

# Report on Bachelor / Master Thesis

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

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

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

## Short summary

The thesis investigates the connectedness between the U.S stock market and the crude oil during the turbulent times on the financial markets impacted by the COVID-19 pandemic. The stock markets are represented by portfolios formed from the most liquid representatives of 10 U.S. sectors, crude oil is represented by the West Texas Intermediate (WTI) futures. The results suggest the overall volatility connectedness on peaked at the beginning of the sample period, and it was dominated by the spillovers stemming from negative shocks. The research question is very interesting and contributes to the existing literature well and the employed methods are adequate to the task. However, it is difficult for the reader to identify the answer to the research question from the results due to lower clarity of the writing and quality of the manuscript form.

## Contribution

The research question is very interesting and it is important for the field, and the author conducts sufficient research to answer the resarch question. However, the presentation and interpretation of the results does not provide a clear main outcome of the thesis.

## Methods

The employed methods are adequate to the task, and the estimation properly described and conducted. The used methodology is far more complex than would correspond to author's level of studies. The author also checks the robustness to changes in the window lengths and robustness to outliers.

## Literature

Author shows good understanding of the strand of literature connected to his topic, and connects it adequately to his research. The literature review is, however, rather sparse.

## Manuscript form

The manuscript form is the largest shortcoming of this thesis. It is not very well written, and in some places it is difficult to read. It also contains a few typos and errors. The Figures are presented in quite low resolution which makes them difficult to interpret, and they are not well placed within the manuscript. The presentation of the results makes it difficult to identify the answer to the research question.

## Overall evaluation and suggested questions for the discussion during the defense

The results of the Urkund analysis do / do not indicate significant text similarity with other available sources. In my view, the thesis fulfills the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University. I recommend the thesis for defense and suggest a grade D. Below I present questions and comments that I believe should be addressed at the defense:

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- How is the total spillover index itself informative of the spillovers from/to crude oil, given that it contains 10 (30) representatives for stocks and only WTI representing oil. Can it be used to assess the transmissions between stock markets and crude oil market?
- What does comparing the directional spillovers to/from WTI and to/from stocks suggest about the transmission of shocks between stocks and crude oil?
- No confidence intervals are reported, yet these are crucial to assess the statistical significance of the results. What methods could we use to obtain the confidence intervals?

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Contribution</i> (max. 30 points)	17
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	13
<i>Manuscript Form</i> (max. 20 points)	7
<b>TOTAL POINTS</b> (max. 100 points)	<b>67</b>
<b>GRADE</b> (A – B – C – D – E – F)	<b>D</b>

**NAME OF THE REFEREE:** Josef Kurka

**DATE OF EVALUATION:** 24.8.2022

Digitally signed (24.8.2022)  
Josef Kurka

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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.*

**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