

Report on Bachelor / Master Thesis

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

Student:	Matej Leško
Advisor:	Mgr. Lukáš Vácha, Ph.D.
Title of the thesis:	Volatility transmission during the petroleum market shock

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

Short summary

The thesis focuses on the volatility connectedness of the West Texas Intermediate oil futures and the U.S. stock market during the Covid-19 pandemic and post-pandemic recovery. Matej uses classical spillover measures and Spillover asymmetry measures (using realized semivariances). He estimates the connectedness of a portfolio of the main 30 U.S. stocks and the U.S. sectors with the oil. The dataset covers the period from August 2019 to June 2022. Results show increased connectedness during the pandemic and stronger bad volatility spillovers.

Contribution

Matej, in the thesis, shows that the beginning of the COVID-19 pandemic is connected with increased volatility spillovers. He also reports interesting results of volatility spillover asymmetry - the different impacts of positive and negative semivariances. I see the main contribution in taking care of the robustness of the methods. Matej demonstrates that the exclusion of two observations can dramatically change the results. However, the thesis would benefit from a deeper discussion of this problem.

Methods

Matej uses standard methods for the VAR estimation and spillover measure computation. Volatility and semivariances are estimated by realized measures applied to high-frequency data. All methods are used correctly.

Literature

In the thesis, Matej uses relevant literature in the field. Viewing the work with literature, it is clear that Matej understands the literature, and he quotes appropriately.

Manuscript form

Manuscript is well structured, but unfortunately there are many typos and language errors. As an advisor, I know that there was a time pressure, so the manuscript would greatly benefit from a deeper revision. There is also room for more precise description of the results and connection with the main hypothesis. Moreover, many Figures have very small fonts on axes and Some Figures are difficult to find.

Overall evaluation and suggested questions for the discussion during the defense

To conclude, Matej did a lot of good work on the difficult topic. The methods used and how they were applied are well above the bachelor's level. The work on the thesis helped him considerably increase his knowledge. However, the thesis could have been much better when better care was taken to manuscript form and better connection and presentation of results.

I fully recommend the thesis for defense as it fulfills the requirements for a bachelor thesis at IES. I suggest a grade C with a suggestion to the committee for giving a better grade in case of excellent performance during the defense, especially an exposition of the thesis's contribution. The results of the Urkund analysis do not indicate significant text similarity with other available sources.

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

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	20
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	20
<i>Manuscript Form</i> (max. 20 points)	5
TOTAL POINTS (max. 100 points)	75
GRADE (A – B – C – D – E – F)	C

NAME OF THE REFEREE: Mgr. Lukáš Vácha

DATE OF EVALUATION: 27.8.2022

digitálně podepsáno (27.8.2022)
Lukáš Vácha

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.*

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.*

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

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.*

Overall grading:

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