Diploma thesis appraisal

Name of the student: Danye Wang
Title of the thesis: Application of Matlab in Portfolio Optimization

The topic of the thesis is portfolio optimization. The goal is to apply different portfolio optimization strategies and to compare their out-of-sample results. The stated goal is in line with the assignment and as can be seen from the elaboration of the thesis, the goal was fulfilled. The analyzed dataset consists of weekly prices of stocks in Hang Seng index in period from 2006 to 2015. The analysis was performed in Matlab and all the codes are included in the annexes.

The structure of the thesis is logical and in the line with the goal. Excluding the introduction and conclusion, the thesis is structured into three main chapters (chapter two, three and four). The Matlab computing environment is described in the second chapter. Analyzed portfolio strategies, backtesting procedure and two performance ratios are introduced in the third chapter. The fourth chapter is the most important part of the thesis as student applies proposed active portfolio strategies on selected historical dataset and analyzes the obtained wealth paths. The results are presented on ongoing basis in the fourth chapter and summarized in tables 4.22 and 4.23 and figures 4.10 and 4.11. To sum up, the minimum-variance strategy (without short-sales and risk-free investment possibilities) was found as the best strategy among all examined strategies.

It must be said that student Danye Wang independently elaborated the thesis focused on complex and computationally intensive topic. Although the conclusions are not groundbreaking, they are interesting, correct and supported by the presented results. Due to my opinion, there are no methodological errors in the thesis and it also complies with the requirements given by Principles for Elaboration of Final Theses.

Due to the aforementioned reasons I recommend the thesis for defense at the final exam.

Ostrava, May 10, 2016

Ing. Aleš Kresta, Ph.D.