THE Frontier Line

Thought Leadership and insights from Frontier Advisors

Issue 162 July 2020

Relative Value
Multi-Asset
Hit Rate Analysis

FRONTIER ADVISORS

25 years

Frontier Advisors

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Frontier's purpose is to enable our clients to generate superior investment and business outcomes through knowledge sharing, customisation, client empowering technology and an alignment and focus unconstrained by product or manager conflict.

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Michael Sommers is a Principal Consultant having joined Frontier in 2013 and is the head of Alternatives and Derivatives. His responsibilities include undertaking 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 joining 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. He was also involved in regulatory and risk governance related work at a senior level. Prior to working in London, 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 degree from Macquarie University.

Executive summary

Until a few years' ago, multi-asset managers were consistently delivering stable and reliable returns with good downside awareness. However, from 2018 we began to notice a shift towards persistent underperformance in relative-value multi-asset managers that was outside of expectations. This prompted us to investigate the cause of this under performance.

We have spent the past two years surveying the various relative-value multi-asset managers within the universe that Frontier covers for detailed performance attribution data, including both rated and unrated managers. Our research into the sector has evolved during this time and resulted in a deeper understanding of what drives manager performance and the elements that contribute to a strategy being most likely to achieve its objectives.

Our analysis revealed that performance challenges were sector wide, rather than manager specific, and somewhat related to the market environment. However, there are some key elements that demonstrate manager skill and we believe that by better understanding the specific performance drivers that lead to success, an investor is better placed to select a manager that is more likely to deliver on its target.

We believe that the performance of multi-asset managers during the COVID-19 crisis in Q1 2020 has helped re-establish the investment credentials of multi-asset strategies, which had fallen out of favour. Relative value multi-asset strategies were among the best performers in Q1 2020, especially compared to equities and other liquid alternatives, with most delivering a slight negative return. Multi-asset strategies also provided valuable liquidity at a time when many investors needed it. Ironically, despite being good performers during the recent crisis, many relative value managers were redeemed, at least in part, thanks to their good liquidity and the fact that investors would not lock in major losses by selling. Considering these valuable characteristics, we believe that positions in many multi-asset managers will be re-instated once markets normalise and investors' liquidity needs are less urgent. In addition, we believe that having an allocation to a discretionary manager in a portfolio can be a useful complement to a suite of systematic strategies.

For investors that hold multi-asset managers in their portfolios, or who are considering making an allocation, we believe that this additional level of due diligence is essential. With our extensive survey data, Frontier is well-placed to assist investors in evaluating their existing manager line-up, or assessing prospective managers for inclusion in a portfolio.

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What is multi-asset?

For investors that prefer low cost, less complex, liquid strategies that are expected to provide some diversification and reasonable returns (in the order of Cash + 4-6% p.a.), multi-asset strategies can be a good solution.

Multi-asset strategies invest across asset classes and are essentially discretionary managers that have fundamentally-driven, top down, macro themed views.

Multi-asset strategies exist across a spectrum and can include:

- Long-only directional positions in assets, typically involving buying an index in an asset class that a manager believes will perform well
  - By being long-only, this exposes the portfolio to the market moves of the asset (or the asset class beta[1])
- Relative value trades only, which involves buying an investment in an asset class a manager believes will perform well and funding the position by selling an investment in an asset class (usually the same asset class) that it believes will perform poorly. For example, if a manager believes that oil prices will increase due to higher economic activity, it might buy the currency of an oil-producing country like Norway, and sell that of an oil-importing country like South Korea
  - In doing this, it reduces the beta or overall market exposure for the asset class (i.e. if an investor buys 10 year bonds and sells the same value of 5 year bonds, it does not matter if 10 year bonds fall in value, what really matters is if 10 year bonds fall less than 5 year bonds, in which case the investor makes money)
- A mix of directional and relative-value trades

Our research focussed on a subset of relative value managers within the broader multi-asset universe. Relative value managers typically:

- Focus on a set of 20-30 trade ideas that express their macro view, for example if the manager believes that country A will perform better than country B
- Can go long and short, for example by buying country A's currency and funding the purchase by selling country B's currency
- Structure portfolios to generate small incremental returns from each idea, rather than placing large bets on a few ideas
- Have no set asset allocations and do not tend to focus on specific asset classes

Frontier's clients typically include multi-asset strategies in their portfolio as a less complex and accessible liquid alternative allocation or, increasingly for large investors, as an information sharing co-investment or partnership.

