulated performance shown on the previous page and realised performance of managers could be attributed to real-life implementation constraints, trading costs, management fees as well as uncertainty over historical costs/opportunities. Our view is that Sharpe Ratios in the region of 0.5 – 1.0 are more realistic going forward than those in the historical backtests.

⁵ We are aware of a few managers who target excess returns above 8% p.a.

Role within a portfolio

We see there being a number of benefits to adding an ARP fund to your portfolio:

- Diversification ARP funds have low to zero correlation with traditional asset classes and low correlation with most hedge funds. These funds can be added alongside traditional assets or multi-asset funds in a portfolio context.
- Competitive fees generally ARP funds charge a management fee of between 0.5% and 1.0% p.a., with options for a lower management fee alongside a performance fee. These fees are typically lower than traditional hedge funds and Fund of Hedge Funds (FoHFs).
- Strong risk-adjusted returns ARP managers typically target a specific volatility level (usually between 5% and 10% per annum) rather than a return target. High quality managers are expected to achieve annual excess returns of between 3% and 8% p.a.
- Liquidity ARP funds are at the liquid end of the spectrum of alternative strategies, with funds traded on a weekly or even daily basis.

When classifying an allocation, there are a number of ways ARP funds can be considered to match investors risk and return objectives:

- Building blocks for a hedge fund allocation –
 ARP funds are a good introduction to the types of
 strategies hedge funds employ and offer similar
 risk and return characteristics. Over time an ARP
 allocation can be expanded to add complimentary
 alpha-generating hedge fund managers.
- Substitute for Hedge Funds or FoHFs —
 historically low volatility has had an adverse impact
 on traditional hedge fund returns. ARP funds do
 not generate alpha (non-systematic returns) but
 can offer some similar exposures with a cheaper
 and more liquid method of implementation.
- Complimentary alongside other absolute return strategies — ARP funds can target similar returns to other absolute return solutions.
 Adding an ARP fund can aid diversification of a portfolio and reduce key manager risk.
- Substitute for absolute return strategies the diversification benefit offered by some multiasset products (DGF, MAC etc.) is not as great as the diversification benefit offered by ARP funds. It is not uncommon for DGFs in particular to have a correlation to equities above 0.5, whereas ARP funds have a correlation closer to zero.

In summary, ARP funds provide the ability to access alternative sources of returns at reasonable fee levels. Distinctions between hedge funds, multi-asset funds and ARP funds continue to blur, however adding an ARP allocation to a diversified portfolio should enhance returns and reduce correlation to traditional assets.

Aon | Research and Insights Alternative Premia, Alternative Premia

Potential considerations

As with any investment, there are certain risks and details that investors should consider when looking at ARP funds:

Trading costs – trading costs for some strategies can be significant. Trading platforms of individual managers need to be sophisticated enough to trade large volumes of different instruments at low cost.

Large universe of factors – as well as the three main types of strategies previously mentioned (Momentum, Value and Carry) there are many others that funds may utilise e.g. Defensive strategies that target premia which have low correlation to traditional equity markets. We prefer managers to target strategies where they have significant experience and expertise rather than attempting to do everything.

Implementation – there is no standard implementation of ARP strategies. There are a number of choices to be made when implementing a strategy and hence the same strategy can have vastly different outcomes across providers, depending on portfolio construction.

Risk management – ARP funds employ leverage to efficiently exploit anomalies and enhance returns. We have a strong preference for managers who can demonstrate strong risk management processes.

Limited performance history – most ARP funds only have limited performance history. Over the last few years we have observed wide-ranging performance, with our preferred funds providing strong risk-adjusted returns.

Conclusion

We believe ARP strategies can aid diversification within a portfolio and allow investors to access returns that are significantly uncorrelated with traditional equities and bonds. The price point of ARP funds is appealing compared to hedge funds and competitive compared to multi-asset strategies.

An allocation to ARP is especially appealing for investors who do not currently have an allocation to hedge funds and wish to achieve similar market exposure or investors who have been disappointed by other more active absolute return strategies and wish to seek returns in a more systematic manner.

As with actively-managed strategies, care must be taken when evaluating and selecting an ARP manager. We expect relatively high performance dispersion within the ARP manager universe due to the number of implementation options and variance in skillsets. Manager selection is therefore critical to successful investing in this area.

If you wish to learn more about ARP or how to implement an ARP strategy, please contact your consultant.

Aon | Research and Insights Alternative Premia, Alternative Price

Contacts

Sion Cole

Senior Partner and Head of Client Solutions sion.cole.2@aon.com +44 (0)20 7086 9432 Follow me on twitter – @PensionsSion

Tim Giles

Head of UK Investment Consulting tim.giles@aon.com +44 (0)20 7086 9115 Follow me on twitter – @TimGiles90

John Belgrove

Senior Partner john.belgrove@aon.com +44 (0)20 7086 9021

With thanks to our authors

Max Bawden

Associate Consultant max.bawden.2@aon.com +44 (0)117 901 3484

Matthew Towsey

Principal Consultant matthew.towsey@aon.com +44 (0)20 7086 9332

About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

For further information on our capabilities and to learn how we empower results for clients, please visit http://aon.mediaroom.com.

© Aon plc 2017. All rights reserved.

This document and any enclosures or attachments are prepared on the understanding that it is solely for the benefit of the addressee(s). Unless we provide express prior written consent, no part of this document should be reproduced, distributed or communicated to anyone else and, in providing this document, we do not accept or assume any responsibility for any other purpose or to anyone other than the addressee(s) of this document.

Notwithstanding the level of skill and care used in conducting due diligence into any organisation that is the subject of a rating in this document, it is not always possible to detect the negligence, fraud, or other misconduct of the organisation being assessed or any weaknesses in that organisation's systems and controls or operations.

This document and any due diligence conducted is based upon information available to us at the date of this document and takes no account of subsequent developments. In preparing this document we may have relied upon data supplied to us by third parties (including those that are the subject of due diligence) and therefore no warranty or guarantee of accuracy or completeness is provided. We cannot be held accountable for any error, omission or misrepresentation of any data provided to us by third parties (including those that are the subject of due diligence). This document is not intended by us to form a basis of any decision by any third party to do or omit to do anything.

Any opinions or assumptions in this document have been derived by us through a blend of economic theory, historical analysis and/or other sources. Any opinion or assumption may contain elements of subjective judgement and are not intended to imply, nor should be interpreted as conveying, any form of guarantee or assurance by us of any future performance. Views are derived from our research process and it should be noted in particular that we can not research legal, regulatory, administrative or accounting procedures and accordingly make no warranty and accept no responsibility for consequences arising from relying on this document in this regard.

Calculations may be derived from our proprietary models in use at that time. Models may be based on historical analysis of data and other methodologies and we may have incorporated their subjective judgement to complement such data as is available. It should be noted that models may change over time and they should not be relied upon to capture future uncertainty or events.

Aon Hewitt Limited is authorised and regulated by the Financial Conduct Authority. Registered in England & Wales. Registered No: 4396810.

Registered Office: The Aon Centre The Leadenhall Building 122 Leadenhall Street London EC3V 4AN

Copyright © 2017 Aon plc

aon.com

