Report on Master Thesis

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

Student:	Pavel Fišer
Advisor:	doc. PhDr. Jozef Barunik Ph.D.
Title of the thesis:	Co-jumping of yield curve

***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 thesis is an original piece of work focusing on co-jumps and their influence on the term structure of the U.S. bonds. The author uses unique set of high frequency data about the term structure, and quantify the impact of co-jumps on the correlation structure of the bond pairs. Further, he finds link between main macroeconomic news announcements and co-jump behavior using newly proposed probabilistic model. The work is hence highly contributive empirical work that could potentially be published in a respected international journal (I have no doubt that journals similar to Journal of Banking and Finance level would be interested to publish the results).

Methods

Pavel uses advanced frequency domain techniques including wavelet analysis, and high frequency data to estimate the co-jumps of the term structure. Although the techniques rely on the methods proposed by Barunik and Vacha (2018, JFM), author needed to adjust the framework to fit the bond futures significantly. In turn, Pavel developed his own code adapting the methodologies to the new data, and showed very strong command of the economic model building, statistics, econometrics, and also coding. I need to stress that we have spent quite significant amount of time together with Pavel during the consultation hours, and I could see large amount of time and efforts he put into the thesis preparation despite the fact that at the stage of preparation of the proposal, I have tried to discourage him from the topic since I knew it will be very demanding work. From this perspective, the thesis turned to be very successful project for him.

Literature

Pavel demonstrated his deep understanding of the literature and provides credit to all important as well as relevant studies. He works with relevant literature properly, and adapts his own original ideas based on proper understanding of the previous literature. With this respect, Pavel provided excellent work too.

Manuscript form

The text is logical, well written, connects findings to the existing literature well. Pavel 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. I have seen the text being rewritten several times, and have no additional comments on the form.

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Summary and suggested questions for the discussion during the defense

In conclusion, I believe that during the work Pavel proved himself to be an independent researcher, obtained interesting original results, and mastered advanced techniques. Hence thesis deserves to be defended. In case Pavel 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. In addition, I award the thesis with maximum number of points since it deserves this evaluation at all categories due to very serious and rigorous approach of Pavel.

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

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

NAME OF THE REFEREE: Jozef Barunik

DATE OF EVALUATION: May 25, 2018

Referee Signature

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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.*

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**