Is your Liquid Alternate Manager warehousing risk?

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Investors, researchers and consultants alike should be aware there is a remarkable characteristic concerning robust investment strategies that flies in the face of the intellectual orthodoxy of 'Risk Management'. That is, the more robust an investment strategy, the more volatile its performance will be. This occurs because robust strategies are not optimized to particular markets, market conditions or set of market views. The opposite is also true. A strategy that has been designed with to-good-to-be-true returns and low volatility on historical testing/running will work only for a given period of time or given market. These strategies tend to be curve fit and/or market fit and do not resemble anything close to robust. We realise this statement undoubtedly goes against what most investors feel about volatility versus returns however, here's the rub: Facts don't care about your feelings. The literature and empirical evidence clearly demonstrate that robust strategies are in fact more volatile.

The preceding statement is also in harmony with the dominant quant paradigm which likens low volatility strategies with to-good-to-be-true returns being akin to picking up penny's in front of a steamroller. In other words, you can design strategies as we highlight below however, they are all guilty of 'warehousing risk'. Essentially, a strategy can be designed so it accumulates risk in a number of ways. And when that strategy finally stops working, it stops working in a spectacularly catastrophic manner. This was also observed in the lead up in the GFC.

Many banks and investment managers developed securitized products that appeared to generate outsized returns on extremely low volatility however, as we were to find out later, these products were just setting the financial system up for a major and catastrophic loss by warehousing risk. In the short term whilst the securitization party was continuing, everyone was celebrating because enormous returns were being generated with apparently very low risk. The risk was always there, it had not evaporated, it was just being warehoused to be realised at a later date.

Let's now discuss the 'science' of Risk Management. From a philosophical position, we are very suspicious of measures like VaR, standard deviation, Sharpe ratio and any other kind of standard risk metric taught at University and deployed and many financial services firms. The literature and empirical evidence confirm that risk is inherently present in any investment vehicle, particularly if you wish to achieve a reasonable level of return above the traditional asset classes. Evidence also indicates that an investment manager's worst drawdown is generally in their future, not their past. Any successful investment manager who has been around for 20+ years has had a major drawdown, which I would characterize as 35% or greater, and sometimes more than just one. We were fortunate that Dalton Street's largest drawdown didn't happen until 2018 (-27.7%), so we worked for a long time living an incredibly charmed investment life.

In some cases, these major drawdowns are called blow ups. And sometimes managers lose significant FUM allocations because both the investment manager and investors do not have the discipline to stay with the strategy thinking that the strategy may be 'broken'. In keeping with that

thought, I am always bewildered when investors don't believe that Equities are 'broken' when equity indices lose >50% as they did during the GFC. Weird huh?

On a point of fact, one of the top performing Managed Futures managers, Dunn Capital, have been investing for over 40 years with annualized returns exceeding 13%p.a., 'blew up' between 2003 and 2005 experiencing a 60% drawdown. As calamitous as this was for clients amidst the drawdown, they promptly learnt that if you can live through a drawdown like that, you will indeed enjoy outsized returns over the long-term.

There are factors that have to be accepted and acknowledged as almost impossible to control in investments. The most important factor is whether your investment manager is going to lose his or her head during a significant drawdown. This is why during the due diligence phase of assessing an investment manager, more questions should be asked around the investment manager's discipline and proclivity for risk in their personal life, not just investment life.

Managers who have survived in this business are the managers who have been able to weather drawdowns without losing their nerve or taking mis-directed risks because that is where the real risk resides. The real risk is whether your manager has the discipline to stick to their strategy and not be swayed by market commentary, clients or their own marketing and sales team. If you believe your investment manager has the discipline to stay the course, then you as an investor should probably stay the course too. Investment managers, and for that matter entrepreneurs, often talk about how they learnt from an adverse time in their career or investment performance. What have you learnt from your last drawdowns? Seriously ask yourself, have you learnt anything from the big drawdown that you had more recently?

