FULCRUM

Don't Bet The Ranch - Practical Applications

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Executive Summary

In "Don't Bet the Ranch", we explained the importance of jointly focusing on hit ratios, asymmetry and breadth in generating repeatable and attractive risk-adjusted returns without market directionality or persistence exposure to other risk premia.[1] In this follow-up paper, we discuss their practical application, focusing on lessons learned over the last ten years through actual implementation of the philosophy.[2]

Attractive hit ratios can only be reasonably expected if investments are limited to areas in which the manager has an identifiable and persistent edge. We clearly understand where we have advantages and continue to invest in these areas to nurture and broaden them. Over the last ten years, our investment team has achieved a hit ratio of 56%3 and this has been an important driver of our long-term success.

At its core, generating asymmetry requires the creation of option-like pay-offs. This can be achieved by explicitly buying options, investing in cheap, distressed or high growth assets that may trade like options, or by using trading techniques, such as trend-following and stop losses. Through a combination of these methods, we have achieved an asymmetry of 1.[3] over the past decade.

Breadth is ultimately determined by the number of distinct areas in which an edge can be exploited. Over time, we have gradually increased breadth by exploiting opportunities across all liquid asset classes, integrating more time horizons into our investment process and adding additional expertise into the investment team. Our combined use of fundamental and behavioural insights has allowed us to generate more than typical breadth in the portfolio.

For reference, each of these parameters is defined below:

Table 1: Key drivers of risk-adjusted returns

	Performance Driver	Definition	Portfolio Impact
Skill	**Hit Ratio** (quality of ideas)	The percentage of all ideas that result in profits.	More skilful managers will tend to outperform. A 55% hit ratio is high and 60% is outstanding, especially in strategies with low market directionality.
	Asymmetry (implementation skill)	The average gain made from profitable ideas relative to the average loss made from unprofitable ideas. Generating effective asymmetry requires implementation skill.	The best managers introduce significant asymmetry in their returns, even if at the expense of hit ratios. In practice, achieving asymmetry greater than 1.5 is challenging.
Breadth (number of ideas)		The effective number of *uncorrelated* ideas in a year, each of which is sized to generate the same expected portfolio level gain. Breadth is a measure of diversification.	Assuming a constant level of skill, greater breadth is usually beneficial. Diversified portfolios should aim to achieve breadth in excess of 10. In practice, increasing breadth is often associated with falling hit ratios and rising leverage.

1 Don't' Bet The Ranch: Hit Ratios, Asymmetry and Breadth, Fulcrum Asset Management, November 2015
2 There is a direct, theoretical relationship between the expected Sharpe ratio and the expected hit ratio, asymmetry and breadth. In the presence of uncertainty (around the true value for each of these parameters), it is sensible to view the expected Sharpe ratio as an upper limit of what can be achieved.
3 Net of all transaction costs.

Hit Ratios

What are Reasonable Expectations?

Net of transaction costs, the average active investor will have a hit ratio below 50%. In the absence of embedded asymmetry in returns, the average active investor will therefore lose money over time, regardless of breadth. The best, surviving active managers have delivered long term hit ratios that are rarely above 60%. Once we adjust for the likely impact of survivorship biases, we believe it is unreasonable to expect a long term hit ratio much greater than 55%; this is already a sufficiently impressive and challenging target to aim for. This is particularly true for strategies that target higher levels of breadth as it becomes increasingly difficult to maintain profitability as lower conviction ideas are added to the portfolio and uncertainty increases.

Identifying an Edge

Identifying, maintaining and expanding a repeatable edge is difficult, and investments should only be made where there is a reasonable likelihood of possessing an advantage. In our case, that edge lies in the following areas:

1. We are able to understand the present better than consensus by **distilling macro-economic data in a more timely manner.** It is far easier to make money by understanding the present than forecasting the future.

2. We have developed an **armoury of macro-economic models designed to closely resemble those used by policy makers at the world's leading central banks**. These models allow us to better gauge their thoughts and upcoming actions.

3. We are able to identify and trade **short-term dislocations across asset classes**, many of which are ignored by investors focusing on individual asset classes.4 These dislocations typically occur because of behavioural biases exhibited by large numbers of investors, including herding, anchoring and myopic loss aversion (reacting too strongly to short term losses, often at the expense of long-term performance).

4. Over recent years, we have added to our expertise in **medium to long-term thematic investing in equities**. Most investors do not take a thematic approach, instead relying on their ability to select the best individual equities. We follow a broad-based basket approach, capturing the overall segment's dependence on a macro theme, yet minimising single-name risk. These views tend to be related to cyclical sectors, such as commodities, real estate, financials and technology.

