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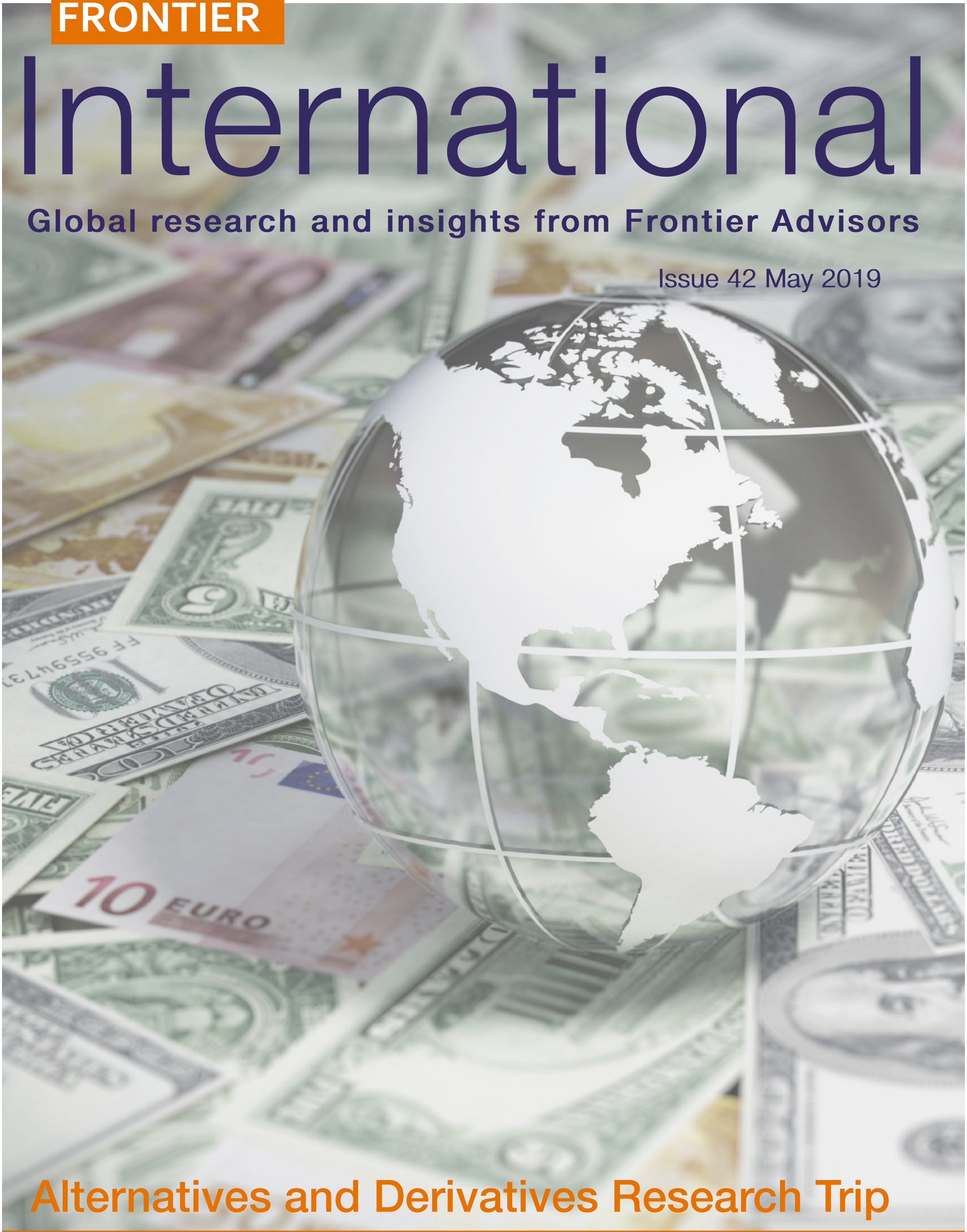

Alternatives and Derivatives Research Trip

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Frontier regularly conducts international research trips to observe and understand more about international trends and to meet and evaluate, first hand, a range of fund managers and products.

In conjunction with insights we share with our Global Investment Research Alliance partners, these observations feed into our extensive international research library.

This report provides a high-level assessment on the key areas and observations unearthed during this recent Alternatives and Derivatives research trip. We would be pleased to meet with you in person to provide further detail on these observations.

