

Title: Cryptocurrency Price Determinants and Price Efficiency

Speaker: Praveen Pathak, University of Florida

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Abstract:

The cryptocurrency market has experienced substantial growth in recent years. Though the prices remain volatile, the factors that impact the price dynamics of the new type of investment instrument have not been fully identified yet. In this study, we recognize the dual nature of cryptocurrencies, i.e., being a software program and a financial instrument, and examine the impact of software advancement on the price dynamics of cryptocurrencies. The open-source software (OSS) platform functionality enables social behaviors that we use as signals. Using data from the largest OSS platform, we establish the connection between open-source activities and the price movement of cryptocurrency. In particular, as popularity measures, forks and watches increase the market price increases eventually. On the contrary, contribution measures, such as commits and pull requests, are negatively related to prices. We connect our findings to the public perception of software quality. Our findings have direct implications for investors, OSS platforms, and policymakers.

Informational Efficiency of Cryptocurrency Markets

Based on our analysis of more than 1,000 cryptocurrencies, we find that Initial Coin Offerings (ICOs) exhibit significant inefficiencies with variance ratios less than 0.7 for up to 5 years from the issue date. While a matched sample of Initial Exchange Offerings (IEOs) underwritten by exchanges are consistently more efficient than ICOs, and IPOs (similar market capitalization to ICOs) of stocks trading on regulated markets are efficient within 30 days of issue. Several unique features of cryptocurrencies (attention, platform, and proof type) influence their efficiency. Our findings suggest that due diligence by exchanges and regulators is an important determinant of the efficiency of cryptocurrencies.

Speaker Profile:



Praveen Pathak is the Robert B. Carter Professor in the Department of Information Systems and Operations Management. He received his Ph.D. from University of Michigan at Ann Arbor in 2000. He holds a MBA from the Indian Institute of Management, Calcutta, and a B.Tech. (Honors) from the Indian Institute of Technology. Prior to joining University of Florida, he was working as an Assistant Professor at Purdue University. His research interests are in the field of Information Retrieval, and Web Mining. He has also done research in the area of Business Process Outsourcing, and Healthcare IT. He has published in various journals including Management Science, Information Systems Research, Journal of Operations Management, Journal of Management Information Systems, Production and Operations Management, IEEE Transaction on Knowledge and Data Engineering, Decision Support Systems, Information Processing and Management, Journal of The American Society for Information

Science And Technology, and IEEE Intelligent Systems. His work has also been published in various leading conferences including Proceedings of the International Conference of Information Systems, Annual Hawaii International Conference on System Sciences, Americas Conference on Information Systems, Workshop on Information Technologies and Systems, INFORMS Conference on Information Systems and Technology, and Meetings of Decision Sciences Institute.

Professor Pathak's teaching interests are in the field of Business Data Communications Management, Data Mining, Business Statistics, and Network Security. Prof. Pathak is Member of ACM, IEEE, INFORMS, DSI, and AIS. He is on the editorial board of Decision Sciences, and Journal of Database Management, a program committee member of Workshop on Information Technologies and Systems, and Conference on Information Systems and Technology, and an ad-hoc referee for Management Science, Information Systems Research, Information Processing and Management, International Conference of Information Systems, Hawaii International Conference on System Sciences, and Americas Conference on Information Systems. Before entering academics, Prof. Pathak had worked with Citibank, Index Computing, and Indian Telephone Industries. While at Citibank his team started the bank's mortgage business and established it across all of India.

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