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THE BENEFITS OF UNCORRELATED ASSETS AND STRATEGIES

Rob Stewart and Toby Masters

A market neutral strategy should provide meaningful diversifying benefits for investors given the expected low correlation to the underlying equities market.

Market neutral is often mistakenly viewed as assumed to be negatively correlated. The fact that the equity market has a negative month does not imply a market neutral strategy will produce a positive return. This would imply the strategy is negatively correlated. Rather market neutral should be considered as uncorrelated to the equities market over the medium to long term, notwithstanding the potential for periods of both positive and negative correlation to equities in the short term.

There will be periods from time to time when market neutral strategies will not perform well. No investment can legitimately claim to perform at all times in all market conditions. This reflects the need to have a diversified portfolio with exposure to a range of assets and strategies that will perform through various market cycles.

One of the aims of diversification is to reduce volatility outcomes and improve overall risk adjusted returns. This can be best achieved through combining assets that are largely uncorrelated. Put simply when a particular asset within a portfolio performs poorly other assets will generally help to smooth out portfolio returns.

How uncorrelated assets can add value and reduce risk

In the following example we have two stocks, Fortescue (FMG AU) and Xero (XRO AU). Fortescue is a well-recognised iron ore producer and exploration company with assets located in the Pilbara region of Western Australia. Xero provides a platform for online accounting and business services to small businesses through a range of cloud accounting software.

Clearly Fortescue and Xero have very different businesses with different macro factors impacting the behaviour of the respective share prices. Fortescue is driven by changes in the price of iron ore. Xero is driven by the growth of its cloud based software across multiple markets. Of course there is the overall need for both businesses to manage costs etc., but the businesses are fundamentally different.

In the three years to June 2019 Fortescue and Xero had generated similar returns of 55% and 54% per annum, respectively. A pretty good outcome when compared to the S&P/ASX 200 Accumulation Index which returned 13.9% pa over the same three-year period.

These returns were generated with volatility of 39% and 30% respectively.

More importantly while the two stocks produced similar returns the journeys were quite different. In periods where Fortescue performed strongly Xero performed modestly and vice versa. When looking at the correlation between these two stocks—that is a measure of the extent to which they move in unison—the correlation was a mere 0.10. This means that over the three year period under study Fortescue and Xero were essentially uncorrelated. This is not surprising given the substantial differences in their underlying drivers we noted earlier.

However, when we combine these two stocks in equal weight we witness the power of adding uncorrelated assets to improve portfolio diversification.

	FMG AU	XRO AU	Average	Combined	XJOAI	Improvement
Return	260.9%	244.5%	252.7%	252.7%	47.8%	
Return pa	53.4%	51.0%	52.2%	52.2%	13.9%	
Volatility	39.0%	30.2%	34.6%	27.6%	10.6%	-20.4%
Reward to risk	1.37	1.69	1.53	1.98	1.31	29.4%
Draw down	-44.2%	-29.9%	-37.1%	-20.7%	-12.9%	-44.1%

The first item to note is the volatility of both stocks at more than 30%. Whilst index volatility has been 10.6% on over the analysis period, individual stock volatility can be a lot higher. In fact many investors might be surprised to discover that the average individual stock volatility is close to 30%.

The uncorrelated nature of the two stocks' return streams demonstrates the power of diversification. By adding two uncorrelated stocks with similar volatility characteristics we can substantially reduce the overall volatility of the combined positions without impacting overall returns. The volatility of the combined portfolio is 28% compared to the average individual volatility of 35%.

Risk reduction

A portfolio's systematic risk cannot be eradicated completely, but it can be mitigated through the careful allocation of funds to a broad range of assets. Provided the assets are not highly correlated a diversified portfolio should reduce the overall volatility of returns and smooth investment returns over the long term. However, one should be mindful that in volatile and negative markets the correlation between assets tends to increase, thereby reducing some of the expected benefits of diversification.

We believe any strategy that is included in a diversified portfolio should have low correlation with the existing assets in the portfolio, providing very clear diversification benefits and reducing portfolio risk.

To demonstrate the non-correlated nature of the Equus Point Capital Market Neutral strategy, the correlation matrix shown in Figure 2 compares the strategy against a range of well recognised indices from June 2000 to May 2019. The Equus Point Capital strategy exhibits low or negative correlation to each of the alternative assets, clearly demonstrating its potential to add attractive diversification benefits to investor portfolios.

