Special Issue **Hedge Funds**

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THE COST OF ACCURACY IN THE LEAST SQUARES MONTE CARLO APPROACH
Dear readers,

Hedge Fund research is today one of the most active and challenging areas of research in the field of investment research. Indeed, most of the academic papers on Hedge Funds were originally direct extensions of studies related to mutual funds. But the latest literature developments are interestingly focused on the particularities of the Hedge Funds investment vehicles. We can already find a bunch of papers on the different liquidity issues related to these funds, both on the market and the funding sides. The propagation of risks between Hedge Funds via Contagion phenomena is among the topics treated by the current literature. And last but not least, the design of optimal incentive fees structures is an example of the new research topics related to the Hedge Funds industry. The major consequence is the emergence of specific needs. Generic topics such as funds performance and portfolio risk measurement are directly impacted and sophisticated approaches are developed to optimally solve these important practical concerns in the Hedge Funds environment. The filtering of time varying alphas and betas from reported returns can be cited as the first example of this evolution.

This special issue of BMI includes guest contributions from renowned researchers in the field. In the hedge fund context, the measure of alpha is not an easy task. Hughes Pirotte and Nils Tuchscheidt tackle this problem and review the existing literature in the first contribution of this volume. Of course, performance measurement exercise is constrained upon the data availability. Vikas Agarwal, Vyacheslav Fos and Wei Jiang analyze hedge fund performance before “birth” and after “death”, i.e. when hedge funds do not self-report their performances to commercial database. Gilles Criton and Olivier Scaillet adapt to the hedge funds universe a recent performance measurement technique that controls for the proportion of true alphas. In particular, they cover the specificities of hedge funds dynamics in considering time varying betas. Monica Billio, Lorenzo Frattarolo and Loriana Pelizzon use a Markov Switching model to obtain time varying alphas, both for the whole industry and for hedge funds strategies. Interestingly, they find that hedge fund ability to generate alphas has been highly affected by crises, and in particular by the recent financial turmoil. Finally, in the last contribution of this issue, Roberto Savona investigates contagion dynamics between hedge funds during these crises. He provides a red flag system that can help hedge funds portfolio managers to build diversified portfolios.

Serge Darolles
Guest Editor of BMI – Special Hedge Fund Issue
Université Paris Dauphine
Alpha or not Alpha:  
The Case of the Hedge Fund Industry  
Hugues Pirotte, Université libre de Bruxelles, FinMetrics  
Nils Tuchscheid, Tages Capital

Since the Markowitz mean-variance framework of 1952 and the subsequent discoveries of the CAPM and the APT, finance researchers have always strived to produce a reference performance measure adjusted for risk. With such a measure, any supplemental return would be denominated as “alpha”. But is this nectar real? How reliable is it when it comes to individual hedge funds and funds of hedge funds? Risk does not just measure variability. Volatility and correlations are certainly reductive. Investors are not necessarily loyal. Leptokurtosis exists and market frictions prevail. On top of that, the existence of alpha is intimately related to its benchmark and the latter is particularly delicate in the hedge fund industry. This paper addresses the topic by reviewing the related research and challenging its results and the relevance of the existing pricing models when it comes to hedge funds and funds of hedge funds.

Keywords: Hedge funds; Performance; Alpha; Abnormal returns.  
JEL classification: G11; G15; C14.

What Happens “Before the Birth” and “After the Death” of a Hedge Fund?  
Vikas Agarwal, Georgia State University  
Vyacheslav Fos, University of Illinois at Urbana-Champaign  
Wei Jiang, Columbia University

We analyze hedge fund performance before “birth” (i.e., the date on which a fund begins to self-report to commercial databases) and after “death” (i.e., the date on which a fund ceases to self-report to commercial databases). We find that funds initiate reporting after an extended period of high performance, but that such performance deteriorates following birth. Additionally, our analysis indicates that both fund performance and net flows decline significantly after death. We compare the characteristics of reporting and non-reporting funds, and find that funds facing higher costs to disclosure (i.e., those funds with trading strategies that are more likely to be revealed through disclosure) are less likely to disclose by reporting to commercial databases, while those funds that presumably receive greater benefits from disclosure (i.e., young and medium-sized funds ostensibly seeking funding) are most likely to initiate disclosure. Finally, with the sole exception of characteristic-based benchmarks, we do not find any evidence of the reporting funds’ performance being better than that of non-reporting funds. Our results provide a better understanding of the self-selection bias inherent in commercial databases.

Keywords: Hedge funds; Mandatory and voluntary disclosure; Reporting and selection biases.  
JEL codes: G20; G23; G29.

Hedge Fund Managers:  
Luck and Dynamic Assessment  
Gilles Criton, Senior Analyst  
Olivier Scaillet, University of Geneva, Swiss Finance Institute

This paper outlines a new technique that considers the dynamics of hedge fund and controls for the proportion of true alphas. This methodology enabled us to analyze alphas and betas of hedge fund managers differently than the approaches commonly applied. Through this work, we proved that alphas generated by hedge fund managers’ dynamic strategies are not consistent within strategy and across different market conditions. Moreover, our work analyzed market exposures during two periods of economic crisis, illustrating heterogeneity within each strategy. We revealed that, regardless of the strategy, exposures are concentrated on the credit spread and bond risk factors.

Keywords: Hedge Fund Performance; time-varying coefficient; Nonparametric estimation; Kernel methods; Multiple structural breaks; Multiple hypothesis testing; False discovery rate.  
JEL Classification: C12; C13; C14; C12; G31; G23.

A Time-Varying Performance Evaluation of Hedge Fund Strategies through Aggregation  
Monica Billio, University of Venice  
Lorenzo Frattaroli, University of Venice  
Loriana Pelizzon, University of Venice, Goethe-University Frankfurt

We evaluate the time varying behavior of the extra performance of single hedge funds using a Markov Switching model. We calculate the hedge fund performance adjusted by the Fung and Hsieh 7 factors and use this measure as the dependent variable of a Markov Switching model. With this methodology we obtain individual time varying alphas that are then aggregated to compute time varying alphas for the whole industry and single hedge funds strategies. Our analysis shows that profitability changes dramatically through time, across categories and is related to the level of competition of the hedge fund market.

Keywords: Extra performances; Hedge funds; Markov switching models; Financial crises.  
JEL codes: C58; G30; G31.

Detecting Early Warnings for Hedge Fund Contagion  
Roberto Savona, University of Brescia

In this paper we investigate contagion dynamics in the hedge fund industry and explore their main symptoms and implications for systemic risk. Correlations in hedge fund returns, their leverage dynamics, and market liquidity shocks are commonly classified as the main systemic risk drivers in the hedge fund industry. How they can be assembled in order to detect hedge fund contagion? In this paper we try to give an answer to this question by realizing an Early Warning System for hedge funds based on specific red flags that help to detect symptoms of impending contagion effects. Our empirical findings revealed a changing nature of contagion which has important implications for investors and asset managers, in particular regarding the role played by correlations in portfolio construction and portfolio risk management.

Keywords: Hedge funds; Contagion; Dynamic conditional correlations; Time-varying beta; Regression trees.  
JEL codes: C71; C44; G10.
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