Hedge Funds -

Hedge funds in the late stages of a business cycle

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"We investigate the behaviour of a large variety of hedge fund strategies in the late stage of a business cycle. While hedge fund returns for many strategies tend to be very similar in the long run, we find large differences in returns in the late stage of a business cycle with Multi-strategy hedge funds, Merger Arbitrage, Statistical Arbitrage, Volatility-driven and Quantitative hedge funds providing the best opportunities."

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Introduction: Entering the late stages of the business cycle

In our Quarterly Market Update for the third quarter 2018 we investigated the behaviour of different traditional and alternative asset classes during the late stage of a business cycle. One alternative asset class that got short shrift was hedge funds. Because hedge funds consist of a myriad of different investment strategies, we could only cover the behaviour of the major overarching styles.

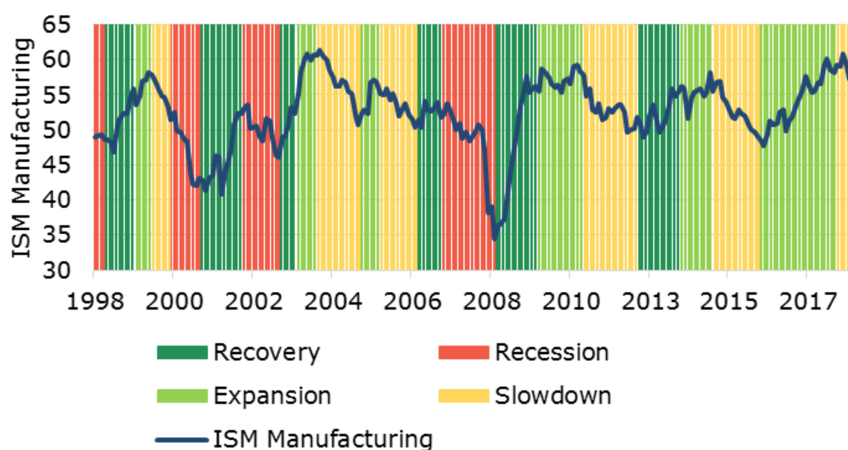
In this report, we want to right this wrong and focus on the behaviour of different hedge fund styles during the late stage of a business cycle.

In order to do this, let us repeat the way we defined the different stages of a business cycle in our Quarterly Market Update. We used the change in the steepness of the yield curve and the change in Purchasing Manager Indices as criteria to differentiate between different stages.

Based on these indicators, the four phases of a business cycle are:

- **Recovery:** After a recession, business cycle indicators improve as the outlook for businesses improves. At the same time, the yield curve steepens as long-term yields rise in anticipation of rising inflation and increased economic growth going forward, while the central bank keeps policy rates low for a while.
- **Expansion:** As the recovery matures and central banks start to hike interest rates, the yield curve flattens while business cycle indicators keep rising, indicating a typical economic expansion.
- **Slowdown:** Once economic activity starts to slow down, the business cycle indicators drop from their cyclical highs. The yield curve continues to flatten as central banks continue to hike rates and long-term yields decline in anticipation of lower inflation and lower growth in the future.
- **Recession:** Finally, the economy may fall into recession. Business cycle indicators continue to decline while the yield curve steepens as the central bank cuts short-term interest rates to stimulate the economy.

Fig 1: The four stages of the business cycle in the US



Source: Bloomberg, Fidante Partners.

Fig. 1 shows the stages of the business cycle together with the ISM Manufacturing index over the last 20 years. In our view, we are currently in a typical slowdown phase of the cycle and expect this phase to prevail for the next twelve to eighteen months.

In our Quarterly Market Outlook we showed that the returns for macro hedge funds tend to accelerate in a slowdown phase of the cycle while the returns for Long/short Equity, Event-driven, and Relative Value strategies tend to decline compared to other stages of the cycle.

