

Report on Bachelor Thesis

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

Student:	Radim Kašpárek
Advisor:	doc. PhDr. Ladislav Krištofek, Ph.D.
Title of the thesis:	Scale of Market Movements for US stock market

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

Please provide your assessment of each of the following four categories. The minimum length of the report is 300 words.

Contribution

The thesis replicates and extends the results of Zumbach et al. (1999) to S&P500 and DJI stock indices for recent dates between 01/2015 and 03/2017. The main motivation is to show whether the scale index and its dynamics can be connected to some specific (political) events, here specifically the Brexit and the US elections. The results suggest that in fact the markets were strongly affected by these events, which reflected into the specific scale. Also, the Brexit decision shows a more severe impact than the elections results. The contribution is relatively limited by a limited dataset (using high-frequency data) and its narrow focus. Unfortunately, I think that the author has not been able to "sell" his contributions enough in the thesis.

Methods

The most important applied and utilized methods are advanced for a bachelor's thesis. Specifically, the scale index is based on scaling of high-frequency data and the method builds on the principal component analysis and Monte Carlo simulations as well. The more standard methods such as log-normality testing and graphical representation of volatility correlations are handled nicely.

Literature

The topic of the thesis is very specific, which makes the potential literature coverage rather narrow. What I miss here though is at least a mention of works of Didier Sornette and co-authors (mainly Johansen, Zhou and Filimonov). I must note that these do not exactly overlap with the topic but rather follow similar ideas. Therefore, this is not a huge omission. The principal component analysis section (4.4) could have included more (recent) references.

Manuscript form

The thesis is nicely written and well structured. There are few minor problems such as having section 4.1.1 with no following section 4.1.2. The figures could have been given more work, specifically they would benefit from unifying their style. Some figures suffer from insufficiently detailed caption/description where a reader might end up being confused what the figures actually represent.

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

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	20
<i>Methods</i> (max. 30 points)	25
<i>Literature</i> (max. 20 points)	16
<i>Manuscript Form</i> (max. 20 points)	16
TOTAL POINTS (max. 100 points)	77
GRADE (1 – 2 – 3 – 4)	2

NAME OF THE REFEREE: doc. PhDr. Ladislav Křištofuk, Ph.D.

DATE OF EVALUATION: 5.6.2017



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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