There are two varieties of drawdowns. There is the standard garden-variety drawdown. For Dalton Street this may be 5% to 15%, and we view them as just part of doing business. They are not pleasant; but on the other hand, the problem is that even the garden-variety drawdowns are likely to cause anguish to our clients. In terms of running a quantitative strategy however, these are just part of the business.

Then there is the calamitous kind. When an investment manager experiences a 'blow up', investors generally panic and commence extrapolating recent performance into an event that will now become common whereas in fact, they are very rare. A highly profitable and competent investment manager may experience a >35% magnitude drawdown once in every 30 or 40 years and it does not render their strategy 'broken'. So once again, it is really just a matter of living through it when it happens. In terms of Dalton Street's experience last year, we suffered a little angst and anxiety like our clients however, we did not change a thing. The fund, on a point of fact, has jumped >24% since the October bottom. This has been the experience of the strategy throughout the past 20+ years.

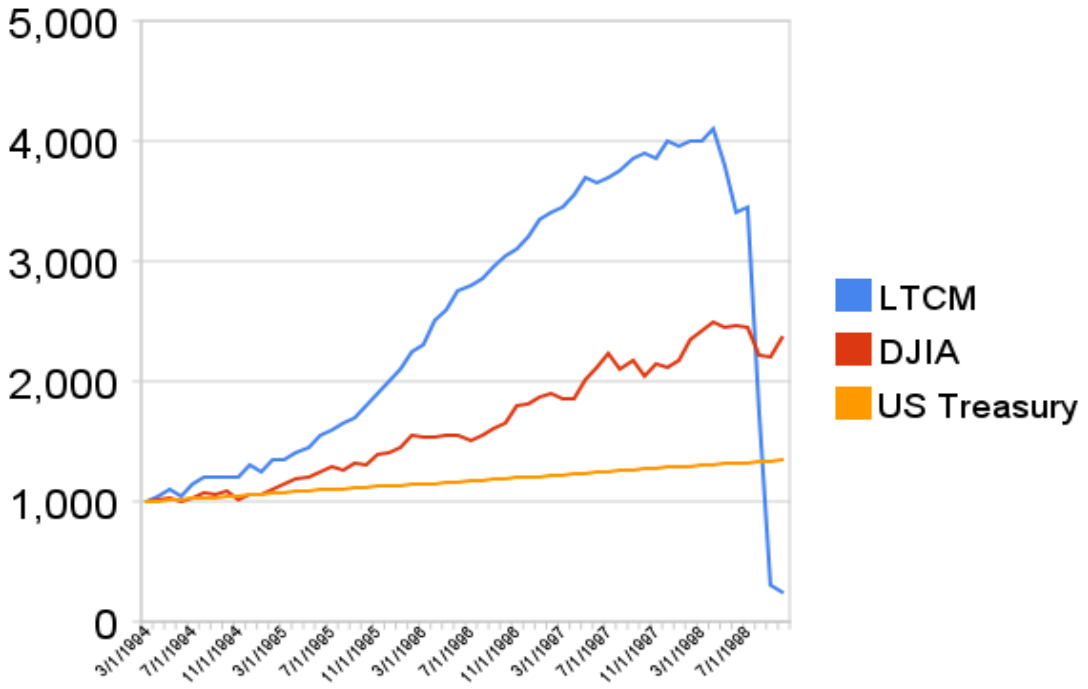
For Dalton Street, the existence of drawdowns large or small have not had any particular bearing on whether our strategy is working or not or that something needs to be fixed. The reason for this the long-term performance history and an investment philosophy that relies on the flawed psychology of market participants, namely human behaviour. That means the behavior will continue and markets will continue to exhibit persistence in the factors we exploit.

Now onto LTCM, Amaranth Advisors and Madoff. I highlight these three funds as diverse example of what can go wrong in a quantitative strategy, a fundamental strategy and a case of fraud. In Madoff's case it was an outright Ponzi scheme. Even Dr James Simons from Renaissance Technologies failed to guess that one even though he was highly suspicious.

