Blockchain Suptech Training in SWE-FSA

LOCATION: Stockholm FSA

Training group. Dr. Arto Luoma, PhD. Student Jarna Pasanen, Professor Lasse Koskinen, Associate Professor Timo Rintamäki; Tampere University, Finland

April 20th, 2021,

Use Case I: **Libra or Librae? Basket-based Stablecoins**

Here we assess, from an empirical viewpoint, the advantages of a stablecoin whose value is derived from a basket of underlying currencies, against a stablecoin which is pegged to the value of one major currency, such as the dollar. Empirical findings show that our basket based stable coins is less volatile than all single currencies.

Use Case II: **ICOs success drivers: a textual and statistical analysis**

Initial coin offerings (ICOs) are one of the several by-products of the cryptocurrencies world. The investors, of course, hope for an increase in the value of the token in the short term, provided a solid and valid business idea typically described by the ICO issuers in a white paper. However, fraudulent activities perpetrated by unscrupulous actors are frequent and it would be crucial to highlight in advance clear signs of illegal money raising. Here we employ statistical approaches to detect what characteristics of ICOs are significantly related to fraudulent behavior.

April 22th, 2021

Use Case III: **A Statistical Classification of Cryptocurrencies**

This use case provides insights for the separation of cryptocurrencies from other assets. By applying various classification models, we can classify cryptocurrencies as a separate asset class, mainly due to the tail factor. The main result is the complete separation of cryptocurrencies from the other asset types, using the Maximum Variance Components Split method. Additionally, we show that cryptocurrencies tend to exhibit similar characteristics over time and become more distinguished from other asset classes.

Use Case IV: **Cyber risk management with rank based models and explainable AI**

In a world that is increasingly connected on-line, cyber risks become critical. However, to date, there are no risk models for ordinal cyber data. We fill the gap, proposing a rank-based statistical model aimed at predicting the severity levels of cyber risks. The application of our approach to a real-world case shows that the proposed models are, while statistically sound, simple to implement and interpret.

May 18th, 2021

Use Case V: **Analysis of the cryptocurrency market applying different prototype-based clustering**

Here we aim to summarize and segment the whole cryptocurrency market in 2018 with the help of data analysis tools. We will use three different partitional clustering algorithms each of them using a different representation for cryptocurrencies, namely: yearly mean and standard deviation of the returns, distribution of returns, and time series of returns. As a result, this offers a description of the market and a methodology that can be reproduced by investors that want to understand the main trends on the market and that look for cryptocurrencies with different financial performance.

Use Case VI: **Financial Risk Meter for Cryptos**

A systemic risk measure is proposed accounting for links and mutual dependencies between financial institutions utilizing tail event information. The FRM indices detect systemic risk at selected areas and identifies risk factors. In practice, FRM is applied to the return time series of selected financial institutions and macroeconomic risk factors.

Use Case Providers. Use Case 1,2 and 4: University of Pavia; Use Case 3: Humboldt Universität zu Berlin, Bucharest University of Economic Studies and University of Cyprus; Use Case 5: Universidad Complutense de Madrid; Use Case 6: Humboldt Universität zu Berlin

LINK TO THE AGENDA   **REGISTRATION LINK**   **EVALUATION LINK**

**ABOUT THE EU GRANT**

Consortium Partners

FinTech (Financial Technology) means "technology- enabled financial innovation." There is a strong need to improve the competitiveness of European FinTech, creating a common regulatory approach across all countries. This can help encourage innovations in banks and in B2B FinTech companies, in the application of big data, artificial intelligence and blockchain technologies, while authorities and researchers assess their risks. Europe has a broad mosaic of regulatory landscapes and technological innovations in finance. Regulators must move quickly and make important decisions about emerging scientific and business opportunities, without stifling their economic potential. The Fin-Tech project, under the EU's Horizon2020 funding scheme, aims to create a European FinTech risk management hub. To this end, it will develop ready-to-use FinTech risk management models which will be dynamically updated and aligned with best research and practice.

The project includes training to national regulators (suptech) and to European fintech hubs (regtech) by a group of independent experts that have leading research expertise in the measurement of the risks that arise from the application of big data, artificial intelligence and blockchain technologies and, specifically, of those arising from innovative payments, peer to peer lending and financial robo-advisory.

The project has started on January 1st, 2019 and will last until June 2021. The activities of the project include 6 research workshops with international regulators, 48 hours of suptech workshops for each national supervisor and 6 regtech workshops for Fintechs and innovative banks. Financial institutions will be the ultimate validator of the proposed FinTech risk management solutions, as the project will involve the risk management functions of a selected group of banks in writing a final assessment of the project's output (FinTech risk management models).

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Blockchain Suptech Training in SWE-FSA

Agenda: Stockholm Blockchain Suptech I

LOCATION: Stockholm FSA

DATE: April 20th, 2021

8:30 Opening (Professor Lasse Koskinen, Tampere University)

8:45 Blockchain technology in Financial Sector (Associate Professor Timo Rintamäki, Tampere University)

9:45 PhD student's comment (Ph.D. student Jarna Pasanen, Tampere University)

10:00 Overview of Use Cases (Professor Lasse Koskinen)

10:15 – 10:45 Discussion and Coffee Break

10:45 Use Cases I and II
Libra or Librae? Basket-based Stable coins and; COs success drivers: a textual and statistical analysis (Dr. Arto Luoma, Tampere University)

12:15 Discussion

Agenda: Stockholm Blockchain Suptech II

LOCATION: Stockholm FSA

DATE: April 22th, 2021

8:30 Opening (Professor Lasse Koskinen, Tampere University)

8:45 Discussion on USE CASES 1 and II

9:45 USE CASES III and IV
ICOs success drivers - a textual and statistical analysis and;
Cyber risk management with rank based models and explainable AI
(Dr. Arto Luoma, Tampere University)

10:30 -10:45 Coffee Break

10:45 USE CASES III and IV Continue

12:00 Discussion

Agenda: Stockholm Blockchain Suptech III

LOCATION: Stockholmi FSA

DATE: May 18th, 2021

8:30 Opening (Professor Lasse Koskinen, Tampere University)

8:45 Discussion on USE CASE III and IV

9:30 USE CASES V and VI
Analysis of the cryptocurrency market applying different prototype-based clustering
techniques and; Financial Risk Meter for Cryptos (Dr. Arto Luoma, Tampere University)

10:15-10:30 Coffee Break

10:30 USE CASES V and VI Continue

11:30 Discussion on USE CASES V and VI

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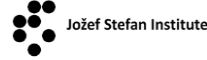
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