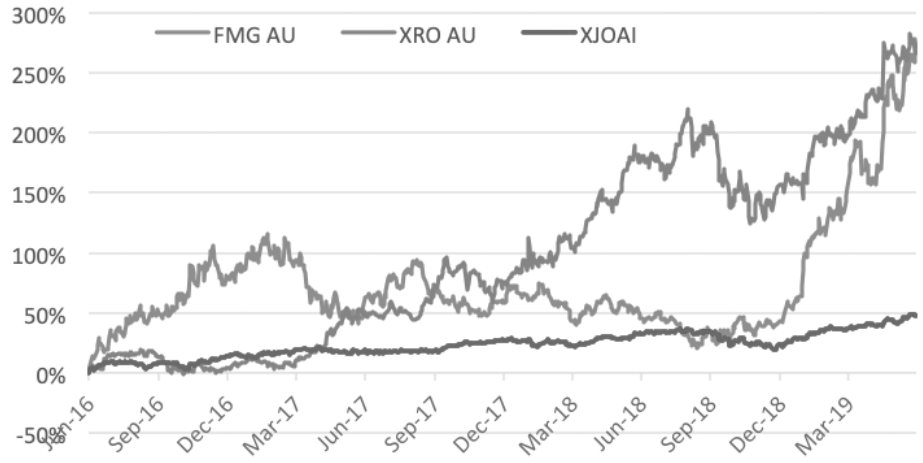
Capital preservation

Downside moves tend to be sharper and more violent than upside moves. Remember also that a loss of 50% in the value of an investment requires a subsequent 100% return to restore the investment to its original value. This example reflects the events of 2008 and where the local share market lost 47% in value (including dividends).

The quote

While alternative assets can be beneficial to a portfolio it is important to consider the liquidity characteristics of any investment.

Figure 1. Three-year cumulative return



Source: IRESS

These losses took more than six years to recover, although in a pure capital sense the market remains more than 10% below its 2007 peak at the time of writing.

We view capital preservation as one of the keys to successful long-term investing and achieving optimal investment outcomes.

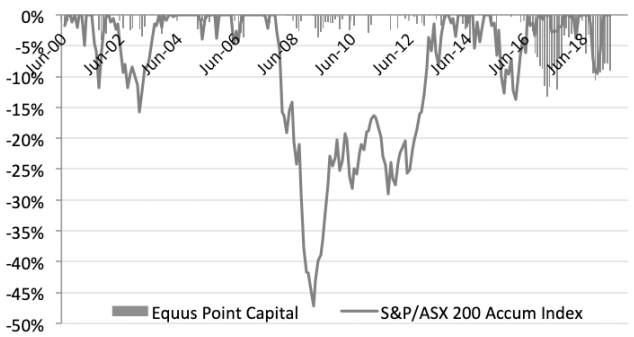
By way of example, Figure 3 illustrates the draw-down of the Equus Point Capital Market Neutral strategy against the S&P/ASX 200 Accumulation Index from June 2000 to May 2019. The Equus Point Capital strategy clearly preserves capital over the long term through shallower draw downs, and avoided the near halving of the index during 2008.

Figure 2. Correlation matrix

	Equus	S&P/ASX 200	REIT's	MSCI$A	Composite Bonds	Cash	S&P 500	Gold	AUDUSD
Equus	1.00								
S&P/ASX 200	0.09	1.00							
REIT's	0.11	0.62	1.00						
MSCI$A	-0.03	0.55	0.29	1.00					
Composite Bonds	0.16	-0.26	0.11	-0.25	1.00				
Cash	0.21	-0.09	-0.12	-0.14	0.14	1.00			
S&P 500	-0.06	0.72	0.44	0.72	-0.37	-0.15	1.00		
Gold	0.10	0.03	0.06	0.12	0.12	0.09	0.01	1.00	
AUDUSD	0.03	0.41	0.18	0.50	-0.30	0.00	0.55	0.40	1.00

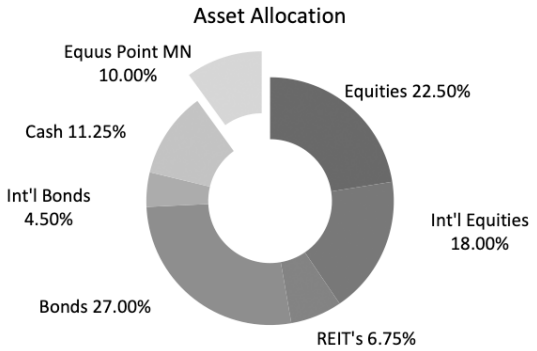
Source: IRESS

Figure 3. Draw downs



Source: IRESS

Figure 4. Asset allocation



Source: IRESS

Alternative assets area broad church that can include long/short equity, distressed debt, private equity, direct property and infrastructure, to name but a few. Each of these has their own risk, return and liquidity characteristics. Ideally alternative assets should provide some protection for an investor, such that when more traditional assets do poorly, alternative assets provide valuable diversification.

