Report on Bachelor Thesis

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

Student:	**Daniel Štancl**
Advisor:	**doc. PhDr. Ladislav Krištoufek, Ph.D.**
Title of the thesis:	**Predicting Financial Market Crashes using Log-periodic Oscillation and Critical Slowing Down**

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

Please provide your assessment of each of the following four categories, summary and suggested questions for the discussion. The minimum length of the report is 300 words.

Contribution
The major aim of the bachelor thesis of Daniel Štancl is to compare two methods used to identify financial bubbles and associated market turmoil, in particular the Log-periodic Power Law (LPPL) model and the Critical Slowing Down (CSD), suggested as being able to detect the end of financial bubbles. Apart from that, the author attempts to enrich existing research dedicated to the LPPL model with a comprehensible description of the non-linear optimization methods in one piece of work. While I acknowledge both of these aims to be fully legitimate, I would raise concern if the second one was actually fulfilled given the extensive literature devoted to this topic. The thesis deals with an interesting topic, even though it is more of an „evergreen" and not as original in my view.

Methods
The thesis employed and compared two concepts deemed suitable for predicting crashes in financial markets - namely the LPPL model and the CSD - both being calibrated on four historical crises. While the methodology used is relatively standard, I like the inference about the mutual „compatibility"of these models despite contradictory underlying assumptions.

Literature
The author has worked with a broad range of predominantly foreign literature. Overall, I consider the literature review to be satisfactory.

Manuscript form
I do not have any objections to the manuscript form and I appreciate the thesis being written in LaTeX. I would only suggest having the text proofread in order to eliminate typos, e.g. pages 5 & 6 mention doc. Krištoufek as a supervisor three times, but each time using different academic degrees and even renaming him in one instance. Also, a language correction would be helpful to rephrase ambiguous formulations, such as the last sentence on page 67.

Summary and suggested questions for the discussion during the defense
Apart from these small imperfections, I consider the thesis to be a solid piece of work and I am convinced the author fulfilled all requirements for a bachelor thesis to a satisfactory level. In case of a successful defence, **I propose grade A.**

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

CATEGORY	POINTS
Contribution (max. 30 points)	22
Methods (max. 30 points)	30
Literature (max. 20 points)	20
Manuscript Form (max. 20 points)	19
TOTAL POINTS (max. 100 points)	**91**
GRADE (A – B – C – D – E – F)	**A**

NAME OF THE REFEREE: PhDr. Oliver Polyák, CFA

DATE OF EVALUATION: **24th May, 2019**

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Referee Signature

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*

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*

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*

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	GRADE
91 – 100	**A**
81 - 90	**B**
71 - 80	**C**
61 – 70	**D**
51 – 60	**E**
0 – 50	**F**