## Abstract

In this thesis, we take the mean-risk approach to portfolio optimization. We will first define risk measures in general and then introduce three commonly used ones: variance, Value-at-risk ($VaR$) and Conditional-value-at-risk ($CVaR$). For each of these risk measures we formulate the corresponding mean-risk models. We then present their robust counterparts. We focus mainly on the robust mean-variance models, which we also apply to historical data using free statistical software R. Finally, we compare the results with the classical non-robust mean-variance model.