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Fund Of Hedge Funds Vs. Multi Strategy Funds: Different Sides Of The Same Coin?



Alexandros Kyparissis
Analyst Hedge Funds
Stone Mountain Capital
Tel.: +44 7843 144 007
Email: alexandros.kyparissis@stonemountain-capital.com

The recent disheartening performance of Funds of Hedge Funds (FoHFs) gave rise to a debate about whether their model is dying slowly or can still attract institutional money. The most popular investors in the FoHFs space are pension funds and insurance companies looking for safe and well-diversified products to allocate their assets, but their recent losses made them reconsider alternative strategies with similar characteristics. Multi-strategy funds (MS) will compete with FoHFs for assets and the current trend proves, that they are a formidable competitor, as their assets grew from \$292bn in Q3 2015 to \$316.3bn in Q1 2016 according to BarclayHedge. The industry's data provider exhibits a plunge in the assets of FoHFs over the same period, as their assets decreased from \$448.3bn to \$396.5bn. It is clear from the graph below how the strategies converge after 2007 and the financial crisis of 2008.

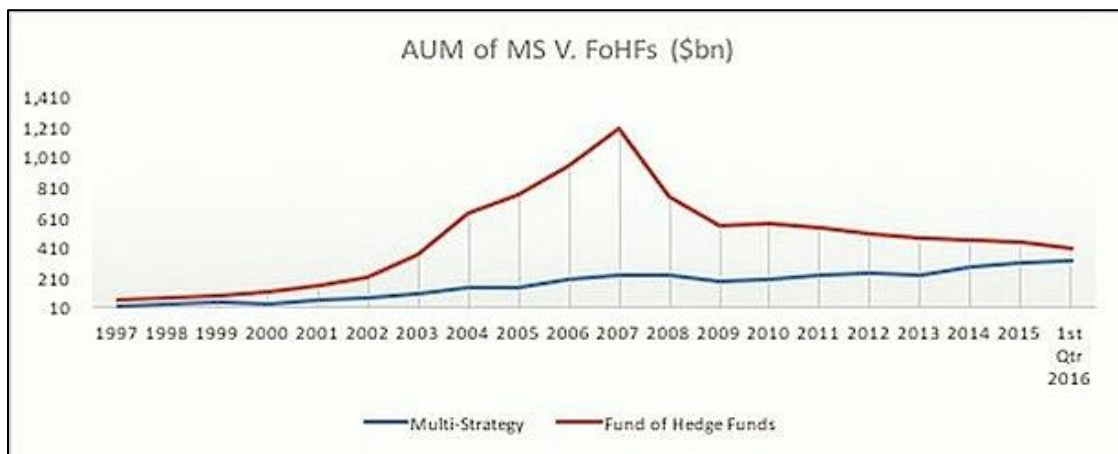


Figure 1. AUM development over time. Source: Stone Mountain Capital Research, BarclayHedge

FoHFs are an investment vehicle that invests in a portfolio of single hedge fund managers, which in theory offers professional manager selection, robust portfolio construction, better risk monitoring, thorough and cost-effective due diligence, diversification, broad and better access to managers and in some cases education to first time alternative investment investors. FoHFs might be the only alternative for investors to access hard close single manager funds due to existing allocations. On the other side, MS are not a very different concept, as it offers investors a variety of hedge fund strategies, but all from the same provider, a single hedge fund. Despite, the similarity of concepts in the two strategies, which is based on the diversification and the variety of strategies offered, there are basic differences between them and investors should be aware of these and know what to expect in terms of performance and risks.

Starting from the fee structure, which is all over the press, FoHFs typically charge 1/10 on the top of the existing typical 2/20 fee structure of hedge funds, costing investors eventually 3/30 of their allocation. On the other hand, MS as a sole provider of these strategies charge normally 2/20 fees, a clear advantage in terms of fees for investors. A study from Lomtev, Woods and Zdorovtsov in 2007 found that the netting of fees give MS investors a mean premium of 23 basis points. Fee netting is the payment of investors for profits on combined strategies and not on each one profitable strategy, which is how the profit-sharing models of FoHFs work. In the same study, the authors support MS in terms of transparency, a view that this perspective does not share, considering MS switching trading strategies' makes an evaluation opaquer. This opacity gives rise to agency risks associated with MS investing, which according to Agarwal and Kale (2007) should add a premium for MS investors. FoHFs on the other side, by offering managed accounts for their investors, allow for better evaluation of their skills. They also consider MS funds to have better market timing skills, which leads to support Gregoriou (2004) findings about bad market timing of FoHFs.

Moving further to our analysis, we create an equally-weighted index for MS strategies across the different classification in the HFRI Index and we create a correlation table between our created index, HFRI FoF Index, equities with S&P500 as proxy and fixed income with BofA Merrill Lynch Corporate Master Index as proxy.

Index	MS INDEX	HFRI FOF	BoFA index	S&P500
MS INDEX	1	0.93	0.50	0.81
HFRI FOF	0.93	1	0.42	0.74
BoFA index	0.50	0.42	1	0.32
S&P500	0.81	0.74	0.32	1

Table 1. Correlation table of examined strategies, Source: Stone Mountain Capital Research, HFR Inc, BofA Merrill Lynch, S&P Dow Jones Indices

The table above highlights the high correlation between MS and FoHFs, which boosts the argument about similarity in the underlying strategies. More to that, MS have higher correlation to traditional indices than FoHFs, which diminishes the diversification advantage, indicating that FoHFs could be a better (ex-post) diversifier for investors with significant exposure to the above indices. Theory and empirical studies suggest that MS have superior risk-adjusted performance, so we extend our analysis towards that direction.