The below chart represents the value of $1,000 invested in LTCM when it commenced trading in 1994. LTCM generated average annualized returns of 35% after management fees of 2% and 20%. More amazingly, and an insight into what was about to happen, their Sharpe Ratio was 4.35 on a huge $4.8B under management. This is relative to most great Alternate managers who produce circa Sharpe ratio of 1.0.

The Sharpe ratio was far too high and volatility far too low for the returns being generated on the managers FUM. You can see in the chart below how smooth the returns were versus the Dow Jones Industrial Average…...until it collapsed of course! LTCM's return profile broke the three rules discussed in further detail later:

1. The average volatility was too low for the average return generated. In other words, the Sharpe ratio was too high. High Sharpe ratios are generally viewed as a positive however, there is such a thing as a too high Sharpe ratio. Particularly as highlighted in point 2
2. The Sharpe was too high relative to the FUM. W can imagine a proprietary trading operation achieving a Sharpe of 4.35 however it would be on FUM of only $25M - $50M
3. There were next to zero monthly drawdowns until the end



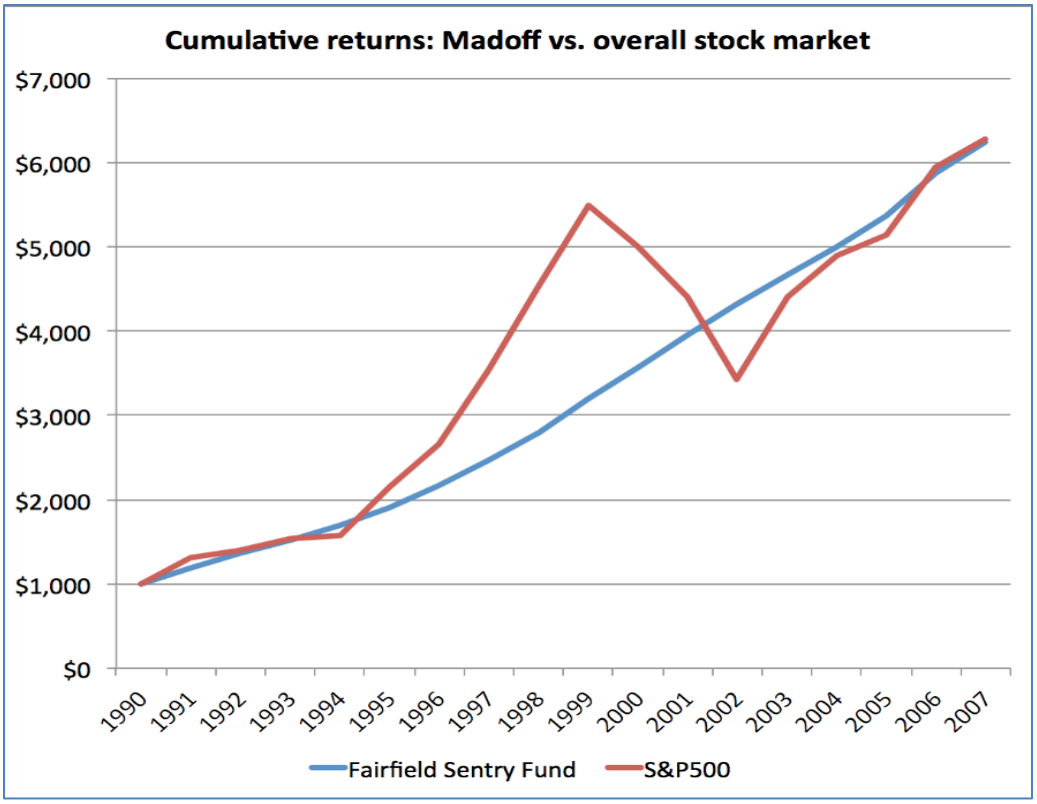
Source: https://en.wikipedia.org/wiki/Long-Term_Capital_Management#/media/File:LTCM.png

Now to Madoff. A Madoff feeder fund, Fairfield Sentry, generated average annualized returns of 10.5% p.a. after an introduction fee of 4%. More incredibly, these returns were generated on average annualized volatility of just 2.4% or a 2.5 Sharpe ratio and claimed FUM of USD60B. To put this into perspective, over the same period the S&P 500 returned 9.6% annually with annualized volatility of 14.3% or 0.4 Sharpe.