Among the broad universe of multi-asset managers that Frontier tracks, both rated and unrated, those multi asset managers which vary their allocations to directional and relative value style trades have generally performed consistent with expectations over the long term (typically 10-15 years), delivering their stated cash plus 4-6% p.a. returns. In recent years, however, the returns from many relative-value focussed multi-asset managers have been disappointing. Many managers have struggled for some time to achieve their return objectives of cash plus 4-6% p.a. In order to achieve these return targets, managers will typically target ex-ante volatility at 4-8% and have a target Sharpe ratio of 0.6-0.7x.[2 3]

[1] The beta (or beta coefficient) of an investment is a measure of the risk arising from exposure to general market movements, as opposed to idiosyncratic factors. It is the risk of an investment relative to the market, as opposed to an investment's own volatility.

[2] Ex-ante volatility - the forward-looking portfolio volatility calculated from current assets weights and asset covariance estimates. It is the level of expected risk that a manager builds into its portfolio construction.

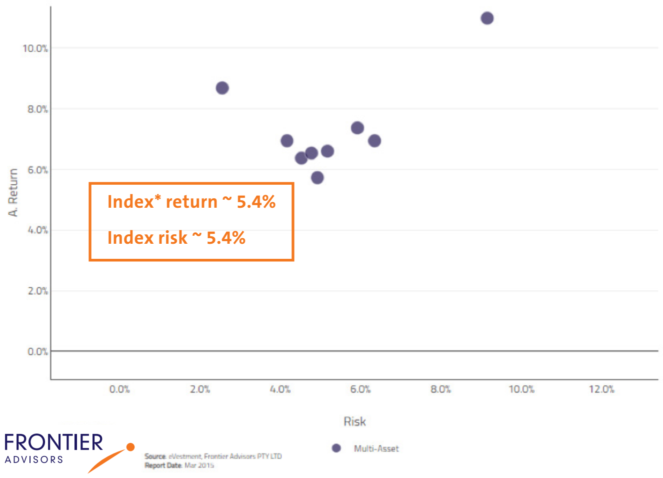
[3] Sharpe ratio – a measure of risk-adjusted return. The excess return you receive for the extra volatility you endure for holding a riskier asset, essentially the additional return per unit of additional risk an investor takes.

$$\textit{Sharpe ratio} = \frac{R_x - R_f}{\sigma_x}$$

Rx = expected return of investment
Rf = risk-free rate
x = standard deviation of investment

Chart 1 and Chart 2 (below) illustrate how both the returns and realised risk of multi-asset managers (both directional and relative-value) have deteriorated in the past five years, when compared to the five years leading up to 2015. Ex-ante volatility data (shown in Chart 3) has been more challenging to collate due to different approaches from different managers (e.g. the rolling time period provided, or monthly vs quarterly data) and the length of the time series provided. Nonetheless, Chart 3 illustrates a declining average ex-ante volatility amongst the managers who provided data.

Chart 1 - Five Year Multi-Asset Peer Comparison to March 2015

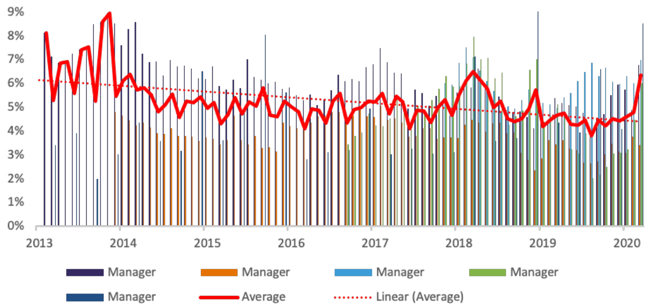


*Index is 50% Wilshire Liquid Alternative Relative Value Index and 50% manager universe

Chart 2 – Five Year Multi-Asset Peer Comparison to March 2020

*Index is 50% Wilshire Liquid Alternative Relative Value Index and 50% manager universe

Chart 3 – Ex-ante expected volatility of selected relative value managers



Source: Managers, Frontier

Multi-asset strategies often have their returns compared to those of equities, as the long term return target of many strategies suggests returns close to those of equities but with much lower volatility. Charts 4 and 5 (shown on page 6) show how a universe of relative value managers perform compared to equities and a typical "Balanced" 60/40 portfolio (which is also sometimes used as a reference point) over rolling one year periods. [4]

Relative value managers tend to outperform both equities and a balanced portfolio in equity down markets but underperform during equity bull markets. Recent strong equity markets have often made relative value managers appear relatively unattractive, yet relative value managers had much smaller losses during 2018 when equity markets struggled (down 2.4% vs 10.4% for the MSCI World Price Index in USD). In 2008, during the depths of the GFC, relative-value returns series showed a much more resilient drawdown profile (down 6.4% compared to equity markets which lost 42.1%). More recently, during the COVID-19 market crisis, relative value managers lost an average of 1.4% in Q1 2020 compared to losses of 21.4% for equities.

