

Report on Master Thesis

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

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Advisor:	PhDr. Ladislav Krištofuk, Ph.D.
Title of the thesis:	Testing the Effects of Parameter Changes in the Bornholdt's Model

OVERALL ASSESSMENT:

This thesis describes financial market trading patterns using a model of magnetization from econophysics. Similar attempts can be observed in behavioral economics and evolutionary game theory. The topic of this thesis is a very specialized topic that is not currently being taught at the IES. This topic is not familiar to me and a standard check of the master thesis was done but of the rigorosity of the background.

This thesis is well structured. The topic goes far beyond the IES master thesis objectives.

Literature coverage is narrowly focused on the topic. There is no special part dedicated to the literature and a limited amount of links is provided in the introduction. The references appear on the go clustering in parts two and four and still fulfil the master thesis requirement.

Financial series used as data are subject to simulation and testing the match between the patterns of econophysics and financial series. The simulation and testing parameters on the data presents a high value added to the thesis.

Methodology is relying on simulations and testing various parameters of econophysics functions to catch the patterns of a financial market series. Again, need to mention that I do not feel myself in the position to judge the rigor of the functions applied.

The Author states that seemingly best results were obtained at the border of the set of parameter combinations.

QUESTION 1) What was the selection process for the parameters to be tested?

QUESTION 2) Would it be possible to re-focus the parameters to center the best results?

A minor typo (missing sign) was identified on p.25, last sentence of second paragraph, I assume a minus sign is missing for the "minority case" to be $C_i(t)=-1$.

This thesis is well written and could be shortened and published as IES working paper.

Overall, I recommend this thesis to be accepted for defense and to be awarded 94 pts and grade 1 – excellent!

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

CATEGORY	POINTS
Literature (max. 20 points)	15
Methods (max. 30 points)	30
Contribution (max. 30 points)	30
Manuscript Form (max. 20 points)	19
TOTAL POINTS (max. 100 points)	94
GRADE (1 – 2 – 3 – 4)	1

NAME OF THE REFEREE: PhDr. Vojtěch Seman

DATE OF EVALUATION: 29/08/2014



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