Report on Bachelor / Master Thesis

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

Student:	**Tomáš Šamaj**
Advisor:	**Mgr. Jan Šíla, M.Sc.**
Title of the thesis:	**Connectedness between stocks of cryptocurrency-linked US companies and the Cryptocurrency market**

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

Short summary
The submitted thesis examines the effects of the interconnectedness between the returns of cryptocurrency-linked stocks, the US stock market and selected cryptocurrencies. The recently introduced Dynamic Networks method is applied to the large dataset of daily returns from the past two years. The significant overall and directional connectedness is demonstrated as the main empirical result. The author also demonstrates the significant effect of the connectedness measure on the returns of an equally weighted portfolio of cryptocurrency-linked stocks.

Contribution
In my opinion, the presented thesis is an empirical exercise that lacks motivation. It seems to me as just another application of the connectedness methodology to different datasets without properly explaining the implications of such an exercise. The description of the results is mechanical, and the reader does not learn why such results are important, what they present or how they contribute to the literature. Further, while it is standard in the literature to study either volatility connectedness or both volatility and return connectedness, the author does not explain why the thesis concentrates only on return connectedness.

Methods
The dynamic connectedness methods used in the thesis are relatively novel in literature and non-standard for a bachelor thesis. Given that the author is using a precoded package, the methods seem to be applied correctly, and the obtained results align with what the reader would expect. From the methodology and results sections, it is hard to judge whether the author understands the methods well since the methodology section is a rewritten version of the original article, and the results are just mechanically described. During the defense, the author should explain the methodology's logic to demonstrate its good understanding.

Literature
The bachelor thesis contains a very limited literature review. Besides the papers introducing connectedness measures the reader does not learn much, and the section devoted to Cryptocurrency Markets with a single reference does not correspond to the statement that "academic literature studying these markets is nowadays highly relevant". Since the papers devoted to Bitcoin have hundreds of citations, I believe that at least a couple of the most relevant papers should be mentioned in the literature review section.

Manuscript form
The submitted thesis is written using proper language, although some drawbacks are present in the text. Overall, the thesis would benefit from careful proofreading – there are some very long sentences in which the reader can easily get lost; there is at least one single sentenced paragraph; the paragraphs in the literature review section summarizing individual papers should be connected, not summarizing works one by one; unnecessary citation (some works are cited in two consecutive sentences); some abbreviations appeared in the text before being properly defined; footnote numbering is restarted in section 5; methodology explaining bootstrap proceddure for OLS confidence interval should be in methdology section not results; etc.

Overall evaluation and suggested questions for the discussion during the defense

Report on Bachelor / Master Thesis

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

Student:	**Tomáš Šamaj**
Advisor:	**Mgr. Jan Šíla, M.Sc.**
Title of the thesis:	**Connectedness between stocks of cryptocurrency-linked US companies and the Cryptocurrency market**

Overall, I think that the presented thesis is a replication of methodology using a different dataset that lacks proper motivation. While the topic of the thesis is relevant, my impression from reading the text is that it was written at the last minute.

During the defense, the author should

- discuss in detail methods used in the thesis.
- explain the motivation for concentrating on return spillovers and not also volatility spillovers
- compare the results of "portfolio CLS "and "individual CLS "presented in tables 5.1 and 5.3 - since the CLS portfolio is an equally weighted portfolio of individual assets and TO_diff is statistically significant at 5% level what might be the reason that estimates at individual CLS are not statistically significant?
- explain the specification of the OLS model. Given the time series characteristic of data, wouldn't it be better to use some sort of ARMA model?
- explain the difference between estimation of dynamic connectedness with corr= FALSE and corr=TRUE as described in Figure 1

In my view, the thesis fulfils the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University. The results of the Urkund analysis do not indicate significant text similarity with other available sources. I have no additional questions to be answered during the defense. In case of a successful defense, I recommend a grade "E".

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

CATEGORY		**POINTS**
Contribution	*(max. 30 points)*	10
Methods	*(max. 30 points)*	20
Literature	*(max. 20 points)*	10
Manuscript Form	*(max. 20 points)*	15
TOTAL POINTS	*(max. 100 points)*	**55**
GRADE	**(A – B – C – D – E – F)**	**E**

NAME OF THE REFEREE: Frantisek Cech

DATE OF EVALUATION: 30.8.2023

Frantisek Cech

Digitally signed by Frantisek Cech
Date: 2023.08.30 15:56:54 +02'00'

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**