Association for Information Systems

AIS Electronic Library (AISeL)

ICIS 2022 TREOs

TREO Papers

12-12-2022

A Taxonomical Approach to Classify Cryptocurrencies

Ace Vo Loyola Marymount University, ace.vo@lmu.edu

Miloslava Plachkinova Kennesaw State University, mplachki@kennesaw.edu

Follow this and additional works at: https://aisel.aisnet.org/treos_icis2022

Recommended Citation

Vo, Ace and Plachkinova, Miloslava, "A Taxonomical Approach to Classify Cryptocurrencies" (2022). *ICIS 2022 TREOs*. 22. https://aisel.aisnet.org/treos_icis2022/22

This material is brought to you by the TREO Papers at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 2022 TREOs by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

A Taxonomical Approach to Classify Cryptocurrencies

Ace Vo, Ph.D., Loyola Marymount University, <u>ace@vo.lmu.edu;</u> Miloslava Plachkinova, Ph.D., Kennesaw State University, <u>mplachki@kennesaw.edu</u>

Since the inception of Bitcoin in 2008, there are now more than 10,000 cryptocurrencies worldwide (Statista, 2022). This diversity, coupled with the complexity and uncertainty of the domain, motivated us to take a more systematic approach and categorize existing cryptocurrencies. By taking a taxonomy approach to create this classification, we can offer academics and practitioners an easy to navigate list of the properties of each cryptocurrency. Furthermore, such a tool can be useful to compare and contrast specific characteristics and offer a more rigorous method that can provide further decision support to potential investors who are only now entering the field. This taxonomy can answer several important questions from both practice and research, including but not limited to, which factors indicate survivorship in the marketplace, which factors point to potential to commit fraud, and which factors signal maturity. We will follow methods detailed in Nickerson et al. (2013). First, we will choose the taxonomy's meta-characteristics, or its overall objectives. Second, we will identify the ending conditions, or where the taxonomy would be exhausted. The subsequent iterative process would allow for the gestation of common characteristics and creation of categories. Once all the ending conditions are met, the taxonomy will be complete.

The taxonomy development is appropriate for cryptocurrency categorization because it offers both a theoretical and procedural underpinning for such an endeavor. There are several articles that utilize a taxonomical approach in classifying blockchain in general and cryptocurrencies in specific, which lay a great foundation for this research (Karantias, 2020; Nijsse & Litchfield, 2020; Sarkintudu et al., 2018; van der Merwe, 2021). However, these taxonomies are geared towards the technical aspects of cryptocurrencies, and the current project is focused on the socioeconomic aspects on how blockchain can be understood from the outside-in perspective, i.e., from the end users.

References

Karantias, K. (2020). Sok: A taxonomy of cryptocurrency wallets. *Cryptology ePrint Archive*.

- Nickerson, R. C., Varshney, U., & Muntermann, J. (2013). A method for taxonomy development and its application in information systems. *European Journal of Information Systems*, 22(3), 336-359.
- Nijsse, J., & Litchfield, A. (2020). A taxonomy of blockchain consensus methods. *Cryptography*, *4*(4), 32.
- Sarkintudu, S. M., Ibrahim, H. H., & Abdwahab, A. B. (2018). Taxonomy development of blockchain platforms: information systems perspectives. AIP Conference Proceedings

Statista. (2022). Number of crypto coins 2013-2022. Statista. Retrieved from:

https://www.statista.com/statistics/863917/number-crypto-coins-tokens/

van der Merwe, A. (2021). A Taxonomy of Cryptocurrencies and Other Digital Assets. *Review of Business*, 41(1).

Presentation at TREO Talks in conjunction with the 43rd International Conference on Information Systems, ICIS 2022 TREO Talks are not peer-reviewed and not a formal part of the ICIS 2022 Proceedings All TREO Talks are available in the TREO Talks section of the AIS e-Library