Relative value managers also tend to have lower betas to equity markets compared to a "Balanced" 60/40 portfolio. This equity beta profile is also dynamic in nature which can reflect managers reducing sensitivity to equity markets if the managers have a view that equity markets could experience range bound market moves or market falls. Relative value managers can also benefit if certain sectors fall by less than others (technology relative to transport for example).

[4] Universe created from equally-weighted returns series of strategies we consider to be predominantly relative-value focussed.

Chart 4 – Relative Value vs 60/40 vs Equities One Year Rolling Returns to March 2020

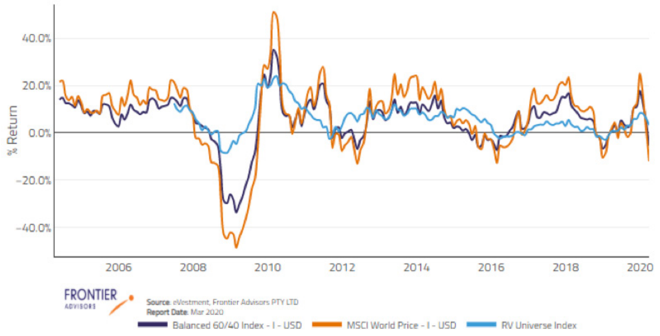
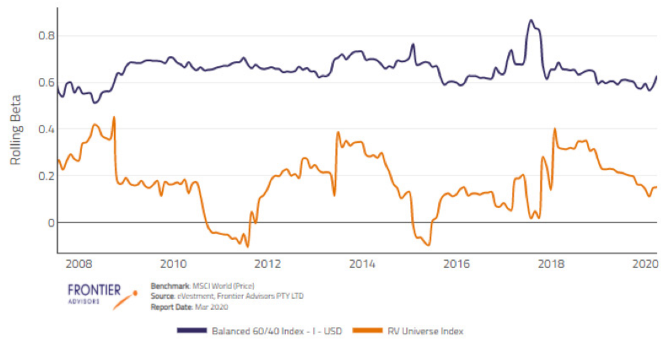
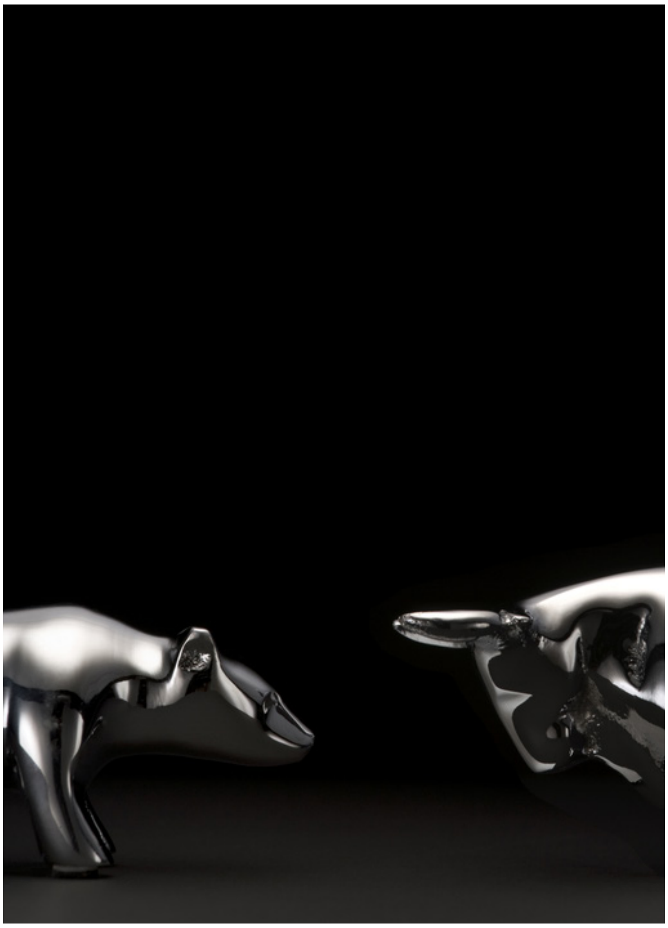


Chart 5 – Relative Value & 60/40 One Year Beta vs MSCI World Price to March 2020



Whilst relative value multi-asset managers performed favourably during the recent COVID-19 market turmoil, it does not negate the long period of lacklustre returns leading up to now. Frontier has researched what has been driving the poor returns of many relative value multi-asset managers and tried to determine if the problems are manager specific or sector wide. We considered whether the diminished performance is a result of many new managers entering the market and competing away ideas. However, we do not believe this is the case, as multi-asset managers operate in large liquid markets and therefore should have sufficient liquidity for many players.

