

## **Abstract:**

This thesis aims to identify main driving market risk factors of different strategies implemented by hedge funds by looking at correlation coefficients, implementing Principal Component Analysis and analyzing "loadings" for first three principal components, which explain the largest portion of the variation of hedge funds' returns. In the next step, a stepwise regression through iteration process includes and excludes market risk factors for each strategy, searching for the combination of risk factors which will offer a model with the best "fit", based on The Akaike Information Criterion – AIC and Bayesian Information Criterion – BIC. Lastly, to avoid counterfeit results and overcome model uncertainty issues a Bayesian Model Average – BMA approach was taken.

Key words: Hedge Funds, hedge funds' strategies, market risk, principal component analysis, stepwise regression, Akaike Information Criterion, Bayesian Information Criterion, Bayesian Model Averaging

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