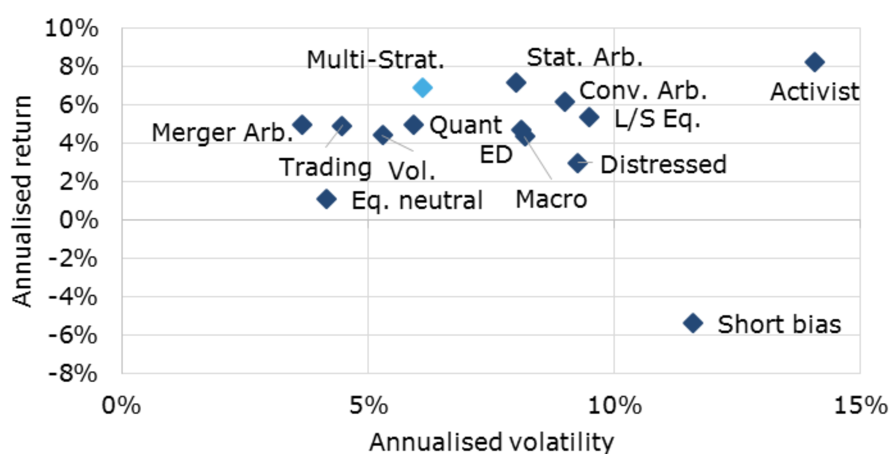
In this report we want to break the Long/short Equity, Event-driven, and Relative Value strategies up into different prominent sub-categories. In order to do this we analyse the performance of different hedge fund strategies as captured by the HFRX index series, which contains hedge funds that are open for investment. The only exception to this rule is our use of the BAIF Equity Statistical Arbitrage Fund Index to model statistical arbitrage strategies. This index is used because the HFRX index series does not have a separate index for this strategy. Also, unlike in our Quarterly Market Outlook, we will use US Dollar returns throughout this report since we are only interested in the relative performance of different strategies, and hedge fund returns are typically reported in US Dollars.

Hedge fund strategy risk return trade-off

In order to provide a baseline for our investigation into different hedge fund strategies, we show the average annual risk and return for the last 20 years in Fig. 2. We can split the different strategies under consideration into three different groups by performance:

- **Underperformers:** At the bottom of the pack in terms of performance are Short-biased and Equity Market Neutral strategies. Short-sellers have had negative returns with high volatility for the last two decades, meaning that they are a bad investment proposition as a strategic investment (though tactically during a recession or an equity bear market these strategies can perform well, as we will see below).
- **Middle of the road:** Most hedge fund strategies have very similar returns over the long run. Merger Arbitrage (5.0% p.a. over the last 20 years), Active Trading (4.9%), Volatility (4.5%), Quantitative Strategies (5.0%), Event-driven (4.7%), Macro (4.4%), and Long/short Equity (5.4%) all fall within 1 percentage point of each other, though the differences in volatility can be large.

Fig 2: Risk and return of hedge fund strategies 1998 - 2018



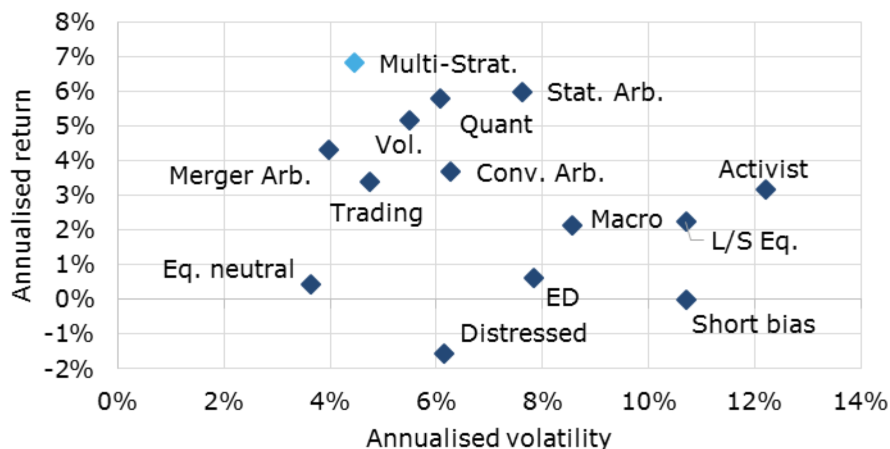
Source: Bloomberg, Fidante Partners. Data in US Dollar as at 31 July 2018.