While alternative assets can be beneficial to a portfolio it is important to consider the liquidity characteristics of any investment.

The Equus Point Capital Market Neutral strategy provides liquidity by only investing in listed shares that are members of the S&P/ASX 200 and avoiding the least liquid shares within this share universe. In addition the strategy uses liquid index futures to manage residual beta risks.

What is a market neutral strategy?

A market neutral strategy attempts to provide a return stream that is independent of the underlying equity market. This is achieved through buying stocks (long exposure) and selling stocks (short exposure) with the aim of removing or neutralizing exposure to the general market. In doing so, the strategy seeks to add value irrespective of market direction.

There are however some key considerations when assessing the attributes of an equity market neutral strategy:

Underlying strategy

- market neutral strategies are often based around the concept of pairs trading where long stock positions are offset by related short positions
- in reality many strategies could be considered market neutral provided they remove the impact of the market from the return stream
- Equus Point Capital differs from typical market neutral strategies in that it is seeking to derive meaningful returns from well-known behavioural biases in the Australian equities market, through a combination of long and short stock positions and the use of futures to achieve a market neutral outcome.

Dollar weighted or beta weighted neutrality:

- some market neutral portfolios are dollar neutral where the size of the long portfolio equals the size of the short portfolio in dollar value
- however dollar neutrality does not take into account the sensitivities of individual stocks to market movements; as such a dollar neutral portfolio may exhibit significant correlation to the market
- in contrast, a beta neutral portfolio ensures the sensitivities of stocks are balanced such that the overall return stream is uncorrelated to the underlying market
- but even beta neutrality is based on a measured historical beta, which is a good guide to future beta, but not necessarily perfect given beta is constantly changing.

Availability of stock borrow: there may be periods when an inability to borrow stock for the short side limits the ability to execute. This is particularly important for a pairs trading strategy where there are essentially two legs to a single trade.

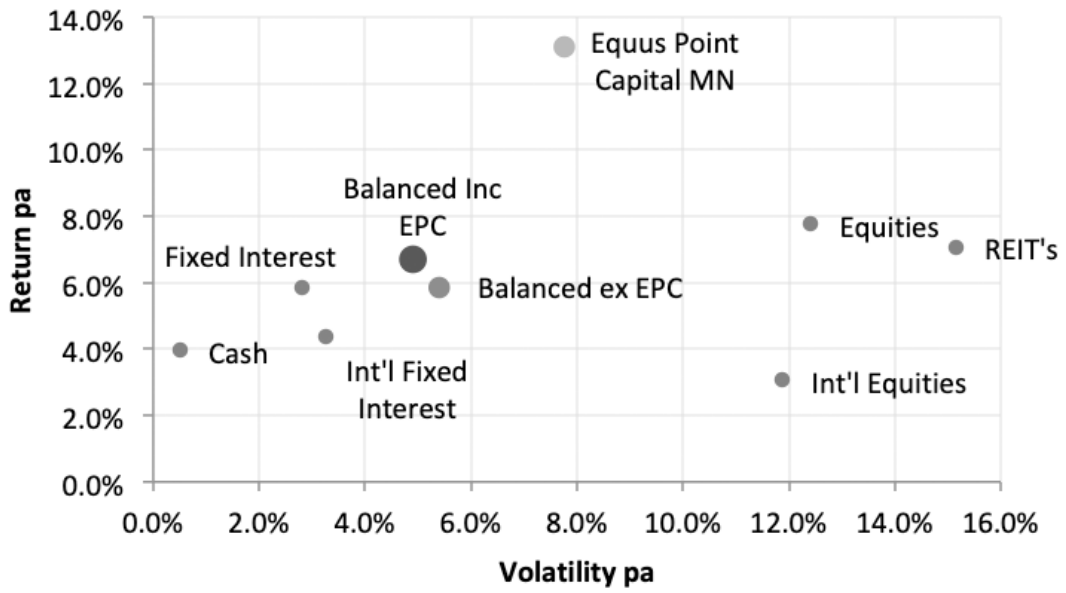
Short squeezes: there are periods where stocks that have been heavily sold short find support and rally resulting in negative returns. In theory this could lead to unlimited losses and managing potential losses on the short side of the portfolio is crucial. At Equus Point