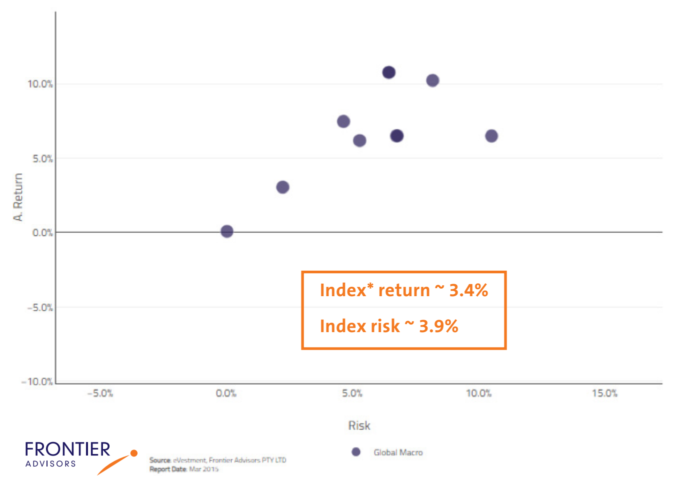


Market environment

It could be that the market environment has simply not been supportive of macro-oriented strategies more broadly.

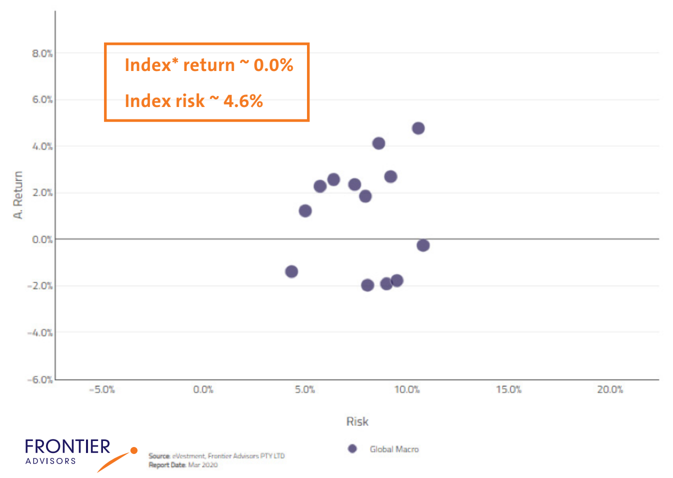
The same performance discrepancy is evident in more traditional global macro strategies as well, with average returns reducing over the past five years compared to the previous five years, and risk increasing. We note that recent returns are skewed by the sell-off in Q1 2020, but the same story holds for the five years to December 2019 as well.

Chart 6 – Global Macro five year comparison to March 2015



*Index is Barclay Global Macro Index

Chart 7 - Global Macro five year comparison to March 2020



*Index is Barclay Global Macro Index

When we reflect on the macro-economic environment of the past 10 years, we can distinguish between two distinct regimes:

- Post-GFC and leading up to 2014, we saw a QE driven recovery which provided clear opportunities to macro-oriented managers
- Since 2015, stocks have looked expensive, multi-asset and macro managers have been more bearish and therefore did not benefit from the continued late cycle rise in markets that extended to early 2020

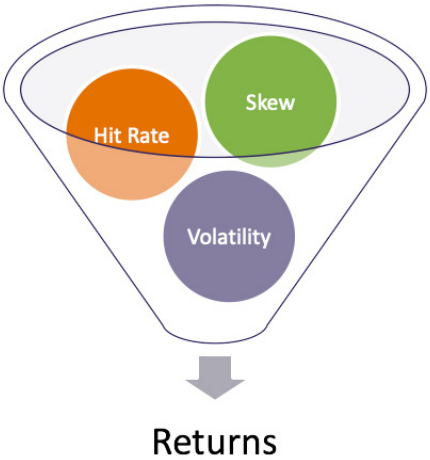
With less market certainty and a lack of dispersion both across and within markets, it makes it harder for managers to avail themselves of more impactful macro opportunities. Also, not only was there little dispersion, but also not much movement when it did occur (i.e. less cross-asset volatility). These dynamics continued to have an impact on overall return outcomes until the start of the COVID19 crisis in the week beginning February 24 2020.

Whilst individual manager performance may have been lacklustre, we believe that multi-asset managers have still provided valuable diversification in equity-dominant portfolios and downside protection during equity drawdowns, notably in Q1 2020, but also in Q4 2018, 2011 (Eurozone crisis) and China-driven issues in Q3 2015 and Q1 2016.

What do multi-asset managers need to deliver returns?