- **The outperformers:** The third group consists of those strategies that historically have generated higher returns. Activist hedge funds top the list with an average annual return of 8.3% over the last 20 years, though with a high volatility of 14%. Statistical Arbitrage funds provided an impressive 7.2% per annum with a more moderate 8% volatility. We also add Multi-strategy hedge funds to our analysis though they are not a strategy on its own, but a combination of many different strategies. Over the long run, these "portfolios of strategies" have performed very well, with an annual return of 6.9% and an average volatility of 6.1%.

While hedge fund performances are very similar in the long run, big performance differences appear in the more challenging environment of a late stage business cycle (Fig. 3). Because equity corrections become more frequent and market volatility typically increases, strategies that benefit from higher volatility, like Macro and Short-biased hedge funds tend to show better performance than their long-term averages. Event-driven and Long/short Equity strategies, on the other hand, tend to struggle in a late stage environment as financial markets turn choppy, with sometimes unpredictable technical corrections. This is also the result we showed in our Quarterly Market Update, where we showed that Long/short Equity strategies and Event-driven strategies have worse performance than Macro strategies in the late stage of a business cycle.

Other strategies such as Merger Arbitrage, Statistical Arbitrage, and Equity Market Neutral hedge funds barely differ in their risk-return profile during the late stage of the cycle from their long-term averages. This should be expected since arbitrage strategies try to exploit mispricings between individual securities of a similar type and should thus be largely independent of the prevailing growth and interest rate environment. Similarly, Equity Market Neutral hedge funds do exactly what the label says: they produce returns independent of the equity market and thus largely independent of changes in growth and interest rates.

Fig 3: Risk and return of hedge fund strategies in an economic slowdown



Source: Bloomberg, Fidante Partners. Data in US Dollar as at 31 July 2018.

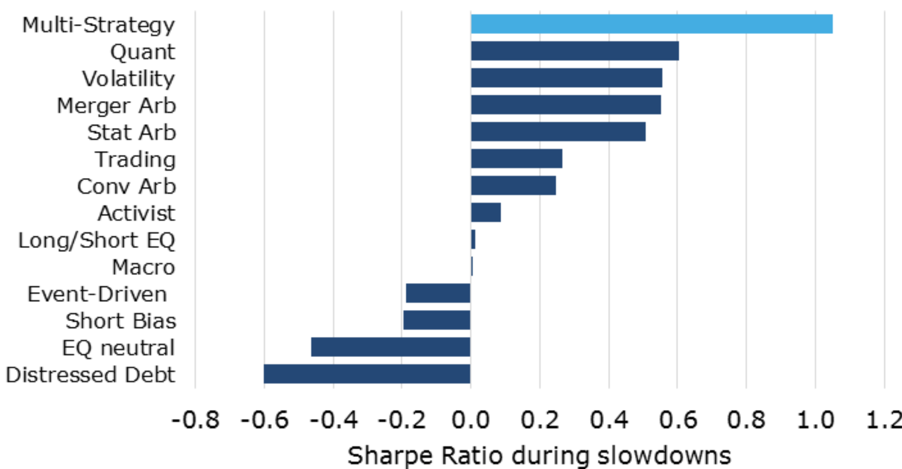
In order to measure the risk-return trade-off of different hedge fund strategies, we look at simple Sharpe-Ratios rather than more sophisticated measures of return relative to downside risk. We have done that analysis as well and the results in terms of relative attractiveness are virtually the same for all measures relating risk to return, so we will stick here with the familiar Sharpe-Ratio.

