

Bitcoin in Conventional Markets

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Blockchain technology is being closely studied from a technical point of view and links to the Internet of Things (IoT) as well as its impact on financial investment. A secure blockchain is a distributed network in which information is stored as a chain-connected block. This innovative technology is based on cryptography and decentralization principles, ensuring high data security and integrity. Using cryptographic algorithms, the blockchain can help or face challenges in ensuring privacy and protection against fraud and manipulation. The combination of cryptographic algorithms and consensus mechanisms enables a variety of uses for blockchain technology, such as the development of applications with enhanced security, blockchain distribution networks, intelligent grids or digital financial systems. One of the most evocative immersions of blockchain technology into conventional markets is the innovative use of blockchain to create crypto-assets and the expansive attraction of investors to adopt blockchain currencies for investment portfolio diversification.

Keywords: trust of blockchain ; investment slopes ; cryptocurrency ; international finance ; conventional markets ; Bitcoin investment

1. Introduction

Blockchain technology has reshaped the conventional understanding of investments and proposed a shift from centralized regulated investment networks to a decentralized, collaborative dimension encrypted by technology ^[1]. Previous studies indicate that blockchain technology reveals new operational opportunities for financial service providers, considering the interest of conventional market agents in adopting the blockchain in operational trade, processing capabilities or reporting financial systems . Server-based reporting systems, traditionally used in conventional markets, are under profound transformation , and blockchain technology is used not only as a trend, but also as a way forward for traditional market agents to achieve innovative operational advances and increased operational security. However, one of the most evocative immersions of blockchain technology into conventional markets is the innovative use of blockchain to create crypto-assets and the expansive attraction of investors to adopt blockchain currencies for investment portfolio diversification ^[2].

The widespread advances in blockchain technologies have shown that any context can present opportunities for those who focus on obtaining information. The innovative nature of blockchain technology, combined with the world of financial investments, has become fascinating and full of opportunities, risks and challenges ^[3]. As technology is constantly changing, information can be the key to success. Since the adoption of cryptocurrency, such as Bitcoin, the blockchain has quickly become an economic hotspot ^[2]. The challenge for regulators, financial institutions and the attraction of individuals to invest in blockchain technology has grown rapidly. However, along with the excitement of technological development and the breakthrough in the investment of crypto for portfolio diversification comes the stress of finding the right solutions to secure the gains and mitigate the losses. The search for appropriate solutions for investment requires inspiration and knowledge. Numerous recent research studies on emerging technologies have focused on key aspects of blockchain, such as security, reliability and trust in crypto investments.

Several research studies have addressed different perspectives on blockchain security and have drawn divergent conclusions such as highlighting positive aspects, or elaborating on security concerns, challenges and risks. Studies point to the positive security characteristics of blockchain technology in accounting and corporate financial reporting , logistics and supply chain management , improving the operational efficiency of the health industry , increasing the compliance potential of companies in applied information sharing practices and safeguarding sensitive data ^[4]. Zamani et al. investigated a series of blockchain incidents based on understanding the root causes, and formulated recommendations for prevention and security consolidation. Such security risks in blockchain technology surpass the widely debated regulatory insufficiencies and address aspects such as the permissionless of blockchain caused by restrictive network hashing power ^[5], poor design or vulnerability of smart contracts , suspicious or malicious breaches of currency blockchains ^[6] with the purpose of altering wallet addresses and digital wallet breaches . Given the decentralization of

blockchain technologies and the large number of parties involved and the association with different Internet of Things capabilities, researchers draw signals that all the risks associated with blockchain security are yet to be discovered.

The choice to invest in cryptocurrencies stimulated research in looking for answers regarding motivation, modernism, sustainable impact or ignorance . Researchers have turned to game theory or capital market theory to understand and to analyze the complex decision-making process of investors in conventional stock markets. According to game theory, stock market choices may be understood similarly to playing a game, when a participant's actions are influenced by the actions of others . The actions and the strategic choices of investors to buy, sell or hold certain portfolio assets are interconnected with market dynamics.

When it comes to predicting the flow of the supply and demand of stock markets or the values of future returns, the capital market theory was preferred by many researchers. Predicting a stock's expected return is related to systematic risk and market dynamics. According to the modern portfolio theory, developed by Harry Markovitz and followed by many researchers since , an investment portfolio may be considered efficient if potential high returns may be attained at the lowest possible risk exposure. To achieve efficiency, investors are advised to share common assumptions, borrow at risk-free rates and strive for the highest returns while maintaining a low propensity to risk.