In order to achieve their target returns, multi-asset managers need sufficient:

- Hit rate (the number of winning ideas)
- Skew (the extent to which the gains from winning ideas outweigh the losses from losing ideas)
- Volatility (both the amount of ex-ante volatility the manager is building into portfolio construction, but also the amount of volatility realised by the market)



Some managers rely on returns that come from running yield, but this is not an essential ingredient to deliver returns. [5]

We wanted to understand how each of these elements affects the managers in our universe. This level of detailed data is not available on public subscription services, so we surveyed a range of our manager universe (including rated managers, those with formal views and unrated managers). We included managers which are more relative-value in nature but also those which are a mix of relative-value and directional. We asked for quarterly hit rate, skew and ex-ante (i.e. expected) volatility data. Manager responses were mixed, with different managers providing different levels of detail and granularity. Nonetheless, we were able to collate a sufficient number of manager responses into our analysis to illustrate how the multi-asset market has evolved over time.

[5] Running yield – the income derived from investing in a security. Calculated as the annual income from an investment divided by the current market price of the security.

Hit rate analysis

The first ingredient of multi-asset manager returns is hit rate, or the percentage of winning ideas.

The more winning ideas a manager has, the more likely it is to achieve its return target. Managers often identify hit rate as the most important element required to achieve their return objectives (although not all positions managers take are weighted equally and this is examined under skew in the following section).

Our analysis has shown that hit rates have trended down over time, with a noticeable dip from late 2015 which impacted the whole sector. This can be seen in Chart 8 and Chart 9 (below) where average hit rates have fallen from 63% in the five years to 2015, to only 54% in the period after 2015.

Anecdotally, we have seen similar deteriorations in hit rates from global macro managers more broadly.

Chart 8 – Hit rates before 2015

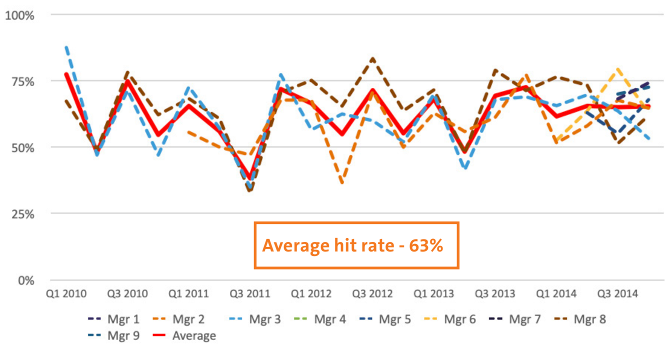
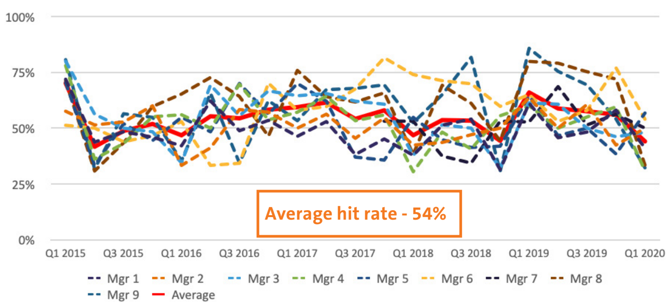


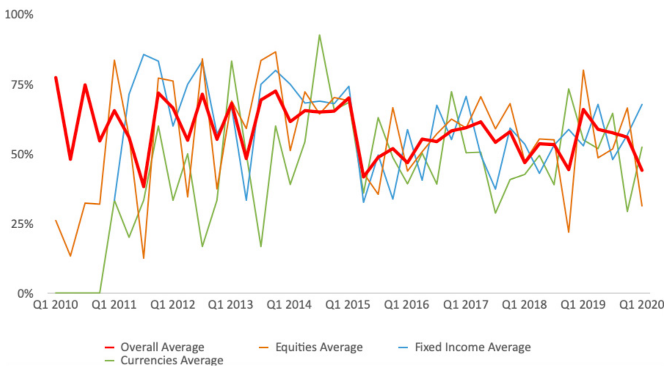
Chart 9 – Hit rates from 2015 to end Q1 2020



Source: Managers, Frontier

In addition to analysing overall manager hit rates, we also examined hit rates at an individual asset class level to see if there was a particular asset class driving the overall lower hit rates. Our research indicated that there is no single asset class driving the change in returns and all asset classes suffered a fall in hit rates over recent times. Chart 10 below shows the average hit rates of the three main asset classes (equities, fixed interest and currencies) that feature in relative value portfolios and that they have all trended down from 2015.

Chart 10 – Hit Rates by asset class 2010 – Q1 2020*



* Overall Average denotes the average hit rate at the manager level, including for those managers who did not disclose to asset class level, and is not limited to equities, fixed income and currencies only.

