

# Report on Bachelor / Master Thesis

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

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<b>Advisor:</b>	<b>Mgr. Tomáš Křehlík, M.A.</b>
<b>Title of the thesis:</b>	<b>Connectedness of high-frequency data</b>

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

The thesis Connectedness of high-frequency data addresses the important issue what happens when we transition from high-frequency, though uniformly sampled data, to true high-frequency continuous-time data in modelling connectedness of a system.

The analysis is attempted using two models: VAR for the discretely sampled data and Hawkes processes in the continuous time. The models are employed on the same dataset of three assets: Apple, Microsoft, and AT&T. Methodologically, the text is on a very high-level, demonstrating sizeable knowledge of advanced concepts in high-frequency finance. Also one cannot stress enough the invisible work on the data, i.e. the synchronization of high-frequency data, programming of the models, and implementation of the estimation itself.

Apart from the fact that the thesis is of very high modelling standard, it also stands out in the provision of economic interpretation and intuition (or lack thereof) of the results. The event based approach to studying the evolution of connectedness provides an important insight what drives and what does not drive the results.

Sometimes the text might be a bit more polished in terms of form and English construction.

Even though the analysis is only conclusive in a sense that the two models are very different and provide various insights, I reckon that this as a valid contribution to the debate within the literature. A bit more care could have been paid to pinpointing reasons for the differences, however, arguably such question might be far beyond the scope of master thesis.

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Literature</i> (max. 20 points)	20
<i>Methods</i> (max. 30 points)	30
<i>Contribution</i> (max. 30 points)	27
<i>Manuscript Form</i> (max. 20 points)	15
<b>TOTAL POINTS</b> (max. 100 points)	<b>92</b>
<b>GRADE</b> (1 – 2 – 3 – 4)	<b>1</b>

**NAME OF THE REFEREE:** Mgr. Tomáš Křehlík, M.A.

**DATE OF EVALUATION:** August 31, 2016

  
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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	<b>1</b>	= excellent	= výborně
61 – 80	<b>2</b>	= good	= velmi dobře
41 – 60	<b>3</b>	= satisfactory	= dobře
0 – 40	<b>4</b>	= fail	= nedoporučuji k obhajobě