We have delivered a hit ratio of 56% over the last 10 years, measured across several hundred ideas. The breadth of ideas is critical as it is much harder to deliver an above average hit ratio as the number of observations rises. Taken to the extreme, a single coin toss using an unbiased coin has a 50% chance of a 100% hit ratio in correctly predicting the outcome. There is obviously no underlying skill involved here. On the other hand, the chance of having a 56% hit ratio measured over 300 coin tosses is close to zero (2%).[5] In such an outcome it is highly likely that the coin is biased or, in the case of investment management, that the manager has exhibited genuine skill. Successfully assessing this skill requires evaluation over a period that contains sufficient underlying breadth in the strategy. Higher breadth strategies can be evaluated over shorter time horizons, while distinguishing between luck and skill is very challenging for low-breadth strategies, a problem that is unfortunately inherent in the industry.

Asymmetry

It is relatively simple to generate asymmetry in a portfolio. Unfortunately, however, most techniques that boost asymmetry come with an associated drawback that depresses the hit ratio, often to such an extent that those gains from asymmetry are entirely wiped out. The key to success is boosting asymmetry while also minimising any negative impact on hit ratios. It is entirely logical to engage in trades where the expected hit ratio is below 50%, so long as the expected asymmetry is sufficiently high to result in a positive expected return. At Fulcrum, **we seek asymmetry in the following ways:**

1. The most direct is **implementing ideas through ownership of options**, with the downside being time decay. It is of crucial importance to only buy options at times when you have a directional view and believe that volatility is under-priced. In practise, it is far more common for investors to use options simply because of loss aversion, where there is a willingness to lose a small amount of premium to generate a lottery-like pay-off. This loss aversion is the primary driver of the volatility risk premium (the tendency of implied volatility embedded in option prices to be higher than that which is subsequently realised) and enables sellers of options to profit handsomely over the long term. Conversely, naïve owners of options are usually unable to offset the long-term drag of time decay.

2. **Identifying assets with high expected returns relative to the asset's volatility** is another way to capture asymmetry. These types of investments are usually contrarian as expected returns typically rise after asset prices decline and volatility rises. Similarly, expected returns typically decrease after asset prices rise and volatility falls. The key insight in these types of trades is to decide whether an estimate of volatility or embedded "margin-of- safety" is the more accurate measure of potential losses.

3. **Investing in areas where uncertainty is particularly elevated,** as tends to be the case for **distressed** or **high-growth assets**, can provide an excellent source of asymmetry that is often overlooked due to investor risk aversion. Like owning options, distressed assets run the risk of losing all their value (a -100% return) but also stand to multiply manifold. Unlike options, they do not have an explicit holding cost. On the other extreme, it is also common for investors to shy away from ultra-high-growth assets (such as biotechnology and commodity exploration companies), where valuations often

4 Our short term ideas typically last for one to three months, medium term for three to twelve months and long term for greater than twelve months.
5 Binomial distribution (=BINOM.DIST.RANGE(300, 50%, 168, 300)).

appear extremely stretched, but option-like payoffs occur much more frequently than in the more stable utilities or consumer staples sectors. Compounding the psychological biases that reduce demand for such investments, many institutional investors are explicitly constrained in their ability to access this asymmetry, due to market capitalisation or credit rating restrictions. In all these cases, fundamental research and sensible position sizing can take advantage of these biases in a low risk and highly profitable manner.

4. **Risk management techniques** can also be used to create asymmetry. For example, asymmetry is the primary driver of returns from trend-following strategies, which cut losers quickly and allow winners to run. While simple, this strategy exploits another persistent behavioural bias that most discretionary investors suffer from – a tendency to hold on to losing investments for too long and cut winning investments prematurely. In similar fashion, appropriately selected stop-losses (i.e. levels that are consistent with the asset's underlying price movements) can result in asymmetry. As with trend-following strategies, however, their drawback is the associated path dependency, where views that would ultimately have proven profitable may be cut as markets gyrate.