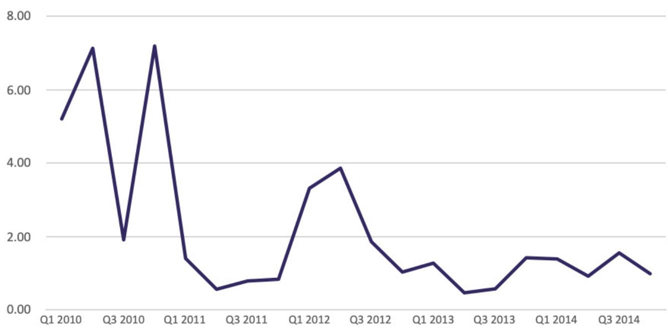
Skew analysis

The second factor that determines multi-asset returns is skew: the ratio of the magnitude of a manager's winning trades compared to the magnitude of its losing trades.

Even if a manager's hit rate is low, if it makes significantly more from its winning trades than it loses from its losing trades, it may still achieve its return target.

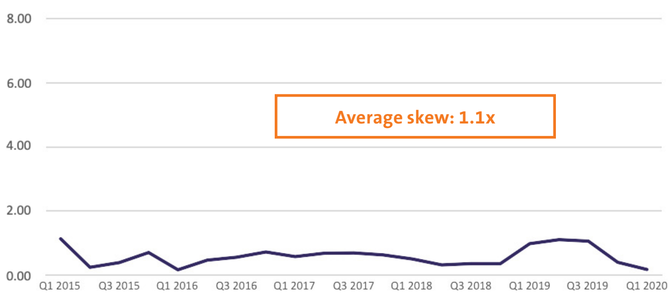
Our research showed that the magnitude of both winning and losing ideas has decreased over time, as has the ratio between them (i.e. the skew). This is no surprise, because as volatility and the spread of outcomes has diminished in many traditional markets such as equities and fixed income, this reduction in the dispersion of underlying parts creates less opportunity for multi-asset managers to add value. On average, winning ideas are still bigger than losing ideas, but the magnitude of both winners and losers has decreased.

Chart 11 – Skew before 2015



Average skew 2010 - 2014: 2.7x
Average skew Q2 2012 - 2014: 1.6x

Chart 12 – Skew from 2015



Source: Managers, Frontier

As Chart 11 and Chart 12 show, the reduction in skew from 2015 is stark, even after removing outlying data points pre Q2 2012. Interestingly, there was a slight uptick in skew in 2019, which has helped deliver improved returns for managers over 2019, but this diminished again in Q1 2020.

Volatility analysis

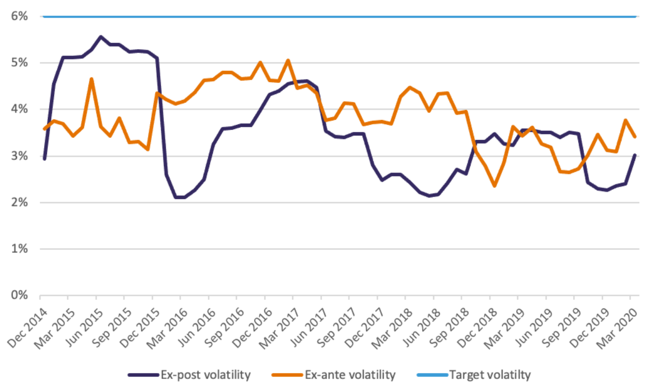
Whilst hit rate and skew are a result of manager skill, realised volatility is somewhat influenced by market conditions.

We distinguish between the level of risk that the manager builds into its portfolio construction (i.e. forward-looking volatility or ex-ante expected volatility) versus the level of risk that the manager realises due to market conditions (ex-post volatility). In our view, managers cannot control the amount of volatility in the market, but they can control how they construct their portfolios. If managers do not take enough risk, they are less likely to achieve their return objectives.

Chart 13 (to the right) illustrates a manager that consistently did not structure its portfolio (ex-ante volatility) to meet its target volatility level of 6.0%. Instead, the strategy had an ex-ante volatility circa 3.5% since 2018. During the benign markets of recent years, the strategy generated an even lower realised volatility, resulting in the manager significantly underperforming its return target. For the Strategy to have reached its target return, the Sharpe ratio would need be in excess of 1.1x. This manager's actual five year Sharpe ratio was materially lower at ~0.1x, which was driven by reduced hit-rates.

The other side of the argument is that a manager that targets a high ex-ante volatility in a low volatility environment may see a large dispersion in returns during a volatility spike. In this case, adherence to sound risk management processes is key and, in our view, highlights the importance of manager due-diligence to confirm that this risk management prudence holds true.

Chart 13 – Manager volatility example



Consequently, investors should be mindful to check that a manager is consistently structuring its portfolio according to its stated process, including prudent risk management, rather than simply relying on favourable market conditions to provide returns and manage risk. The Q1 2020 period was a good test case for a manager's risk management prudence.