Figure 5. Analysis

	Equities	Int'l Equities	REIT's	Bonds	Int'l Bonds	Cash	Equus Point MN	Total	Standard ex Equus Point MN
Weights	22.5%	18.0%	6.8%	27.0%	4.5%	11.3%	10.0%	**100%**	
Returns	7.8%	3.1%	7.1%	5.8%	4.4%	4.0%	13.1%	**6.7%**	5.8%
Volatility	12.4%	11.9%	15.1%	2.8%	3.3%	0.5%	7.8%	**4.9%**	5.4%
Reward to risk	0.63	0.26	0.47	2.07	1.33	8.01	1.69	**1.37**	1.08
Sharpe Ratio	0.30	-0.09	0.20	0.62	0.09	-0.21	1.17	**0.54**	0.33
Draw down	-47.2%	-48.3%	-69.8%	-3.1%	-7.6%	0.0%	-13.2%	**-17.5%**	-22.9%
Recovery	71	168	105	14	28	0	22	**50**	56

Source: IRESS

Figure 6. Volatility v return (June 2000 to May 2019)



Source: IRESS

Capital we acknowledge the difference in risk between long and short positions and have designed our risk management processes to limit the impact of any individual short position on returns.

Sector exposure: some market neutral strategies, particularly pairs trading versions, will seek to neutralize exposure to underlying sectors. For example, this is achieved if the long and short legs are drawn from the same sector. Equus Point Capital does not enforce sector neutrality as we believe sectoral trends can contain valuable information about future returns.

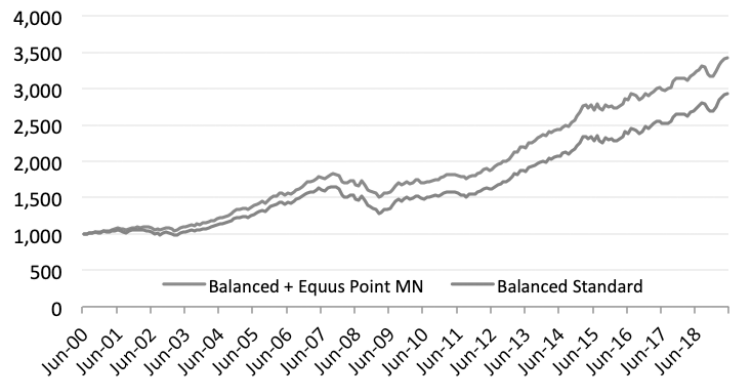
Market liquidity: equity market neutral strategies can have higher turnover than more traditional long only portfolios. As a result the ability to trade in an orderly fashion and minimise market impact costs is paramount. At Equus Point Capital we invest only in a liquid subset of the S&P/ASX 200.

Leverage: the ability to borrow stock to build a short portfolio and use the cash proceeds to increase exposure to the long portfolio introduces leverage. Some funds will allow the degree of leverage to be quite high. At Equus Point Capital we limit the leverage to a maximum three times and will typically have a leverage ratio of two times.

Volatility outcomes: as with any investment, the volatility and correlation profile is an important factor to consider, particularly when the portfolio is leveraged. Equus Point Capital aims to generate a return stream of less than 10% through the cycle, which is somewhat lower than the average volatility of the equities market.