2. Reliability and Trust in Bitcoin Investments

Reliability is an important parameter of the blockchain and a crucial issue in the investment world ^[7]. Investors are looking for assets or instruments that give them confidence in maintaining their value and performance over time. The secure blockchain brings a new dimension of reliability in the transactions and transfers of digital assets such as Bitcoin. By their nature, secure blockchains eliminate the need for central intermediaries, such as banks or financial institutions, to validate and confirm transactions. Transaction validation is performed by a decentralized network of nodes, which in theory reduces the risk of human errors and fraud. Studies show that these beneficial aspects of decentralization are outweighed by the risks associated with the security of globally dispersed blockchain networks . With no proper centralization of data, i.e., no unitary control system, the principle on which blockchain technology is based is that of trust between participants in the network concerned. Therefore, secure blockchains can be regarded as tools based on investors' trust in the activities of other participants in the blockchain network. Blockchain technology offers a reliable solution for the preservation and transfer of digital assets, with the potential to improve accounting activities ^[8]. Nevertheless, the absence of unified control over the entire operations between network nodes creates room for ethical deviations and incompatible competitive behavior .

As a result, confidence acquires dual importance in the financial investment sphere. On the one hand, the trust in the blockchain system is given based on the principle of transparency and certainty, relying on the users' perception, experience and affectivity towards the blockchain . On the other hand, trust can be quantified by the confidence given by the willingness of many individuals to invest time or capital in cryptocurrencies . Trust is dependent on the collective interest of the participants . If the common interest in achieving the financial performance of the entire blockchain system is known and protected by blockchain-specific data protection rules, the common interest of participants may be reflected in the direction of increasing the reliability and performance of the cryptographic investment network. However, if the interests of individuals are channeled towards obtaining their own benefits without considering the common-sense principles of the blockchain, the risk of fraud or security breaches may occur, with the consequence of affecting the security of blockchain systems.

Most of past research focuses on blockchain security and privacy , risks and challenges . Few studies have investigated the reliability and trust of data in blockchain technology and even fewer have examined the need for a modern comprehensive theoretical framework in which blockchain technology may be integrated with conventional market understanding in the context of the adoption and development of cryptocurrency ^[9]. Researchers' contribution to the literature is calibrated by an analysis of the relationship between the evolution of Bitcoin's investment slopes in the context of existing asymmetric market information, adding new insights to the literature concerning the choice and the trust to invest in cryptocurrency.

3. Cryptocurrency Complementing Traditional Investments Imprint New Challenges to Financists and Accountants

Interest in investigating the adoption of cryptocurrency for investment purposes is growing. Various studies have examined the use of Bitcoin in the diversification of investment portfolios and offered divergent results. On the one hand, research finds Bitcoin to be a diversifier in an investment portfolio and not a hedge , highlighting BTC's significant

influence of the spillover effect in relation to other assets . Other studies show that Bitcoin can be considered a hedge over short-time horizons under extreme financial market conditions . Corbet et al. have analyzed the investment role of cryptocurrencies and have concluded that cryptocurrencies do not exhibit links with conventional markets.

Previous studies on BTC investments and sustainability impacts turned to agent theory or capital market theory to build on the understanding of crypto investments choice and came to divergent conclusions. Traditional market theories, as we have known and experienced, require modern approaches to adapt and encompass the technological advancements that transpose to innovative new financial tools in investment markets. The rules that conventionally apply to traditional regulated markets seem to need enhancement as well as to incorporate cryptocurrencies.

The reality of recent years seems to show that nothing can prevent the innovation speed unleashed by cryptocurrency systems and their associated distributed ledger technologies being adopted globally by innovative businesses. Financial innovations generated by the expansion of virtual transactions were quickly accepted by individuals and new terms such as cryptocurrencies, stable coins, defi, NFT, CEX, DEX and ICOs were very quickly integrated into daily language .

Companies that are authorized to trade virtual currencies are obliged to protect the interests and the privacy of their customers. To ensure sustainable economic development and reporting, economic operators are obliged to implement effective corporate governance systems and, thereby, systems to prevent, detect and accurately disclose financial information, nonconformities and financial crime risks . Given the general challenges of regulating and defining terms specific to crypto markets, such tasks sometimes become difficult and can make a difference in attracting customers in a competitive environment.

The decision to invest has multiple implications, the financial or accounting being worth considering. Studies relating to the accounting aspects of cryptography systems and taxation highlight the need for regulatory implementation or clarification regarding the financial treatment, reflection and reporting of cryptographic assets ownership and use. The rise or fall in investment portfolio returns actively influences financial indicators ^[53]. Conventional markets have strict regulations concerning when or how to reflect value fluctuation in financial reports. Crypto assets, on the other hand, have inhomogeneous regulatory approaches regarding when, who, how or if to reflect value fluctuation in financial reports. Understanding the propensity to invest in cryptocurrency, or comprehending the changes in investment slopes, are emerging topics regarding the relationship between conventional investment markets and crypto markets.

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