Return from yield

There are two components to return – mark-to-market and carry (or income).

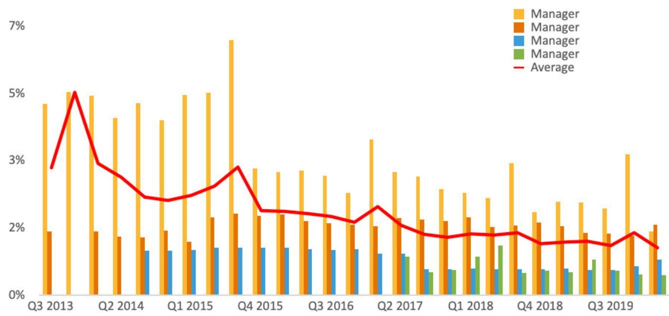
If income is higher, managers do not need to take as much risk to generate the required additional mark-to-market returns. However, if income falls, managers rely more on mark-to-market returns and thus need to take more risk in order to achieve the desired return outcome. When prevailing interest rates are high, managers can get a "free kick" for their returns.

Most managers in our universe do not generate returns from income, however we obtained yield data from the managers that do.

We found only one manager in our universe (yellow in Chart 14) whose overall returns were significantly driven by changes in yield. As interest rates have fallen, the yield has fallen and resulted in lower overall returns for this manager's strategy overall.

However, our research amongst the broader universe found that this phenomenon was unique to this manager and not consistent across the sector.

Chart 14 – Return from yield for selected managers



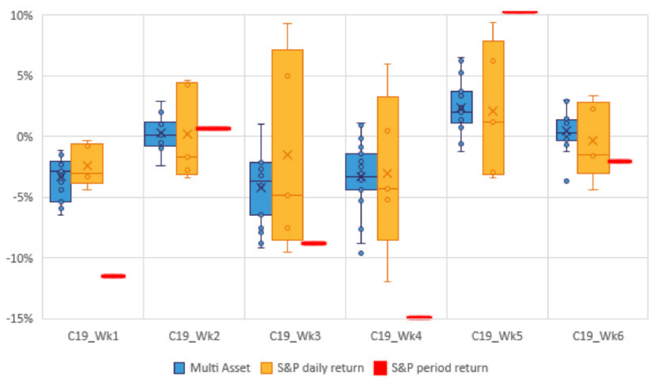
Performance during COVID-19 crisis period

Whilst this research has primarily focussed on longer-term themes that have impacted the performance of relative-value multi-asset managers, it is also important to specifically address this sector's performance during the COVID-19 crisis period.

As we have alluded to in the paper, multi-asset managers generally performed as expected during this time, delivering a return between stocks and bonds.

Frontier surveyed 19 multi-asset managers for their weekly returns for the six most acute weeks of the COVID-19 crisis period and compared the dispersion of returns to that of the S&P 500. As you can see from Chart 15, the returns of multi-asset managers were much more contained than those of equities.

Chart 15 – Multi-asset manager returns vs equities from 24 February 2020 to 3 April 2020



Splitting our universe of multi-asset managers further into relative value only, directional only and mixed managers reveals that relative value only managers provided robust returns, as evidenced in Chart 16:

Chart 16 – Relative Value, Mixed and Directional multi-asset returns vs equities 24 February 2020 to 3 April 2020

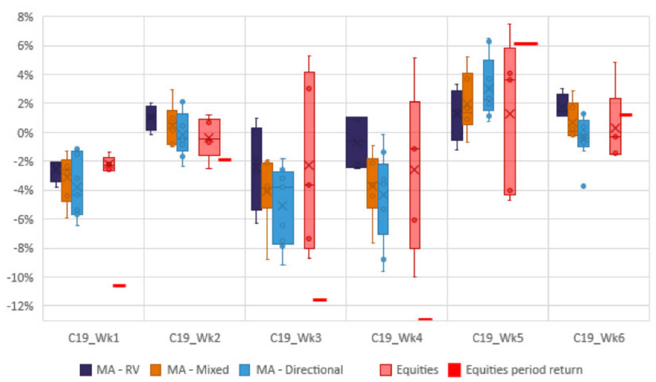
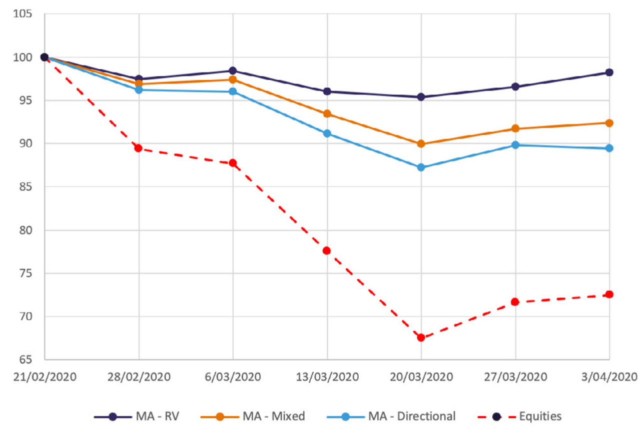


