CRYPTOCURRENCIES IN MODERN FINANCE

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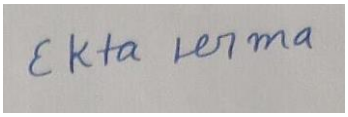

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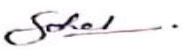

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Abstract

The financial and banking sectors are increasingly focusing on cryptocurrency. The importance of cryptocurrencies in modern finance is investigated in this study. To consolidate earlier studies and gain insights into the benefits and limitations of using cryptocurrencies, we use a narrative literature review method. The findings show that cryptocurrencies provide lower transaction costs, increased efficiency, increased security and privacy, considerable diversification benefits, alternative financing solutions, and financial inclusion to organizations and individuals. The incorporation of cryptocurrencies into modern finance is fraught with difficulties. The lack of regulatory standards, the potential for criminal activity, high energy and environmental costs, governmental bans and usage limits, security and privacy concerns, and the extreme volatility of cryptocurrencies are only a few of these issues. Scholars and managers, as well as those seeking a more comprehensive understanding of these developing financial products, will benefit from the current research.

Keywords- cryptocurrencies, finance, efficiency, challenges, business.

Introduction

The public's trust in traditional banking systems was shaken by the global financial crisis of 2008. The first signals of economic distress were seen on March 16, 2008, when Bear Stearns and Lehman Brothers filed for bankruptcy. The effects of the shock did not stop at these organisations; instead, the debt contagion spread to other financial behemoths like AIG, Bank of America, Citigroup, JPMorgan Chase, Goldman Sachs, and Morgan Stanley. The global financial crisis moved beyond the United States to Europe and Asia. An anonymous person, group, or organisation working under the pseudonym 'Satoshi Nakamoto' established an electronic peer-to-peer system based on the cryptocurrency bitcoin in the aftermath of the 2008 global financial crisis. Bitcoin is a decentralised digital money that was first introduced in 2008 and began to be used in 2009. It was a reaction to financial firms that frequently privatised

profits while socialising losses. The necessity for a system that allowed quick and cheap transactions without the intermediation of any trusted third parties (e.g., banks) was a major driving force behind the creation of cryptocurrencies. Similarly, many academics, enthusiasts, and futurists see bitcoin as a viable alternative to government-issued money in the future. More than 1,600 cryptocurrencies have entered the market since the launch of bitcoin. Beyond the hype, cryptocurrencies are now being used to purchase real-world goods and services. Cryptocurrencies represent a considerable departure from traditional financial system design, management, and regulation. Blockchain is the technology that has led to the growth of cryptocurrencies. "A digital, decentralised, and distributed ledger in which transactions are documented and added in chronological sequence to establish permanent and tamper-proof records," according to Treiblmaier (2018). Instead of the controlled and opaque character of previous monetary systems, blockchain technology is based on peer-to-peer connectivity and cryptographic security, allowing for a decentralised approach with greater transparency and trust. remarked that cryptocurrencies, particularly bitcoin, are new financial tools and alternative investments with benefits for diversification.

Objectives

Opportunities of Cryptocurrencies in Modern Finance:

As previously noted, the use of blockchain technology in conjunction with cryptocurrencies can reduce the cost of trust, which is an important component of the financial system that manifests itself in a variety of ways. These expenses include commissions paid to the intermediary, contract entry and maintenance fees, settlement procedures, cybersecurity, and user authentication. Depositors must have faith in banks to keep their money safe. The financial sector faces numerous hurdles and has recently undergone crises. As a result of the global financial crisis of 2008, millions of individuals around the world lost their jobs and homes. Although cryptocurrencies are not a solution for all financial issues, it is nonetheless necessary to investigate how these economic and financial tools can affect financial stability and help to build a more robust financial sector. Centralized financial institutions are widely held to concentrate risks, socialize losses, and earn considerable economic rents. Cryptocurrencies have the potential to address several issues that plague today's financial systems, including a lack of trust, transaction inefficiencies, and instability (Nakamoto, 2008). Inefficiency,

excessive costs, and liquidity blockage characterize the old method of cross-border payment. Payment methods are opaque, and they introduce various unknowns in terms of pricing and fraud risks. As a result, cryptocurrency payments may be able to reduce the number of these concerns. Cryptocurrencies can be used to avoid fraudulent exchanges or payments, as well as to make service transactions simple and quick.

