Report on Master Thesis

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

Student:	**Bc. Veronika Dovhunová**
Advisor:	**PhDr. Jozef Baruník, Ph.D.**
Title of the thesis:	**Volatility Spillovers and Response Asymmetry: Empirical Evidence from the CEE Stock Markets**

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

The author chose to deal with a very interesting topic of volatility spillovers in the Central Europe stock markets. Veronika builds on established methodology and uses high-frequency price data. The thesis is well written and it is very easy to read, though some non-professional readers may find some technical parts too brief.

The main idea of the thesis is to calculate realized volatilities for positive and negative price changes–semivariances–and then apply Vector autoregression on these time series to analyze spillover effects. Additionally, the author calculates SAM–spillover asymmetry measure–to illustrate how negative shocks tend to transmit more to surrounding markets.

The chapters logically follow and Veronika presents all the necessary methodology (including tests for various time series characteristics). I praise the clarity of the technical parts. This shows author's deep understanding of the topic.

I would like to draw attention to stationarity testing on pages 41-42. I am not satisfied with the fact that the author finds fractional integration and proceeds to use VAR model (which under classical/asymptotic theory needs stationary time series) to determine lag structure. The author then concludes that because the estimated model produces stationary time series it must be a satisfactory model to select the lag length. Although the author carefully and diligently builds the model step by step, she also uncovers a weak point in the whole methodology she uses; fitting VAR model to volatility time series, which are known to be usually borderline stationary.

In the reviewer's humble knowledge, it is hard to say how to deal with these "stationarity issues" better (also given the fact she uses established methodology) or how much they affect the results (to the extreme extend that the results are completely false). Needless to say, the author acknowledges these issues herself. One possible remedy could be using Bayesian inference (which as a finite sample statistics does not rely on stationarity of time series for VAR models inference), yet that would be well beyond master level. Hence, I leave this open to debate and do not consider it to be detrimental to the overall grade I award.

The concluding chapter is nicely written and nicely summarizes the whole thesis. Veronika's findings are inline with her and with common sense expectations. To wrap up, this is a solid thesis, which easily exceeds the master level. Having considered all above-mentioned, I award grade 1.

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

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CATEGORY		**POINTS**
Literature	*(max. 20 points)*	19
Methods	*(max. 30 points)*	29
Contribution	*(max. 30 points)*	28
Manuscript Form	*(max. 20 points)*	19
TOTAL POINTS	*(max. 100 points)*	**95**
GRADE	**(1 – 2 – 3 – 4)**	**1**

NAME OF THE REFEREE: PhDr. Boril.Šopov, MSc., LL.M.

DATE OF EVALUATION: 18th June 2014

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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