Chart 17 shows the evolution of the performance of each type of Multi Asset manager against equities (average of ASX and MSCI World ex-Aust). The diversification benefits during this stress period are clear with each type of Multi Asset manager experiencing losses materially less than those of equities. As expected, relative value managers suffered smaller losses than mixed Multi Asset which in turn experienced smaller losses than directional Multi Asset managers.

Chart 17 - Evolution of average performance in each week for different types of multi-asset managers



As well as retaining their value, multi-asset managers also retained a high degree of liquidity. Whilst all markets suffered somewhat, the markets in which multi-asset managers tend to trade (mainly futures and currency markets) retained a higher degree of liquidity than most physicals markets.

Ironically, multi-asset managers' robust performance and high liquidity made them prime candidates for redemption, as investors sought fast and cheap liquidity for their broader portfolios. We think that these properties make multi-asset managers useful additions within a whole portfolio and investors that redeemed their multi-asset strategies during the crisis are likely to re-instate them once markets and investors' liquidity needs settle down.

Frontier will also be doing ongoing work into the role that discretionary multi-asset managers can play within liquid alternatives sectors that are increasingly dominated by systematic strategies. The COVID-19 crisis demonstrated that having human insight and intervention is a good counter-balance and diversification from algorithmic strategies which are less able to cope with rapid market changes and unprecedented conditions like we have seen recently.

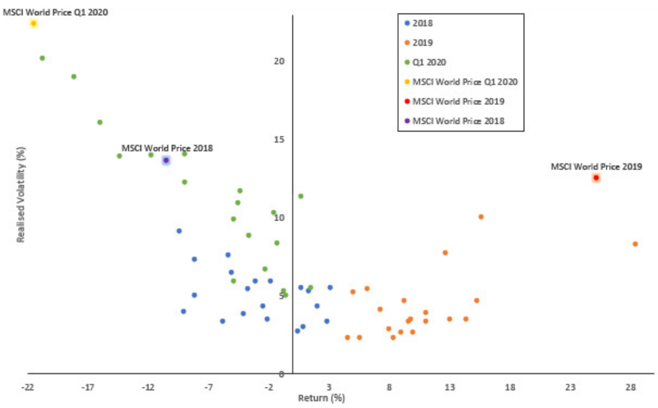
The final word

Our research indicates that we have been in a market environment over the last few years that has not been conducive to multi-asset managers, as our analysis shows that the factors that impact performance have declined across the sector during this time.

Nonetheless, we are seeing some early signs of improvement, notwithstanding the challenging start to 2020. On average:

- Hit rates in 2019 were higher than they were in 2018, thanks to the US Federal Reserve's pivot towards easier monetary policy
- There was a slight uptick in positive skew in 2019
- Managers are being more cognisant of the level of ex-ante volatility being built into their portfolios. Realised volatility was already starting to pick up in 2019 and there has been a spike in volatility in 2020 due to the COVID-19 crisis
- Overall, manager performance in 2019 improved compared to 2018, with most managers in the universe achieving their target returns. Returns in Q1 2020 show that risk has picked up and returns have generally been negative, although the returns of relative-value multi-asset managers have been closer to zero (compared to directional only managers whose returns are more closely linked with equity markets and suffered greater losses). We have illustrated these outcomes in Chart 18 below.

Chart 18 – 2018 vs 2019 vs Q1 2020 risk/returns for multi-asset managers



Regardless of these green shoots, we will need to see a sustained period of strong performance for multi-asset to again become a high conviction allocation. However, the COVID-19 period has certainly reinforced the benefits that an allocation to multi-asset can provide: more resilient returns than equities, good liquidity and a diversified approach from a systematic manager.

The hit rate and ex-ante volatility analysis is a standard part of our due diligence process for our manager universe. It provides an insight into issues which are manager specific, and those which are sector wide. Sourcing this granular data assists us with interrogating managers when we see issues that may impact their ability to achieve their return targets and identify when returns are coming from manager skill or simply from favourable markets.

For investors who already have an exposure to multi-asset managers, Frontier welcomes the opportunity to share our insights on your specific manager line-up.

For those investors who are considering an allocation to multi-asset, please contact your Frontier consultant to discuss the most appropriate manager selection to suit your portfolio's needs and objectives.

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