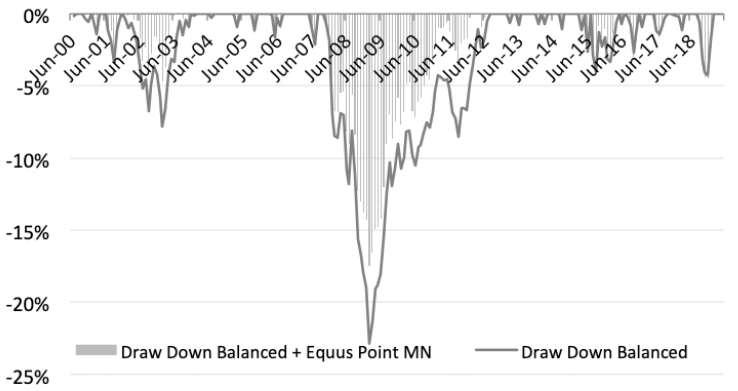
Market conditions: different strategies have strengths and weaknesses in different market environments. For example, the Equus Pont Capital Market Neutral strategy will perform well through the cycle and benefit particularly from periods of large return dispersion and volatility. Conversely, periods of low volatility and constrained return dispersion may lead to periods of more subdued return outcomes.

Figure 7. Cumulative returns



Source: IRESS

Figure 8. Draw downs



Source: IRESSx

Equus Point Capital within a diversified portfolio

Equus Point Capital Market Neutral Fund is designed to provide a return stream uncorrelated to traditional asset classes and preserve capital in volatile negative markets. Given the low correlation of the return stream through the cycle it should provide meaningful diversification benefits within a broader portfolio.

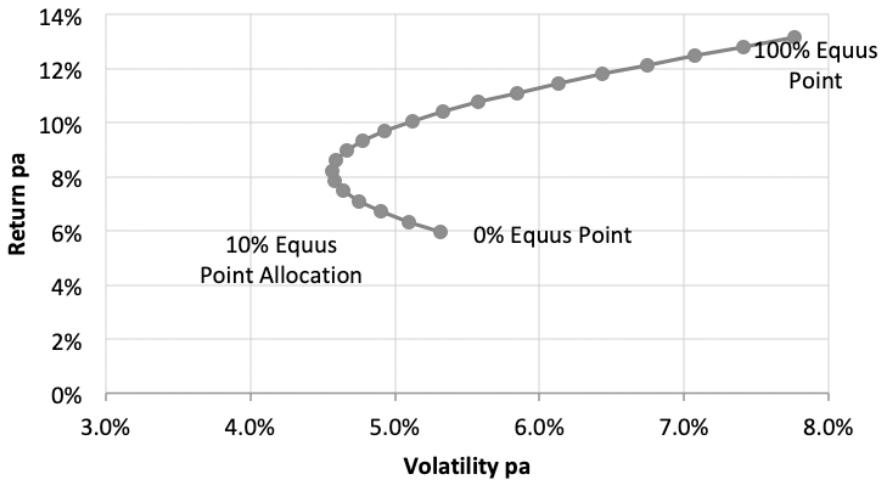
In the following case study, we have taken a standard asset allocation for a balanced fund and added a 10% allocation to the Equus Point Capital strategy. The remaining assets have had their respective allocation reduced on a pro rata basis. We would note that there is some debate about whether an alternative strategy, such as a market neutral strategy where the benchmark is typically cash, should be treated as an equity allocation or a fixed interest allocation within a broader portfolio. In fact it is neither. Market neutral strategies truly represent an alternative to traditional asset classes.

The analysis adopts well-recognised indices and adjusts the returns to reflect management fees for local ETFs to ensure an after-fees return is generated. Rebalancing back to a strategic benchmark is conducted annually. The period of analysis is from June 2000 to May 2019. The Equus Point Capital strategy adopts a 1.2% management fee and a 20% performance fee above a hurdle of the RBA Official Cash Rate (with a high water mark).

Adding just 10% allocation to the Equus Point Capital strategy would have added 90bp in additional return after fees and reduced volatility by 10%. It would also have almost doubled the Sharpe ratio and reduced the draw-down by 20%.

Adopting a sensitivity analysis by varying the allocation to the Equus Point Capital strategy we can demonstrate that for a 'balanced' portfolio a higher allocation than the suggested 10% would improve risk adjusted returns and draw-downs further.

Figure 9. Volatility v return



Source: IRESS

The analysis above is based on the historical return and risk characteristics of the underlying asset classes and that of the simulated Equus Point Capital Market Neutral strategy. Going forward care should be taken in assuming historical return and risk characteristics are representative.