The ability to generate meaningful alpha is limited to lower capacity strategies who have the potential to generate meaningful alpha. Fairfield Sentry, the main Madoff feeder fund example demonstrates a mismatch between returns, volatility and size. The returns in fact, were too good to be true.

Again, the Madoff fund broke the same rules as the LTCM portfolio.

1. Too high Sharpe ratio
2. Sharpe ratio too high for FUM
3. Next to zero monthly drawdowns…. until the end!



Source: https://washingtonmonthly.com/2016/02/09/bernard-madoff-and-the-continuing-curse-of-affinity-fraud/

Data on Amaranth Advisors are a little more difficult to come across however what I have found is this example. Amaranth's FUM peaked in August 2006 at USD$9.2B. By the end of September 2006, FUM had plummeted below USD$3.5B before all assets were eventually liquidated. The entire loss was on a Natural Gas trade that went VERY wrong. Amaranth were well known as natural gas

traders, a market 5 times more volatile than equity markets, yet their realised fund volatility was lower than equity market volatility. One could argue that was a big giveaway.

I had the opportunity to meet the CEO and a number of employees of Amaranth in December 2009 at their new hedge fund which morphed out of the ashes of Amaranth and was being run out of the very same office. They were indeed intelligent, understated, polite and really quite accommodating. Needless to say, it's the numbers that will first giveaway the next actual hedge fund blow up, not necessarily the people running the money.

Below is a chart for Natural Gas in 2006 over the period that Amaranth blew up. An exceedingly volatile market indeed!

Source: Thomson Reuters

SO, WHAT'S THE SUMMARY?

If your manager or proposed manager exhibits any of the three characteristics listed below, further investigation is strenuously recommended:

1. **The average volatility too low for the average return generated.** Sharpe ratio has been positioned as the default ratio for measuring risk adjusted returns and by default the quality of an investment manager for many years. It is an okay measure of risk for large, diversified,

liquid investments, but for others, such as hedge funds, it can be astonishingly deceiving. There is also such a thing as a too good Sharpe ratio.

2. **The Sharpe ratio is too high relative to FUM.** A simple proverb in the investment management world is that the larger a fund becomes, the lower the performance it produces. This effect occurs because a manger tends to become the market and leaves a huge footprint wherever it goes. The fund may also have run out of new strategies and ideas to maintain the flow of investment returns. For example, an exceptional alternate asset manager is seen as a 1-1.2 Sharpe ratio manager. Typically, these managers have relatively low FUM and are not globally recognized names within their industry. The great managers that have long term successful track records with many billions in FUM will be 0.2-0.8 Sharpe ratio manager. The lower Sharpe ratio of the latter is normally caused by their higher volatility or lower returns. In short, beware the investment manager with the 4.35 Sharpe ratio with billions in FUM.

3. **Zero or next to zero negative months.** Risk should be realised along the journey. Other than very low to no risk funds like cash funds, there should be a reasonable number of negative months in a manager's performance history. If a manager is taking on commensurate risk for commensurate reward, this will be borne out in their monthly return profile and that means regular negative months. The negative months can be as high as -10 to -15% and they can experience four or five negative months in a row. On the contrary however, the manager will have equivalent positive months too.

So, how do you avoid the LTCM's, Amaranth's and Madoff's of the world? Firstly, don't be afraid to ask the probing personal questions of your Portfolio Manager or proposed Portfolio Manager. And secondly, rely on the numbers as they will always give the game away. Even in the case of LTCM, Amaranth Advisors and Madoff this was the case.

Keep an eye out for my next paper which will address the question 'Is your Liquid Alternate investment correlated, negatively correlated or uncorrelated to equities?'

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