

ABSTRACT

The decentralized financial (DeFi) market has witnessed remarkable growth in recent years, transforming how people access, manage, and exchange digital financial services. DeFi essentially refers to decentralized economic activities facilitated by blockchain technology. The DeFi peer-to-peer nature has been seen as a disruptor for traditional financial services due to its flexibility, openness, programmability, financial inclusion, censorship-resistant, transparency, and cost-effectiveness. To better understand the evolving DeFi ecosystem and its potential, analyzing transaction data using social network analysis (SNA) can offer valuable insights. The main goal of this research is to identify influential participants and uncover groups of related transactions, providing valuable information to market participants, regulators, and innovators on how to enhance the stability of DeFi and reduce risks. Three DeFi token-based Ethereum protocols have been analyzed: DAI, UNI, and WBTC. The study unveiled key players associated with each token by applying centrality calculations. Additionally, the modularity metric is employed to identify transaction clusters formed within each token, shedding light on the patterns and relationships within the network of the token economy.

Keywords—Social Network Analysis, Decentralized Finance, Blockchain Technology, Network Science