Statistics/Strategy	MS	FoHFs
Annualised Return	2.92%	0.04%
Annualised Volatility	6.11%	5.51%
Max. Drawdown	-19.15%	-21.93%
Skewness	-1.18	-1.44
Kurtosis	7.70	6.47
Calmar Ratio	0.15	0.00
Sharpe Ratio($r_f=2\%$)	0.15	-0.36
Sortino Ratio	0.04	0.29
Downside Risk	1.25%	0.48%

Table 2. Statistical comparison MS vs. FoHFs, Source: Stone Mountain Capital Research

The table above exhibits the statistical features of the two strategies highlighting the higher returns and volatility of MS, leading to higher Calmar and Sharpe Ratio of MS. Both FoHFs and MS are negatively skewed indicating their high probability of negative events in their returns, with FoHFs having more negative skewness than MS. Furthermore, both distributions are leptokurtic, which is a result of return clustering around the mean and the large fluctuation in a tail event. This contradicts the investor type that we see in these strategies, as pension funds and insurance companies tend to and should avoid strategies exhibiting leptokurtic distributions due to their conservative investing. FoHFs have a drawdown of 21.93%, which is slightly higher than MS's drawdown and both occurred between June 2008 and December 2008 at the outburst of the global financial crisis. MS exhibit higher downside risk, which leads to a lower Sortino Ratio than FoHFs opposing to the prevailing literature about absolute dominance of MS in terms of risk-adjusted performance.

The formulas used for the above statistical analysis are below:

- **Max.Drawdown** = $\min\left[\frac{P_{tr} - P_{t-q,r}}{P_{t-q,r}}\right]^n$, where $\{t=1,2...T\}$, $\{q=1,2,...T-1\}$ if $\frac{1}{n} \sum_{m=1}^{m=q} \frac{P_{t-m+1,r} - P_{t-q,r}}{P_{t-m+1,r} - P_{t-m,r}} = -1$, otherwise 0.
- **Calmar Ratio** $\frac{\text{Annualised Return}}{|\text{Max.Drawdown}|}$
- **Sharpe Ratio** = $\frac{R_p - R_f}{\sigma_p}$, where R_p is the annualised return of the index, σ_p the standard deviation of the index and R_f the risk-free rate.
- **Sortino Ratio** = $\frac{R_{\text{above MAR}} - R_f}{\sigma_d}$, where R represents the returns above a minimum acceptable rate and σ_d is the downside deviation

The analysis is extended by using the seven factor model Fung and Hsieh proposed in 2004 to explain the returns of FoHFs and then MS returns are regressed against the same factors. The equations run are as below.

$$R_{\text{FoHF}} = \alpha + \beta \cdot \text{Bond}_{\text{straddle}} + \gamma \cdot \text{Currency}_{\text{straddle}} + \delta \cdot \text{Commodities}_{\text{straddle}} + \varepsilon \cdot \text{S\&P500} + \zeta \cdot \text{size}_{\text{spread}} + \eta \cdot \text{Bond}_{\text{factor}} + \theta \cdot \text{credit}_{\text{spread}}$$

and

$$R_{\text{MS}} = \alpha + \beta \cdot \text{Bond}_{\text{straddle}} + \gamma \cdot \text{Currency}_{\text{straddle}} + \delta \cdot \text{Commodities}_{\text{straddle}} + \varepsilon \cdot \text{S\&P500} + \zeta \cdot \text{size}_{\text{spread}} + \eta \cdot \text{Bond}_{\text{factor}} + \theta \cdot \text{credit}_{\text{spread}}$$

where R_{FoHF} : returns for FoHFs, R_{MS} : returns for MS, $\text{Bond}_{\text{straddle}}$: Bond lookback straddle, $\text{Currency}_{\text{straddle}}$: Currency lookback straddle, $\text{Commodities}_{\text{straddle}}$: Commodities lookback straddle, S\&P500 : Returns of S&P500 Index, $\text{size}_{\text{spread}}$: spread between Russell 200 index and S&P500, $\text{Bond}_{\text{factor}}$: Federal Reserve's 10-year constant-maturity yield and $\text{credit}_{\text{spread}}$: change in the difference between Moody's BAA yield and the Federal Reserve's 10-year constant-maturity yield.

For both FoHF and MS, the only significant non-zero factors that attribute to their performance are the equity factors. This is explained by their high cross-correlation leading our analysis to rely on the mentioned statistics, where we observed the outperformance of MS in terms of return, Sharpe and Calmar Ratio. This premium could also be associated with bigger operational risks of MS because investors in MS bear the idiosyncratic failure risk of the fund, while FoHFs reduce their risk via their managerial diversification. MS may offer investors illiquidity premium due to their flexibility in investing, when it comes to illiquid investments. A last point, that deserves to be mentioned, is the self-selection effect as introduced by Agarwal and Kale (2007), which is the confidence of the best-in-class to run investments across asset classes that requires expertise. MS appear to be a better channel for institutional investors to seek for alpha, and as shown in Stone Mountain Capital Perspective Vol. 6 naive investors can achieve similar returns with sophisticated managers.

This analysis ex-post and should not be exclusively used for investment decisions. It is based on external use of data. The data for the model is provided by David Hsieh's Data Library and can be found here. Furthermore, the analysis is based on indices (portfolio level) and not on individual fund basis, which should be taken into serious consideration as it differentiates investment decisions. Each fund should be analysed thoroughly based on factor and other portfolio exposures and preferences.

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