Challenges of Cryptocurrencies in Modern Finance:

The increasing popularity of cryptocurrencies and FinTech raises various problems and concerns about the viability of future virtual currency integration into the monetary and financial system, especially in the absence of legislation and regulatory standards. The emergence of internet black markets has exploded in recent years. Due to their quasi-anonymity, which makes it impossible to track the identity of the operators and users, Bitcoin has already revitalized underground marketplaces and created several opportunities. According to Kerr (2018), bitcoin is an ideal instrument for conducting business on the digital black market because it thwarts government policing attempts. Cryptocurrencies can revolutionize the way illegal markets work structurally. Cryptocurrencies are commonly used in illegal darknet marketplaces to facilitate the sale of firearms, drugs, and other unlawful commodities. For example, officials seized over 24000 Bitcoins, as well as a variety of narcotics and cash, after receiving a significant amount of outgoing mail from a prominent Australian drug dealer. Similarly, cryptocurrencies encourage the use of the monetary system for criminal activities such as drug trafficking, money laundering, and child pornography. As a result, the omnipresence of illicit markets in controlled economies poses a threat to people's lifestyles, activities, and incomes.

Review of Literature

A review of the literature puts a research study in context by demonstrating the amount of work that has already been done in the study's related field. This section of the article aids in comprehending the findings of research conducted in the relevant areas. Varied scholars have established their alibi and presented various study findings.

Flori (2019) conducts a thorough examination of cryptocurrency's financial applications. Nonetheless, the scope of his research is limited to bitcoin.

Chohan (2017) conducted a cryptocurrency theme review However, other aspects of Chohan's research, such as the problems of cryptocurrencies in the financial ecosystem, remain theoretically unexplored and conceptually undeveloped.

Dorfleitner & Lung (2018) The popularity of cryptocurrencies in the financial context has been highlighted by exponential market volume expansion, according to this document.

Trautman (2014), Cryptocurrencies are a subset of digital currencies that are based on a decentralised network or have centralised organisations. In simple words, cryptocurrencies are a new sort of digital currency created by cryptographic algorithms and exchanged over the Internet utilising protocols like peer-to-peer networking.

According to Pournader et al. (2020), businesses can perform quick money transfers, minimising the need for commissions to pay for goods and services. Ripple, for example, is an open-source, peer-to-peer decentralised digital payment technology that allows for near-instantaneous cash transactions in any form.

Research Gap

We did a narrative literature review using a variety of academic sources, including Google Scholar, Scopus, Web of Science, and Springer Link, to answer the study question. A narrative literature review is a methodological approach that tries to provide a full understanding and critical evaluation of knowledge related to a certain issue, as well as to potentially disclose flaws or problematize concepts, hypotheses, or claims that require additional investigation. A narrative literature review is not intended to be thorough; rather, it is selective in the content it

incorporates, with the goal of furthering and contributing to theory development. Unlike systematic literature studies, compiling a sample of data does not require it to be representative, because the most essential thing is to learn as much as possible about a topic. Using a narrative literature review, we can look at the various ways that cryptocurrencies have been conceptualised in previous studies and assess the theoretical underpinnings of this new financial paradigm. As cryptocurrencies are a relatively new research area that requires thorough elaboration and conceptualization, and because they have been approached from a variety of perspectives, a narrative literature review of these financial innovations is more appropriate to help us meet our research objectives.

As narrative literature reviews have been used in a variety of management, finance, and economics studies, our research technique is well-established. Starting with the origins and foundations of cryptocurrencies, we referred to Nakamoto (2008), which was the first reference on the subject and is widely regarded as the fundamental work that established the groundwork for a huge number of research on bitcoin and blockchain technology. Prior research on the operating basics of blockchain, its functioning, and its applications has been used in order to distinguish between the technology that underpins it and the technology that underpins it. Bitcoin (blockchain protocol) and cryptocurrency are two terms that are used interchangeably. "Does the source have a minor or significant focus on cryptocurrencies in the finance context?" and "Does the source highlight the opportunities of employing cryptocurrencies in modern finance?" were the three criteria used to evaluate the sources included in this study for relevancy. "Does the source provide insight into the challenges of adopting cryptocurrencies in today's financial systems?" and "Does the source provide insights into the obstacles of adopting cryptocurrencies in today's financial systems?" While looking for ideas or concepts related to cryptocurrency, we considered these criteria while screening source titles, abstracts, keywords, and study aims and queries.

