

The Consistency of Self-Declared Hedge Fund Styles – A Return-Based Analysis with Self-Organizing Maps

Ramin Baghai-Wadji¹ Rami El-Berry² Stefan Klocker¹ Markus Schwaiger³

¹ Institute of Finance and Financial Markets, Vienna University of Economics and Business Administration, Vienna, Austria, e-mail: Ramin.Baghai@wu-wien.ac.at, Stefan.Klocker@wu-wien.ac.at

² E-Commerce Competence Center Vienna, e-mail: rami.el-berry@ec3.at

³ Financial Markets Analysis and Surveillance Division, Oesterreichische Nationalbank, e-mail: Markus.Schwaiger@oenb.co.at

Abstract

Despite having some common features, hedge funds remain an extremely diverse asset class. So far no commonly accepted hedge fund taxonomy has emerged. In this paper we provide a classification of hedge fund styles by detecting hedge fund groupings with similar return characteristics on the basis of Self-Organizing Maps (SOM).

Based on a ten-year sample of 2,442 active and dead hedge funds, we can identify nine hedge fund classes. Earlier findings which document a fairly adequate self-classification of hedge funds can only be partially confirmed. On the one hand the consistency of funds' self classification has been decreasing over time and on the other hand the reliability of the declared classification substantially differs between various fund styles. Whereas managed futures and short-sell hedge funds are very consistent in their self-declared strategies, other hedge fund groups (such as fixed income, convertible arbitrage, merger arbitrage, distressed securities, sector technology and sector healthcare funds) exhibit an only moderate aptitude in correctly classifying themselves. Moreover, our results show that several declared hedge fund styles have hardly any similarities and are thus a rather useless label with very diverse return patterns incorporated in these funds (a case in point would be the equity hedge category). The SOM furthermore detects similarities in a number of declared strategies such as merger arbitrage funds and distressed securities funds.

Looking at a balanced sample of funds for two five-year subperiods, we document that for the second subperiod the overall fraction of correctly self-classified funds diminishes, which implies that since 1999 style inconsistencies have been on the rise. Furthermore, our results suggest that so-called style creep is an issue in the hedge fund universe. It is readily observable in the case of funds belonging to style categories which are particularly prone to erroneous self-classification, e.g. emerging market and

equity hedge funds. It appears that hedge funds belonging to categories which are poor self-classifiers change their (return-based) investment style rather often whereas funds pertaining to more homogeneous categories, such as managed futures or short sell funds, exhibit more stable and consistent investment behavior. While we do find evidence for style creep, our data does not corroborate the hypothesis of funds strategically gaming their style in order to improve their track record vis a vis their peers.

Our results are important for a number of purposes. For instance, they can help avoid undiversified exposures to certain styles in the construction of fund of fund portfolios. Furthermore, a consistent classification can be useful in the construction of benchmarks and thus assist performance attribution. Moreover, fund investors might be interested in their exposure to different fund styles for risk management purposes.

JEL-Classifications: C45, G11, G23

Keywords: Hedge Funds, Neural Networks, Self organizing Maps.