Several observations stand out when we look at the risk-return trade-off of different hedge fund strategies:

- There is a subset of hedge fund strategies that tend to deliver superior risk-adjusted returns across the cycle. Most notably, these are Merger Arbitrage, Statistical Arbitrage, Quantitative and Volatility strategies. These strategies also perform exceptionally well in the late stage of a business cycle, as Fig. 4 shows.
- The most common hedge fund strategies, like Long/short Equity, Macro or Event-driven tend to have lower or even negative Sharpe-Ratios in the late stage of a business cycle, making them less suitable investments for this period.
- Multi-strategy hedge funds, with their combination of different exposures, provide one of the best risk-return trade-offs across the cycle overall, but in the late stage of a business cycle they tend to outperform single strategy hedge funds by a wide margin.

Overall, our analysis of the behaviour of different hedge fund strategies indicates that arbitrage-related strategies and Multi-strategy hedge funds should be preferred by investors.

Fig 4: Risk-adjusted returns of hedge fund strategies in an economic slowdown



Source: Bloomberg, Fidante Partners. Data in US Dollar as at 31 July 2018.

What happens if stock markets decline?

Of particular interest to investors during the late stage of a business cycle is the ability of different hedge fund strategies to diversify portfolios in the event of a stock market decline. While this is of concern during every cycle, the very low interest rate environment of the last ten years has driven valuations of stock markets to unprecedented heights. Additionally, traditional fixed income investments are less effective as diversifiers and hedges against stock market declines because the already low bond yields limit the potential price appreciation of government bonds and high grade corporate bonds if equity markets decline.

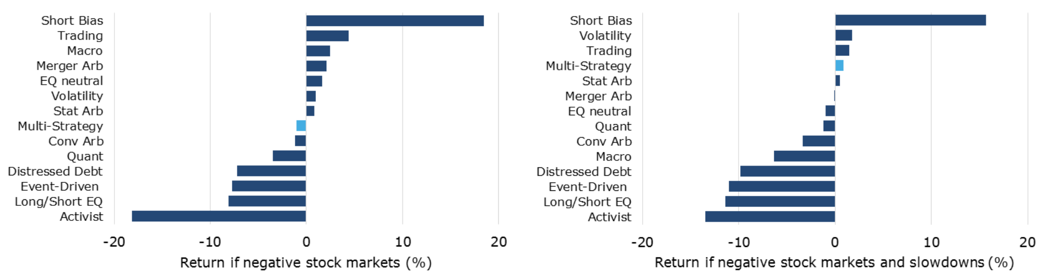
Thus, alternative asset classes like hedge funds will have to do more of the heavy lifting in protecting multi-asset portfolios from significant declines. In Fig. 5 we show the average return of different hedge fund strategies during times of negative stock market returns. The left hand chart in Fig. 5 shows the average over the last twenty years. Unsurprisingly, short-sellers have tended to perform extremely well when stock markets correct. However, Macro and Trading strategies provide significant positive returns as well. Activist and Long/short Equity strategies, on the other hand, provide no protection against downside risk, unless one wants to consider a loss of 15% as a hedge against a loss of 25%.

During the late stage of a business cycle (right hand chart in Fig. 5), the picture looks broadly the same. However, while Macro hedge funds provide less protection than over the entire cycle, Volatility-driven hedge fund strategies perform quite well in this phase.

Finally, Multi-strategy hedge funds emerge again as an attractive opportunity. While the average return of Multi-strategy hedge funds in times of equity market declines is a mere 0.9% annualised, Multi-strategy hedge funds had a positive performance in 62% of the cases when equity markets declined on a rolling three-month basis. If we exclude the financial crisis of 2008, then Multi-strategy hedge funds managed to deliver a positive performance over three months in 81% of the cases when stock markets declined.

