

APPLICATION OF ASSET TOKENIZATION, SMART CONTRACTS AND DECENTRALIZED FINANCE IN AGRICULTURE

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Abstract

This is a study for applying Decentralized Finance (DeFi) operations in a real life Agricultural finance application focusing on how assets tokenization in general and crop insurance in particular may take advantage of fundraising, global capital markets, atomic swap operations over blockchain and finally peer-to-peer trading without intermediaries under standardized regulations and revolutionary custodial services. Descriptive statistical data presentations such as graphs and tables are used to do the analysis and evaluate the development of the sector. The paper is exploring the boundaries and the depth of Decentralized Finance while focusing on Asset Tokenization Application that are being deployed mainly in different agri-businesses starting with crop insurance and ending up with tokenizing the products over blockchain. In conclusion, asset tokenization as a representational digital asset for a traditional financial instrument is becoming an increasingly important part of modern finance and “blockchainization” of the real world. This paper addresses how agriculture sector as production sector can use asset tokenization in securing the crops by smart contracts and issuing digital tokens to fundraising for micro-insurance. Also, using blockchain to tokenize the crops for future contracts while in the same time boosting the efficiency of the agribusiness finance, crop insurance, trading in primary and secondary markets as well as exploring new markets without intermediaries, are aspects that are found in the present research.

Keywords

Tokenization, decentralized finance, smart contract, crop insurance, blockchain, decentralized ledger.

JEL Classification

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