

# Report on Master Thesis

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

<b>Student:</b>	<b>Adam Nedvěd</b>
<b>Advisor:</b>	<b>Jozef Baruník</b>
<b>Title of the thesis:</b>	<b>Analysis of Term Structures in High Frequencies</b>

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

### **Contribution**

The thesis is one of the rare empirical contributions looking at term structures with high frequency data. The main contribution of the thesis is that it uncovers new empirical regularities in the dependence structures of term structures. More specifically, Adam looks at two distinct sources of dependence using recently developed quantile cross-spectral tools (Baruník and Kley, 2015, unpublished manuscript). First, the thesis studies how tails of the term structures are connected, second, the cyclical components of the dependence are uncovered.

### **Methods**

Adam proved good command of methods needed to capture the complex dependence structures of the yield curve. While working with high frequency data about yield curve is demanding, frequency time series analysis is advanced methodology that Adam mastered well. Adam used recently developed quantile cross-spectral analysis as a main workhorse of his analysis, and showed deep level of knowledge in the rigorous analysis.

### **Literature**

Adam demonstrates a good understanding of the current literature, and works with state of the art methods. Relevant literature is discussed in the text and used for developing own novel approach to yield curve modeling, I only miss bit deeper discussion of the quantiles/tails literature.

### **Manuscript form**

The text is logical, well written, connects findings to the existing literature well. Adam worked consistently to obtain the results for a long period, and we have discussed the results and text on a regular basis during the year. Although the manuscript is on very high level, better connection between some sections could provide smoother reading. Still, this is very minor comment on the style.

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## Summary and suggested questions for the discussion during the defense

In conclusion, I believe that during the work Adam proved himself to be an independent researcher, obtained interesting original results, and mastered advanced techniques. Hence thesis deserves to be defended. In case Adam is confident in presenting the details of the work during the defense, and mainly present economic motivation, why he believes the results are important for us economically, as well as where he views his work in comparison to the current literature in finance, I suggest to award the work with grade "A" without doubts.

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Contribution</i> (max. 30 points)	30
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	18
<i>Manuscript Form</i> (max. 20 points)	16
<b>TOTAL POINTS</b> (max. 100 points)	<b>94</b>
<b>GRADE</b> (A – B – C – D – E – F)	<b>A</b>

**NAME OF THE REFEREE:** Jozef Baruník

**DATE OF EVALUATION:** September 10, 2018

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**Referee Signature**

**EXPLANATION OF CATEGORIES AND SCALE:**

**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.*

<i>Strong</i>	<i>Average</i>	<i>Weak</i>
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.*

<i>Strong</i>	<i>Average</i>	<i>Weak</i>
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.*

<i>Strong</i>	<i>Average</i>	<i>Weak</i>
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.*

<i>Strong</i>	<i>Average</i>	<i>Weak</i>
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