Tracking Hedge Funds using Sparse Clones (November 2016)

In cooperation with EBS Universität für Wirtschaft und Recht, Prime Capital AG published a new article in Annals of Operations Research, on replicating the return time series of hedge funds.

There is an interesting debate among academics and practitioners, whether hedge fund returns can be attributed to systematic risk exposures, rather than managerial skills. On the one hand, academic literature suggests that hedge fund performance is mostly determined by alternative betas, which justifies the construction of investable hedge fund clones or replicators. On the other hand, practitioners often claim that management skills are instrumental for successful performance.

In this paper, Dr. Margherita Giuzio, Kai Eichhorn-Schott, Prof. Sandra Paterlini and Vincent Weber study the risk exposure of different hedge fund indices to a set of liquid asset class factors by means of style analysis. That is, the returns of these investment vehicles can be represented by a linear combination of systematic risk factors. The authors extend the classical style analysis framework, by including a penalty that allows to retain only relevant factors, thus dealing effectively with collinearity, and to capture the out-of-sample properties of hedge fund indices by closely mimicking their returns.

In particular, the authors introduce a Log-penalty and discuss its statistical properties, showing that Log-clones are able to track the returns of hedge fund indices with a smaller number of factors and lower turnover, compared to those that are built from state-of-art methods.