Chair for Quantitative Business Administration

Topics for a Master Thesis

8th June 2020

Contents

1 Topics in Portfolio Optimization (Supervisor: Robert Erbe) **2**

1.1 Applied Topics in Asset Management 2

1 Topics in Portfolio Optimization (Supervisor: Robert Erbe)

1.1 Applied Topics in Asset Management

We have established a fruitful collaboration with a Swiss-based asset manager that allows master students to work on real-world portfolio optimization problems. The general research topics are typically quite involved and require solid mathematical knowledge along with good programming skills. The necessary datasets as well as supplementary R code will usually be provided to the student—thus having already worked with R often makes things a bit easier but it is no prerequisite. We invite ambitious students to proactively approach us by sending us their CV as well as their latest university transcript, highlighting their areas of interest.

The following topics have been assigned to students in the past (non-exhaustive list):

- Minimum Variance Portfolio with Market Impact Costs
- Estimation of High-Dimensional Covariance Matrices
- Portfolios from Sorts – Bayesian Methods for Portfolio Optimization