Report on Master Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University in Prague

Student:	**František Čech**
Advisor:	**PhDr. Jozef Baruník, Ph.D.**
Title of the thesis:	**Dynamic Portfolio Optimization During Financial Crisis Using Daily Data and High-frequency Data**

OVERALL ASSESSMENT *(provided in English, Czech, or Slovak):*

The thesis is an empirical work comparing different parametric and nonparametric approaches to portfolio covariance matrix modeling and consequences for dynamic portfolio optimization. Main contribution of the work is that it focuses on comparing different methodologies based on high-frequency data (Realized Volatility) and daily data (modern parametric models) using economic criteria. To my knowledge this is one of the first empirical studies performing such a comparison as the few others existing studies use statistical criteria instead. In addition, this is the first study comparing performance of all the models before and during the crisis. To obtain such a results in dynamic portfolio optimization, authors had to study literature far beyond the level of Master courses as he had to cover different multivariate modeling techniques and high-frequency data techniques.

The thesis is well structured, provides all relevant links to the litarature, text is logical, methodology well-described and most important, empirical results are presented carefully. Over the past year author used my advisory services on the very regular (and frequent as well) basis and we have discussed many methodological as well as empirical issues together with several revisions of text, thus I have no additional questions to the defence.

In conclusion, I believe that the thesis is a very solid piece of work in all aspects. Author shown strong quantitative skills while working with computationally demanding methodologies and finally arrived to contributive empirical results intriguing the use of realized measures in the dynamic portfolio optimization with economic evaluation criteria. Thus I fully recommend the thesis of František Čech to be defended with grade excellent – 1. Due to the originality and contribution of the results I also believe the thesis deserves a consideration for the “distinction for an extraordinarily good master’s diploma thesis” award.

SUMMARY OF POINTS AWARDED *(for details, see below):*

CATEGORY		**POINTS**
Literature	*(max. 20 points)*	20
Methods	*(max. 30 points)*	30
Contribution	*(max. 30 points)*	30
Manuscript Form	*(max. 20 points)*	16
TOTAL POINTS	*(max. 100 points)*	**96**
GRADE	**(1 – 2 – 3 – 4)**	**1**

NAME OF THE REFEREE: Jozef Barunik

DATE OF EVALUATION: 22.1.2013

Baruník

Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

Strong	*Average*	*Weak*
20	*10*	*0*

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

Strong	*Average*	*Weak*
30	*15*	*0*

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

Strong	*Average*	*Weak*
30	*15*	*0*

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Strong	*Average*	*Weak*
20	*10*	*0*

Overall grading:

TOTAL POINTS	**GRADE**		
81 – 100	**1**	= excellent	= výborně
61 – 80	**2**	= good	= velmi dobře
41 – 60	**3**	= satisfactory	= dobře
0 – 40	**4**	= fail	= nedoporučuji k obhajobě