Cryptocurrency: Risks and Returns

Faculty Member: Aleh Tsyvinski
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Proposal Description:

Risks and Returns of Cryptocurrency

This is a joint project of Professor Aleh Tsyvinski and Yukun Liu on studying cryptocurrency as an asset class from the empirical asset pricing perspective.

Note: read very carefully the requirements below. Failure to follow the instructions below will lead to disqualification from consideration.

There are two ways to be considered for an RAship.

1. If you do not have a strong computer science and programming background: see Section 1.
2. If you have strong computer science and programming background: see Section 2.

Section 1: If you do NOT have CS/programming background

You will need to complete the task described below to be considered for the position.

Send only the results and your CV to cryptoyale@gmail.com (e.g., do not send the emails with clarifications, questions, etc. to either Professor Aleh Tsyvinski or to Yukun Liu).

Read through the paper "Risks and Returns of Cryptocurrency", Liu and Tsyvinski, Aug 2018. You can find the latest version of the paper here: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3226952

Use either Stata, SAS, or Matlab. Please carefully write and comment your code. The ideal code should be written so that by only changing the directory of the code, we should be able to produce your results with "one-click".

You should follow the paper descriptions in downloading the appropriate data files. Be mindful of the time-span of the data! For the tasks, the only cryptocurrency used is Bitcoin. For concepts and terms that are not immediate apparent to you, we prefer you to google it and learn them: an important skill in doing research.

When you submit your results, please include your code and data needed to produce your results. Again, comment your code. Please save your results in a PDF file, the format of which should be the same as that in the paper.

Task: replicate Table 5: Bitcoin Returns Factor Loadings one Monthly data

Deadline: 11:59 PM September 3, 2018. All emails received after this time will be disqualified. Only the successful candidates will be emailed for round 2. Also, send your CV.

Section 2: If you have strong CS/programming background

Send your CV and a short description of what your skills/interests are to cryptoyale@gmail.com

This project will require machine learning and web scraping skills. For machine learning, we prefer you to know some of these methods: lasso, ridge, random forest, neural networks, and XGBoost.

Requisite Skills and Qualifications:

Award: Gaurav Pathak
Colton Conley
Tobin Application Link: Tobin Application
Project Type: Tobin RA
Project Year: 2018
Term: Fall 2018

Source URL: https://economics.yale.edu/undergraduate/tobin-ra/fall-2018/cryptocurrency-risks-and-returns