AUTHOR

Michael Sommers

Principal Consultant, Head of Alternatives and Derivatives

Michael Sommers is the head of Alternatives and Derivatives research. He undertakes manager research of liquid and illiquid alternatives strategies as well as derivative strategies, including providing specialist advice for these areas to clients. Michael also provides risk management and generalist consulting advice. Prior to Frontier, Michael worked in London for seven years in a number of trading floor based senior risk management roles at CIBC, Lloyds and HBOS. His roles involved advising on the risk and performance characteristics of diverse portfolios and investment strategies. Prior to this, Michael worked in credit risk modelling at ANZ in Melbourne. Michael holds a Bachelor of Commerce with majors in Actuarial Studies and Finance (including First Class Honours in Finance), a Bachelor of Science and a Master of Applied Finance.

AUTHOR

Marcus Nelson

Consultant

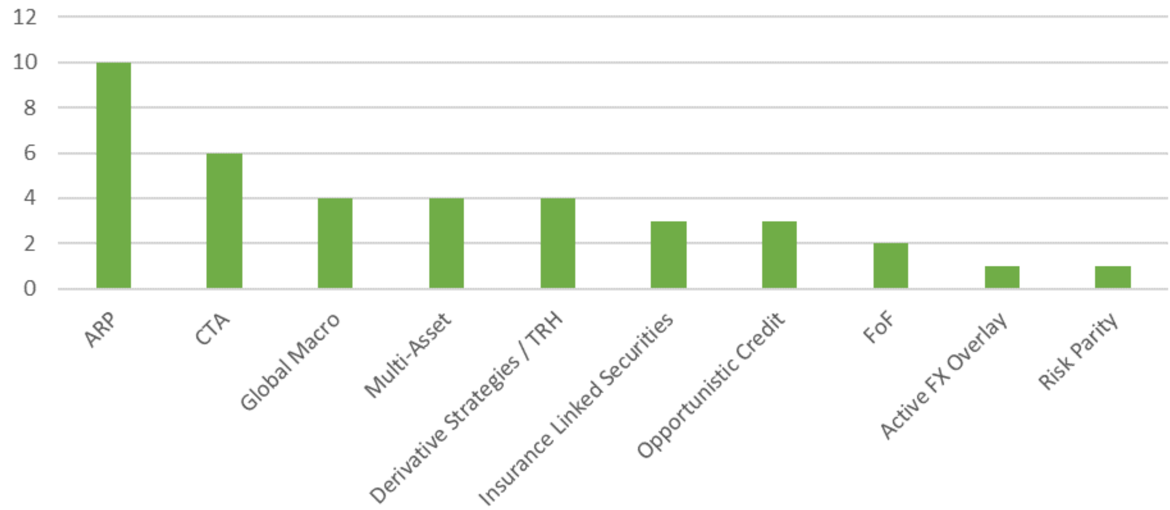
Marcus Nelson joined Frontier in 2017 as a Consultant. Marcus is a member of the Quantitative Solutions Group and the Alternatives and Derivative Strategies team. His responsibilities cover assisting in the development of quantitative tools for clients and the design of analytical modules on Frontier’s Partners Platform. Marcus is also responsible for investment and manager research focusing on absolute return strategies and currency strategies. Prior to joining Frontier, Marcus spent six years at Kaiser Trading Group. During this period he worked in both technical and client facing roles across execution trading, investment research and risk management. Prior to this, Marcus spent two years at Ernst & Young. He holds a Bachelor of Commerce (majoring in Finance and Accounting) from the University of Melbourne, is a CAIA Charterholder has recently passed the CFA level 3 exam.

Trip themes

The Alternatives and Derivatives (A&D) Team at Frontier recently completed an international research trip that involved 38 fund manager meetings in the United Kingdom and America. These trips are essential for our due-diligence of managers since it affords us the opportunity to meet in person with investment and research team members to observe the group dynamic or as individuals. Frontier also met new managers and covered strategies to help identify new ideas.

The meetings covered the full spectrum of Alternatives and Derivatives (A&D) managers, with a tilt to cross-asset strategies including Alternative Risk Premia, CTA, Global Macro and Multi-Asset strategies. The past year has been challenging for a number of alternative strategies, and an objective of this trip was to further our investigation into the underlying reasons for strategy and individual manager performance, as part of testing our ongoing conviction, and to understand how individual managers had responded. In this paper, we cover key takeaways from the trip and what this means for investors.

