## Report on Bachelor / Master Thesis

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

Student:	Tomas Samaj
Advisor:	Jan Sila
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 thesis more or less introduces a new topics of understanding how cryptos influence the returns of companies with exposure to the crypto market. Tomas uses a time-varying parameter VAR model to model the reciprocal interaction of returns of cryptos and constructs a dataset of companies related to crypto. Tomas models returns of crypto-related stocks with a market factor and an interaction term between the two markets which stems from the connection of returns measured with Dynamic Networks.

#### Contribution

The thesis introduces a relatively novel topic of relationship between stocks with exposure to crypto and the cryptocurrencies themselves. Although vast literature exists on the return dynamics of stocks and cryptos individually, their intimate relation has not been studied very much to date. The results bring new results in tot the interaction between booming and emerging field of crypto assets and traditional stock market. The thesis describes that indeed stocks with higher exposure to crypto are more sensitive in their returns to spillovers from the crypto portfolio, thus opening a new perspective of financial research.

#### Methods

The Dynamic Networks methodology is an advanced model, definitely for a BSc level, and the thesis shows a good understanding of the theory as well as interpretation of the results. The work discusses in good detail how to estimate the model and how to calibrate the parameters. Tomas shows good understanding of method and discusses its outputs well, also introduces backward looking kernel estimation to allow for appropriate use for forecasting.

### Literature

Chapter 2 presents relevant literature and terminology within the context of thesis's motivation and the review covers the sources well. The sources are referenced in an appropriate way and format. It does not seem there are bibliographical entries not mentioned in the text.

#### Manuscript form

The text is logical, well organized and concisely written. The manuscript itself attains a high academic quality and the outputs are well readable, yet they do not include individual description, rather just a title.

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

In my opinion this topic is very relevant and since there is not much literature to it right now, Tomas had a difficult task to understand and develop it, which he accomplished very well. Overall, I enjoyed reading the thesis and it shows a great deal of diligent work on the part of the student. Reader might benefit in more in-depth discussion about the interpretation of the interaction term, however, the outlined goals of the thesis are satisfied. In my opinion, this thesis attains the highest standard of BSc work at IES and I would be delighted to see it develop further in MSc thesis or an academic work.

Suggested question for the defense:

- The crypto portfolio is equal weighted, would you expect a different result if you used value-weighted instead?
  - Can you elaborate on the selection of companies? Would you consider adding companies from unrelated sectors as a control?

In my view, the thesis fulfills the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest a grade A."

The results of the Turnitin analysis do not indicate significant text similarity with other available sources.

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

CATEGORY		POINTS
Contribution	(max. 30 points)	30
Methods	(max. 30 points)	30
Literature	(max. 20 points)	17
Manuscript Form	(max. 20 points)	18
TOTAL POINTS	(max. 100 points)	Α
GRADE (A – B – C – D – E – F)		95

NAME OF THE REFEREE: Jan Sila

DATE OF EVALUATION: August 28, 2023

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	В
71 - 80	С
61 – 70	D
51 – 60	E
0 – 50	F