Report on Master Thesis

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

Student:	**Tomáš Kroutil**
Advisor:	**PhDr. Jozef Baruník**
Title of the thesis:	Predictive Accuracy of Competing Value-at-Risk Specifications during Crisis: *An Application to CEE Financial Markets*

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

Submitted thesis compares forecasting accuracy of various modern approaches to risk modeling using the high-frequency data from Central European Countries. Author evaluates the out-of-sample forecasting accuracy of 67 Value-at-Risk specifications, including the traditional as well as the most modern quantitative specifications. As author do not use the re-estimation of the parameters, he gives a "hard time" to all of the models on the data from the current crisis. This extensive empirical comparison is thus really exiting and I have to say I was eager to see the results. During his writing, author showed strong quantitative skills as he could handle the estimation, evaluation and finally comparison of such a vast number of models on his own showing knowledge going far beyond the Master courses at the IES. Benefiting from his technical independency, he could wisely use my advisory service for discussions of the results, methods of evaluation of the models and actual comparison of such an extensive empirical results.

The structure of the thesis is logical, is it reader-friendly as it manages to motivate and explain the basic concepts used for modeling. It is quite hard to discuss all the models and specifications being tested and not arrive to a "phonebook". Author managed to review all the used models logically providing the basic intuition and leaving the unnecessary details in references. Following the introduction of the assessment strategy, he also prepared well for the large empirical test. Finally, the extensive empirical (and I have to add comprehensive also) analysis is carried out and the models are compared very carefully using various criteria. Author also compares his findings with other relevant literature.

As I indicated, the results brought by this thesis are very interesting as they compare traditional time series analysis models, RiskMetrics approach, historical simulation and models allowing for time-varying volatility (GARCH family), models allowing for the long memory feature in the volatility (FIGARCH, HYGARCH) with continuous-time models of Realized Volatility developed lately in the financial literature. Moreover, author uses various distributional assumptions for most of the cases. Tomas showed a hard work during this research and he carefully considered most of my numerous comments. Thus, I have no additional questions for the defence.

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In conclusion, this empirical work contributes to the current literature with the very original results from comparison of such a vast number of the models using the crisis data. I believe the results are worth publishing in a standard empirical journal.

I fully recommend the diploma thesis of Tomáš Kroutil for the defence with grade **excellent** ("výborně" - 1). As I consider the work to be outstanding at the level of Master student, I kindly recommend the board of examiners to award the thesis with *"distinction for an extraordinarily good master's diploma thesis"*.

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)*	20
TOTAL POINTS	*(max. 100 points)*	**100**
GRADE	**(1 – 2 – 3 – 4)**	**1**

NAME OF THE REFEREE:
Jozef Barunik

DATE OF EVALUATION:
25.8.2010

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