Chart 1: Meeting summary



Alternative Risk Premia (ARP) strategies

Alternative Risk Premia (ARP) strategies are systematic strategies which seek to profit in a market-neutral manner from observed risk premia such as carry, value and momentum. 2018 was a very challenging year for the ARP industry as performance suffered amongst most managers. Broadly, the key drivers of losses during the year were:

- short volatility strategies from the spike in the Volatility Index (VIX) during early February 2018 (this market move in VIX[1], colloquially referred to as the "volpocalypse", equated to a 20 standard deviation spike in the VIX);
- losses in trend strategies from the rapid market falls in October, for which managers were not well placed;
- ongoing losses in equity value premia through the year; and
- breakdown in long-standing correlation relationships. For example, historically, equity quality can be a good diversifier to losses from equity value. In 2018, and continuing in 2019, this diversifying relationship has broken down.

We have devoted considerable time during the first half of 2019 to understand the loss drivers, whether these were unexpected or consistent with the strategies and the research underpinning them, and importantly, whether this shakes our conviction in alternative risk premia as suitable strategies for investors to consider for their liquid alternatives portfolios.

Our analysis has involved deep-dive analysis down to the risk premia sleeve level (e.g. equity value) to better identify the key drivers of losses. Importantly, given this was done across a large cohort of managers, we were able to identify common themes.

The growth in the industry has seen the number of managers increase strongly year on year. After a period of relatively stable positive returns for the industry, 2018 witnessed a large increase in the dispersion between our monitored manager universe; this spread across managers was 30% (volatility normalised[2] to 10%).

We have grown concerned with the quality of some of the new entrants into the industry (the key concerns being an academic approach to risk premia expression and portfolio construction – for example, assuming long-term correlation dynamics are appropriate for premia sizing during portfolio construction which, in our view, ignores the loss-additivity which can occur over short periods, especially during market stresses). However, while some new entrants suffered when properly tested for the first time since their relatively recent inception, it was some long standing and well-known names in the industry which suffered the largest losses.

[1]VIX is a measure (tradeable by futures or ETFs) of the market's expectation of future S&P 500 volatility

[2]Normalisation of returns to a particular volatility level involves scaling monthly returns above cash such that the standard deviation of these returns equals the pre-specified normalized volatility level (e.g. 10%). By normalizing returns, we are ensuring a fairer comparison of return streams of different managers and strategies. For example, if one manager lost 5% and another 10%, but the standard deviation of returns for the 10% loss was 4x the standard deviation of the 5% manager, then this means that the 5% loss was achieved with far lower risk being taken which makes this loss higher than expected and indeed worse than the 10% manager. Normalising to the same volatility therefore allows an fairer comparison of the two managers.

We used our trip to continue our post-mortem with each manager and to focus on how these managers were responding to the losses. We particularly focussed on any updates to research, whether the manager had demonstrated appropriate curiosity of the losses to revisit their own convictions in different risk premia sleeves, and, given these meetings were in person, to observe how researchers were reacting to a period of high pressure from a poor performing period. Several managers had bounced back materially since the 2018 losses and so we also sought to detect whether this recent strong performance (coinciding with strong equity markets) had led to any complacency by managers who may see less of a pressing need to critique their performance of 2018.

