Improving Portfolio Performance by Smoothing Optimal Weights

Bachelorthesis

University of Zurich[UZH]

University of Zurich

Department of Banking and Finance

Supervisor

Prof. Dr. Marc S. Paolella

Dr. Patrick Walker

Author: Matthias Tschopp

matthias.tschopp@uzh.ch

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Abstract

Real-world applications of Markowitz' portfolio theory often deliver mediocre results in terms of performance and practicability of the optimal weights. This phenomenon has been attributed to estimation errors in the input parameters of the optimization problem which can get magnified when the optimal weights are computed numerically. In this thesis, one examines the smoothing with the exponential weighting moving average of the ex-post Markowitz portfolio weights with a rolling windows backtesting approach along with three benchmark strategies, one of them being the Ledoit and Wolf (2003) shrinkage approach. The findings show an appealing performance using the ex-post weights smoother, especially when considering transaction costs.