Overall, Multi-strategy hedge funds may be the best compromise for investors looking for a hedge against declining stock markets. While short-sellers promise high returns in times of declining stock markets, their performance tends to be negative if there is no correction. Multi-strategy hedge funds, on the other hand, can provide positive returns when equity markets correct but tend also to provide attractive risk-adjusted returns when they don't.

Fig 5: Hedge fund returns when stock markets decline



Source: Bloomberg, Fidante Partners. Data in US Dollar as at 31 July 2018.
Note: The left hand chart shows the average performance of hedge funds in months when global stock markets declined. The right hand chart shows the average performance of hedge funds in months when stock markets declined during the slowdown phase of the business cycle. All data based on monthly returns from July 1998 to July 2018.

Are multi-strategy funds the best solution?

Throughout this paper we have found that Multi-strategy hedge funds seem to provide an attractive investment proposition for the late stage of the business cycle. Risk-adjusted returns are high and on average, Multi-strategy hedge funds have been able to protect investors in times of an equity market decline. However, we also have to be aware that Multi-strategy hedge funds are no panacea.

First of all, as Fig. 6 shows, Multi-strategy funds did have significant drawdowns during the financial crisis. If we should experience a repeat of the extreme dislocations of 2008/2009, Multi-strategy hedge funds may not be able to avoid drawdowns. There might also be situations that are detrimental to individual strategies within Multi-strategy funds that lead to such big declines in the individual strategy that the overall hedge fund portfolio might experience significant drawdowns. In the aftermath of the LTCM debacle in 1998 and during the Eurozone debt crisis of 2010 to 2012, some Multi-strategy hedge funds experienced significant drawdowns because individual strategies within their portfolio suffered severe losses.

But there are two mitigating factors that help Multi-strategy funds limit the drawdown in these instances. First of all, by their very nature, Multi-strategy funds should experience lower drawdowns than single strategy funds because they spread their assets across different uncorrelated strategies. Second, the managers of Multi-strategy funds typically shift the allocation of the portfolio depending on the performance, the risks and the opportunity set of different individual strategies. Compared to generalist investors, the managers of Multi-strategy funds tend to be better at adjusting allocations to individual strategies simply because they have a deeper insight into the prospects for each strategy and can react much faster to a changing market environment.

In a sense, Multi-strategy funds provide a compromise that some investors may find boring. The performance of Multi-strategy hedge funds tends to be very steady, but that behaviour does pay off well in times of heightened uncertainty – something we often experience in the late stage of a business cycle.

Fig 6: Drawdowns of multi-strategy hedge funds and equity markets

Source: Bloomberg, Fidante Partners. Data in US Dollar as at 31 July 2018.

Conclusions

This report has taken a closer look at the performance of different hedge fund strategies in the late stage of a business cycle when the yield curve tends to flatten or even invert and when growth prospects start to deteriorate. We have seen that in such an environment, some individual hedge fund strategies, like Statistical Arbitrage, Volatility, and Merger Arbitrage, tend to do well both in terms of absolute and risk-adjusted returns. The most vulnerable strategies in this environment are Long-short Equity, Event-driven and Distressed Debt strategies.

Given the elevated stock market valuations, we have also tested the ability of different hedge fund strategies to provide positive returns in times of equity market corrections. While Short Biased hedge funds provide the best return in these circumstances, their negative returns across the cycle and in times of rising stock markets turn them into an unappealing investment proposition. Volatility hedge funds, on the other hand, is the single strategy that tends to provide both positive returns during an equity market correction, as well as attractive risk-adjusted returns in the late stage of a business cycle overall. Probably the best compromise between risk, return and a hedge against market declines is given by Multi-strategy hedge funds. These funds provide an active risk management component that diversifies across different single strategies and adjusts the allocation as market opportunities and risks change. This risk management component, together with the overall low volatility of Multi-strategy hedge funds means that risk-adjusted returns are very attractive in the late stage of a business cycle.

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