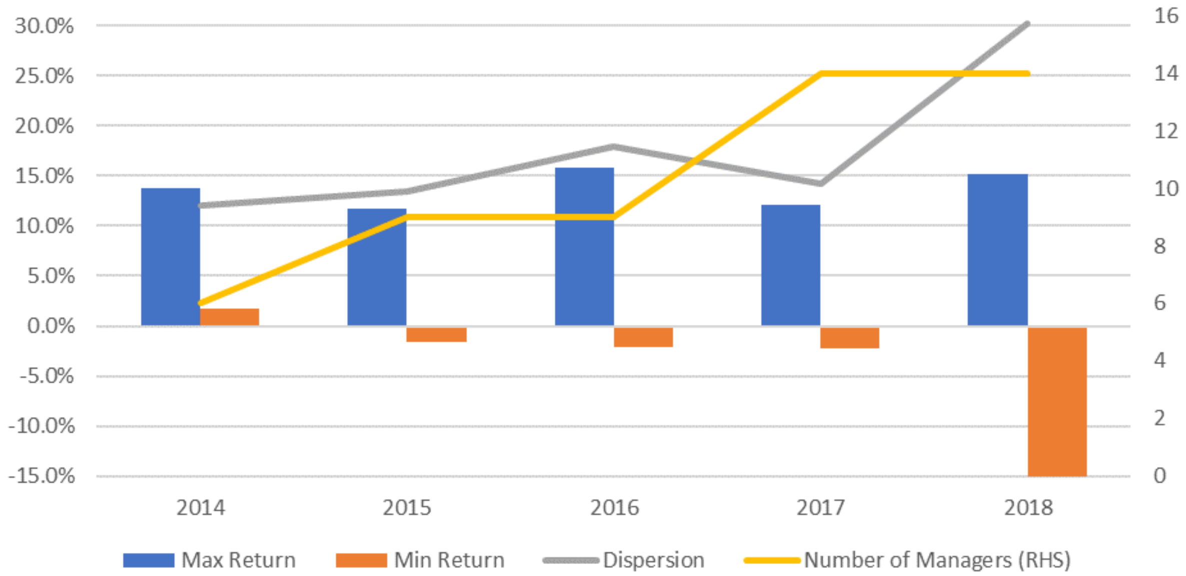
For ARP strategies, diversification amongst return factors is a fundamental premise, but a key observation from our trip was that successful execution requires this to be reflected in portfolio construction and realised returns. In the lead-up to each meeting, we sourced a monthly return series for each alternative risk premia sleeve. This analysis was invaluable when discussing risk/return drivers with the managers during our onsite meetings, allowing us to test the managers' granular level of knowledge of their product.

In one meeting, it was clear that the manager was not across the finer details of the loss drivers which was disappointing but also very instructive about the dedicated focus of this manager to ARP.

In other meetings, this analysis drove the conversation to discuss the impact that equity value and short volatility had on overall portfolio returns in 2018. Managers we met with that performed above the median in 2018 also had exposure to these factors but could demonstrate that these premia were sized appropriately relative to other return sources. In contrast, two high profile managers that struggled with value believed that these premia were correctly sized given the risk is compensated by returns over a 15+ year back test. In one meeting, the lack of appreciation for investors' time horizons was clear (investors are looking at these investments with a 3-5 year investment horizon which is shorter than the 10-20+ year horizon over which these premia are studied). Specifically, the downside potential of these individual premia over shorter periods can erode many years of good performance, as we have seen with some of the most established managers in the industry.

The research trip confirmed our preference for managers that have demonstrated realised track records in excess of three years, with well bedded down processes, a focus on downside awareness during portfolio construction and investment teams that focus primarily on ARP rather than a sum of parts approach from elsewhere in the business. Given the systematic nature and mean-variance based portfolio construction many managers employ, the temptation to tinker with risk allocations could lower our conviction in the manager's approach if we view it as an ill-thought through response to recent loss experience.

Chart 2: ARP universe



Source: eVestment, Frontier. Data to 31 December 2018

Reaffirming our conviction in ARP

The onsite meetings were part of our ongoing review of ARP as a strategy. We concluded the following.

- There have been many periods historically where the cohort of ARP managers outperformed MSCI World on a risk adjusted basis.
- 2018 was a poor year but within statistical bounds of expectations.
    - The losses for short volatility were consistent with loss expectations for such a large move in the VIX.
    - The losses from equity value were within expected bounds for periodic moves (i.e. there weren't any rapid large losses but instead a progressive cumulative loss over the year) but the sustained nature of this underperformance over such a long period should call into question the conviction in this single premium.
    - The small loss in Q4 during a period of rapid market moves (i.e. equities were down 15% for the quarter) highlighted the benefit of diversification across premia - this quarter had a similar return profile to previous short-lived market stresses (e.g. Q3 2015, Jan 2016).
- Portfolio construction is critical, especially the sizing of premia which can become loss additive during short bursts of market stress.
- At the manager level, we reaffirmed our preference for managers who combine academic rigour with market awareness.
- The dispersion of returns also highlighted the heterogeneity of ARP strategies, and the critical importance of manager due-diligence.