Breadth

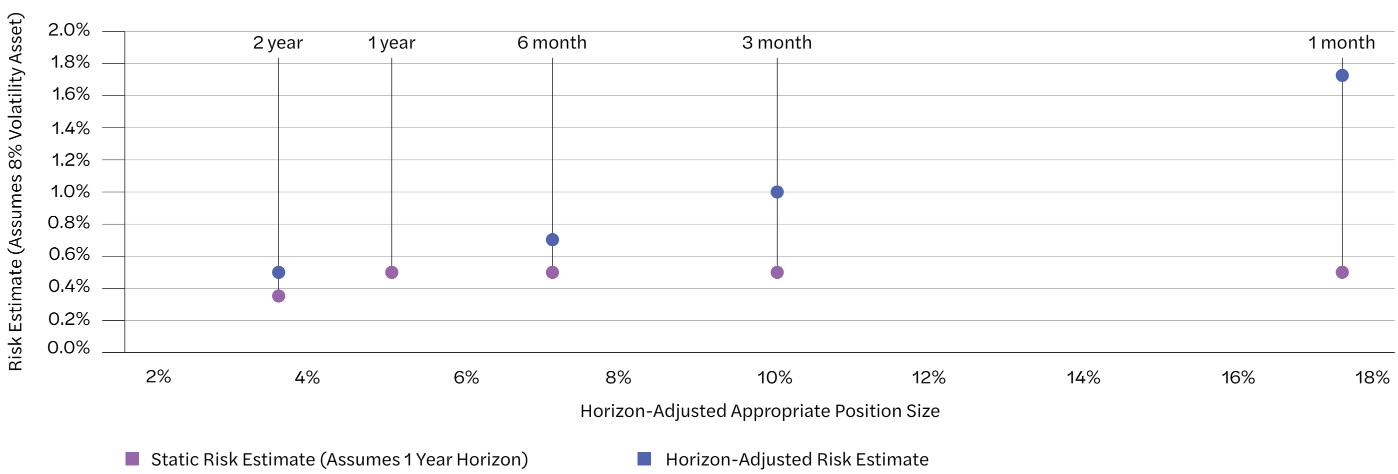
Previously, we've defined breadth as the effective number of uncorrelated ideas in a year, each of which is sized to generate a similar portfolio level gain. In an ideal world, breadth could be increased while maintaining a hit ratio above 50% and simultaneously delivering asymmetry. In practise, however, it is more typical that the best ideas have the most promising combination of hit ratio and asymmetry and after a point one or both of these characteristics fade. Augmenting breadth also requires higher leverage or greater turnover, both of which are subject to their own constraints. So long as the combination of expected hit ratio and asymmetry results in a positive expected return, without breaching other constraints, the idea should be considered for inclusion. At Fulcrum, **we seek breadth in the following ways:**

1. **Combining views across asset classes**, rather than limiting the strategy to one or a few asset classes, is the simplest method. As we seek to identify 15-20 uncorrelated ideas per year, we consider fundamental and behavioural opportunities across equities, fixed income, currencies and commodities. In addition, we seek to implement each of our views in multiple ways, typically across different asset classes.

2. **Supplementing long-term ideas with medium and short-term ideas** also increases breadth. For most macro strategies, it is almost impossible to create adequate breadth by focusing solely on long term ideas. Such a focus prevents dynamism and tends to result in ideas that become correlated with each other because of their sensitivities to the economic cycle, price momentum or swings in investor risk appetite. By expressing views on specific events, such as central bank meetings, and exploiting short-term cross-asset dislocations (typically 1-3 months), we can augment breadth significantly. In this area, we are particularly sensitive to transaction costs and focus on the most liquid and low-cost instruments.

3. **Appropriately sizing positions** to have a meaningful impact on portfolio returns is also required to generate breadth. The key, yet often ignored, insight is to understand that the optimal size of a position is not solely a function of conviction, volatility, transaction cost (per unit of volatility) and correlation with other assets in the portfolio, but also of the intended investment horizon. All else being equal, shorter horizon trades should be sized larger than longer ones to adequately generate breadth in a portfolio. Taken literally, a 1-month currency view driven by an out-of-consensus stance on an upcoming central bank meeting should be sized about five times as large as a 2-year valuation-driven view on the same currency. Clearly, unexpected short-term events can have a significant impact on portfolio returns, regardless of the intended horizon of the original idea. As a result, the theoretical upscaling might be diluted in practice or be mitigated through trade construction.

Figure 1: The Impact of Trade Horizon on Risk



Conclusion

In this paper, we have outlined our approach to enhancing hit ratios, delivering asymmetry and increasing breadth, with the ultimate goal of generating skill-based, positive returns over the long term. In summary, we limit our investments to areas in which we have an identifiable and persistent edge, we use a number of distinct approaches to create option-like pay-offs, and seek to maximise breadth by appropriately sizing positions across asset classes and time horizons.

The methods discussed in this paper are summarised in the table below:

How We Enhance Hit Ratios	How We Generate Asymmetry	How We Increase Breadth
Distil macro-economic data in a more timely manner than consensus	Implement ideas by buying options when implied volatility is under-priced	Equal opportunities across all liquid asset-classes i.e. equities, currencies fixed income and commodities
Develop economic models similar to those used at central banks, and access their output on a real-time basis	Focus on investment with a high "margin of safety"	Supplement long-term ideas with short and medium-term ideas
Exploit short-term dislocations across asset classes, many of which are ignored by single asset specialists	Use risk management techniques, such as trend-following and stop losses.	Appropriately size positions to reflect conviction, risk, covariance and investment horizon
Capture long term thematic trends by investing in baskets of equities	Be willing to invest in distressed or ultra-high growth assets that provide option like pay-offs, without associated costs of time decay	Be introspective and continue to develop areas of strength, while bolstering areas of relative weakness

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Suhail is Fulcrum's Chief Investment Officer and an executive on the Management Board. He joined Fulcrum in 2005 and is the portfolio manager of Fulcrum's Discretionary Macro and Diversified Absolute Return strategies. He has a BSc in Management from the London School of Economics & Political Sciences (2000) and he has been a CFA charterholder since 2003.

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