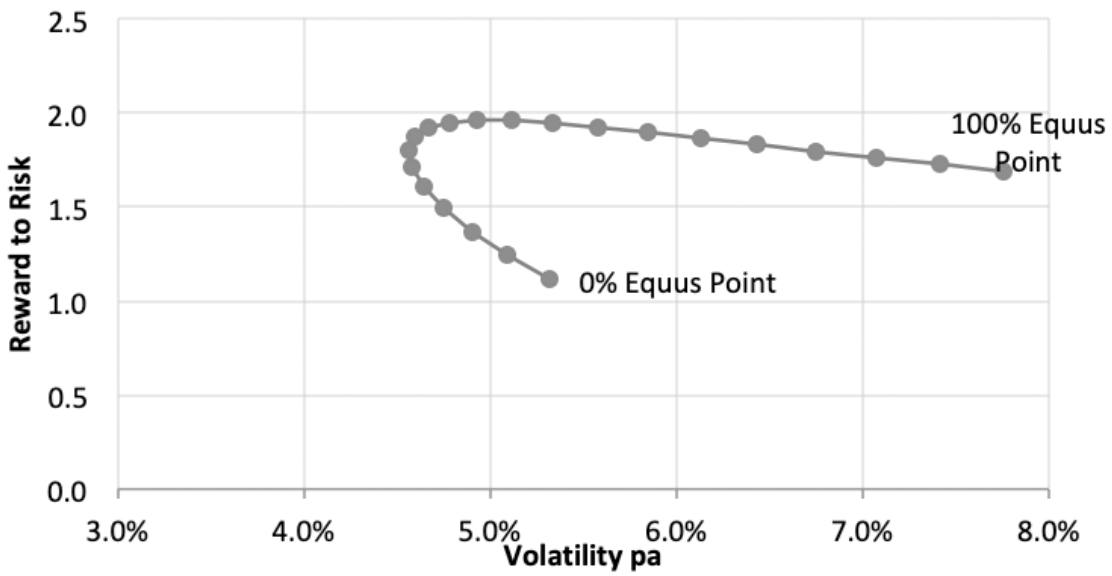
Conclusion

Seeking out and implementing truly uncorrelated assets and strategies can provide meaningful risk adjusted returns to investor portfolios. Uncorrelated strategies assist in reducing portfolio risk, thereby improving risk adjusted returns. They can also assist in reducing draw-downs during times of market stress.

Market neutral strategies provide a return stream uncorrelated to traditional assets and provide real diversification benefits. There are however a range of key considerations when assessing a market neutral strategy. Equus Point Capital's Market Neutral strategy delivers a balanced and uncorrelated return profile that can provide attractive diversification benefits within a broader portfolio. **FS**

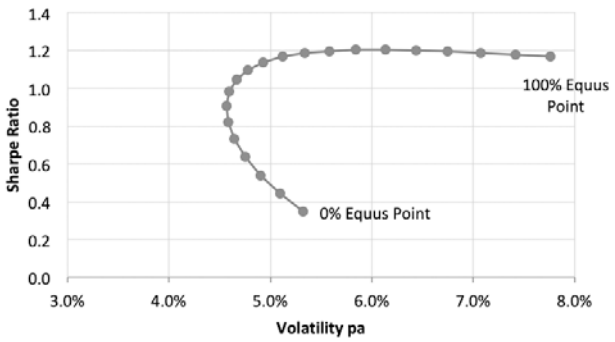
Notes
Equities – S&P/ASX 200 Accumulation Index.
Int'l Equities – MSCI $A.
REITs – S&P/ASX200 REIT's Accumulation Index.
Bonds – UBS All Maturities Composite Bond Index.
Int'l Bonds – Citigroup World Government Bond Index $A.
Cash – RBA Official Cash Rate.

Figure 10. Volatility v reward to risk



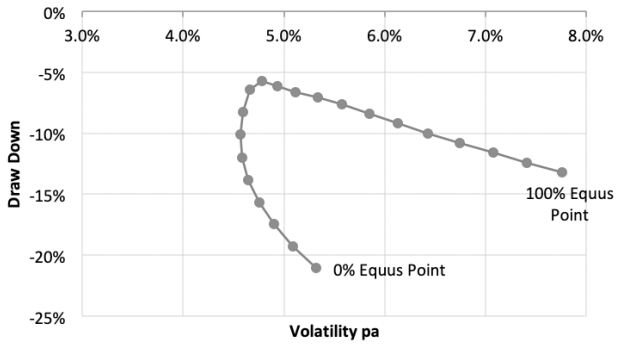
Source: IRESS

Figure 11. Volatility v Sharpe ratio



Source: IRESS

Figure 12. Volatility v draw down



Source: IRESS