Overall, we reaffirmed our view that Alternative Risk Premia remains appropriate for investors. The key reasons for inclusion are:

- Good absolute return potential for risk taken;
- Scalable returns based on desired volatility;
- Diversification;
- High liquidity; and
- Low fees.

We see ARP forming the core of an investor's liquid alternatives portfolio, noting it will also reduce the overall net fee for the sector to allow allocation to more expensive but higher returning strategies (e.g. macro). One key change for ARP was a reduction in our Sharpe Ratio expectations to reflect updated performance experience. We also advise investors that "looking under the hood" of the manager's strategy is crucial given that there is a range of implementation approaches to alternative risk premia.

This is especially true when considering how to combine different managers together within ARP and with other strategies (e.g. CTAs or macro).

ARP manager selection

We have seen many managers trying to enter the Australian market using fees as the key tool to undercut peers to gain traction. Often these track records are simulated and despite the low fees, these managers are generally less compelling to us due to relative weaknesses in the investment process. In the current low volatility environment, strategies that can demonstrate their ability to meet the product return targets, with true diversification to the broader portfolio, are prioritised.

As such, we are focussed on value for money rather than lowest cost in this space. We also hold a preference for managers that have stable investment processes and well-resourced teams that are dedicated to managing the ARP product as a primary focus. We continue to work with investors to help them understand the underlying return sleeves that are driving performance and ensure that these remain in line with expectations.

CTAs / Trend strategies

Commodity Trading Advisors (CTAs) are strategies which seek to profit from trends in different markets within asset classes. The strategy will take a long position in a market which is trending upwards with the size of that long position increasing with the strength of the trend. The strategy will also take a short position in a market when it is in a downward trend and again the size of the short position will increase as the strength of the downward trend increases. Within the CTA strategy, we have seen divergent manager performance over the past five years, with the bulk of the industry generating low single digit performance. This is well below expectations. Managers that have achieved net Sharpe ratios >0.5x have broadly done so in two ways – technology and market selection.

Similar to ARP, we also performed deep-dive analysis at the start of this year and continued this on our trip. CTAs is a more mature, long-standing strategy than ARP, although the lower-fee pure trend offerings are a newer feature of the market. Over the past year, we have seen a divergence in performance between these lower fee offerings and their higher fee flagship cousins.

A key observation is that CTAs need sustained trends to make money, and these sustained trends have not occurred for many years.

For a CTA to make money, trends can be both up and down but the size of return in up markets tends to be lower as up trends are not usually correlated in nature. In comparison, CTAs experience strongest returns where there are correlated moves experienced across markets during a prolonged market stress. We also note that CTAs have not had the benefit of a sustained drawdown in equities of more than 10% over a 6-month horizon since 2011.

CTAs are particularly attractive for their ability to perform in down trending equity markets. A core question this recent period has raised for us is whether this rationale to get a strong return in a prolonged downturn (not necessarily a 2008 period but a 2000-2002 period) is enough to invest through the underwhelming (but often volatile) years for CTAs. This is the key question for investors if deciding to allocate to a CTA.

A further question is what type of CTA. Some CTAs have started reducing the allocation to pure trend factors within their strategy (in many ways, this is a business decision to diversify their returns streams) while others are adopting new methods of incorporating price moves (e.g. Machine Learning) or alternative markets. This can improve returns in environments with limited trends, but may reduce the pay-off during a sustained trend environment. We discuss the alternative methods in the following section.

Technology & alternative markets

Each trip we visit both existing rated and new managers, and for the former it highlights the ongoing investment made by CTA managers in internal research tools and techniques to enhance the investment process and philosophy. Notably, we have seen established managers within the CTA space effectively go back to the drawing board with their investment approaches, relying more on technology by incorporating techniques such as Machine Learning into their investment approach to use fundamental and price data to predict market direction.

These approaches have generated strong returns in a market environment where more traditional trend identification approaches have not worked (e.g. price based moving average crossover style, which is a directional trading strategy where a buy signal is initiated if the market price trades above a medium to long-term average price (and vice versa)). It remains to be seen how non-traditional strategies will perform in sustained equity market drawdowns given many of these strategies have evolved over recent years where market volatility has been more benign.

Alternative markets refer to markets that historically have not been found in typical CTA portfolios – less liquid commodity markets (I.e. German Power, Newcastle Coal), Credit Default Swaps and Interest Rate Swaps. These products cannot all be traded electronically, and specialist execution traders are often required. Often these traders will not travel internationally like many portfolio managers do, therefore meeting with these traders onsite provides an opportunity to assess how well they consider liquidity and transaction costs in implementing the investment strategy.

In terms of overall performance, managers that implement the same trend models across both the standard markets and alternative markets have delivered higher Sharpe ratios with the latter. This dispersion has seen other established managers enter the space with competing “Alternative Markets” products which leads us to question whether these returns will still persist in the future as more managers enter this less liquid space and trades become more crowded.

What this means for a CTA allocation

Both of these approaches aim to improve the overall return achievable in normal market conditions, but somewhat cloud the traditional and key role of CTAs within the portfolio, as they may impact on return potential during sustained market falls.

Both of these approaches have been successfully raising assets at higher fee structures that are more reminiscent of traditional hedge fund strategies. For clients with shorter investment horizons, higher return targets, less willingness to invest in the lumpier return profile of traditional CTAs and have lower fee sensitivities, we believe both of these approaches are worthy of further consideration.

Insurance Linked Securities

Insurance Linked Securities (ILS) strategies are strategies which earn a return from the premiums paid on insurance contracts for weather-related (e.g. hurricanes) and other types of catastrophes (e.g. earthquakes); these catastrophe types are referred to as "perils". The strategies will lose money whenever a peril occurs with the size of that loss depending on the severity of the event. ILS strategies are usually diversified across regions (e.g. providing insurance for hurricane damage across different states like Florida, Texas and New York) and also perils (e.g. an ILS strategy will diversify its exposure to hurricanes and earthquakes as well as bushfires). This diversification helps to ensure that no one single event can lead to a very large loss for the strategy.

Frontier has rated a number of strategies in this space over recent years and clients are often willing to allocate a higher proportion of fee budgets to this area due to strategy performance not being driven by fundamental economic factors and, therefore, higher diversification benefits to the broader portfolio.

Performance in the industry in 2017 and 2018 has been lower than target due to losses from both hurricane events and wildfire losses. Discussions during our onsite meetings were centred around expected loss modelling for these managers and subsequently what realised losses were in the portfolio following a claim event. Most managers will use vendor models[3] as a baseline and then make adjustments for where they believe the risk is not fully captured in the model.

[3]Vendor models are industry-standard models which provide an industry-accepted view of the risk to a portfolio from a particular peril. The statistical models and the inputs to these models are transparent to ensure all market participants have access to the same outputs. Each manager will usually enhance these models with their own views of the inputs. For example, an assumption around the potential number of hurricanes in a single year where the manager may assume that the number of hurricanes will be higher than that assumed by the vendor.

Machine learning

An interesting enhancement to this traditional approach was a manager that was using Machine Learning to enhance its investment process. We see many examples of managers incorporating Machine learning techniques in the CTA/ARP space, however, this was a tangible example of how these techniques could be incorporated in the ILS process, without being the driver of the process. The manager in question had invested in a satellite imagery start-up and was using machine learning to identify glass pool enclosures that covered residential swimming pools. Residents would often not disclose that these enclosures existed on their properties due to higher premiums they would be required to pay.

In a hurricane, these enclosures would lift up and cause damage to neighbouring properties that would cause higher losses on a policy than reflected in standard vendor modelling, which allowed the manager to better assess the potential risk in the portfolio.

There are several high-quality managers in this space, however we view positively those who are investing in technology to enhance their strategies. We believe this has the potential to enhance future returns, primarily due to the resulting better understanding of the loss potential within portfolios.

The final word..

2018 was a challenging year for many alternative investment strategies and continues a recent trend of underperformance within the space. Within ARP, we maintain our conviction in this strategy but any continued underperformance, or performance inconsistent with expectations, will rightly call this into question. The number of strategies continues to expand and the options available to investors are anything but homogenous. For investors, manager selection and understanding the underlying return drivers within each strategy remains key.

Given the dispersion in outcomes, it is difficult to see the number of managers within the universe remaining this high and we believe 5-10 strategies will shape as the dominant managers within the market as track records begin to establish themselves.

On a forward-looking basis we also believe technology and innovation will continue to differentiate top and bottom quartile managers across a range of strategies including CTAs and ILS, with easily replicated and commoditised approaches struggling to meet the often high return expectations set by managers.