Research Methodology

The exploratory investigation is based on qualitative secondary data collection. Research papers are chosen for examination based on their content similarity. To examine the data from various publications and journals, a systematic review process is used. The analysed data is then sieved for the study, resulting in a valuable contribution in this field.

This analysis explains the prospects for progress in Cryptocurrencies as technology advances and the globe undergoes a digitalization phase. In the future, cryptocurrency will be a viable means of exchange and an acceptable alternative for the existing currency. The Cryptocurrency's Blockchain technology makes it safer to use because it allows the user to keep their money safe and secure. But, as with any coin, there are some disadvantages to cryptocurrency. Because the current system is not regulated or controlled by the government, there is a high risk of black marketing.

All of this data is secondary and has been extracted from Google Scholar and a few other websites.

Findings

1. Cryptocurrencies are investment assets, and are sometimes considered in the same way as stocks are for accounting purposes.

2. Böhme et al. (2015) provide a more extensive but still accessible explanation of the fundamental elements of the present technology underpinning cryptocurrencies. Narayanan et al. (2016) provides a thorough description of the textbook. The use of a public cryptographic key to identify ownership is a critical aspect. The corresponding private cryptographic key can then be used to confirm ownership of the linked public key as well as to instruct cryptocurrency transfers to other public keys. The number of keys available is effectively limitless. Because these keys are 256-bit binary values in the case of Bitcoin, there are 2256 potential public keys, which is an almost impossibly enormous amount.

3. Within peer-to-peer networks, blockchains are validated and updated using a 'consensus mechanism' (for example, "proof of work" or "proof of stake") that prevents network members from generating a fake version of history. This agreement therefore allows for fully decentralised safe ownership and trade verification. The term "block" was first used in the context of Bitcoin since its consensus method ('mining') is used to append 'blocks' of roughly 1000 transactions to the chain of transaction records at a time.

4. Note that transactions in cryptocurrencies are subject to limitations such as the absence of reversibility, which means that an incorrect transaction cannot be reversed once it has been

recorded in the block. Traditional payment methods, such as bank transfers and credit card transactions, are more adaptable in this regard.

5. It may, however, influence the choice to mine additional currencies (the marginal cost of coin production should be below market price, which stands for the marginal profit). The difficulty of the mining algorithm, according to Hayes (2015), is also a determinant of cryptocurrency pricing. This metric could be a barometer of the cryptocurrency's cryptographic technology's dependability, and hence a component of the cryptocurrency's basic worth, as it symbolises transaction security, which users appreciate.

Conclusion

The research on the function and challenges of cryptocurrencies in current business and financial systems has been synthesised in this study. The increasing popularity and acceptance of cryptocurrencies demonstrates that traditional financial ecosystems are often unable to respond to citizens' needs and concerns in the aftermath of the disastrous 2008 financial crisis. Cryptocurrencies can be used for anything from simple to complex financial transactions. Many of cryptocurrencies' advantages are practical, as evidenced by their capacity to facilitate more efficient online transactions, cut prices, and expedite payment processes. The usage of cryptocurrencies also means that dealing and exchanging assets over the Internet is more efficient. Cryptocurrencies aid in the development of new business models and stimulate innovation. A cryptocurrency-based ecosystem can open doors for new market entrants and boost entrepreneurs by making the fundraising process easier. Initial coin offerings, for example, allow entrepreneurs and investors to fund new initiatives without the need for intermediaries or the approval of established investors and financial institutions.

Cryptocurrencies' programmability encourages the creation of autonomous decentralised organisations and the spread of automated trusted machine-to-machine transactions. The lack of governance in peer-to-peer networking transactions is one of the most significant barriers to cryptocurrency adoption. Users are vulnerable to identity theft and cyber-attacks. Furthermore, blockchain technology underpins cryptocurrencies, which could allow malevolent actors to operate without control. Users may lose their wallets and their capacity to transact with third parties if cryptocurrencies are affected by bugs or the private key is taken. Apart from these

disadvantages, mining and generating cryptocurrencies consume a lot of electricity, which needs economies of scale. Cryptocurrencies may also be used by investors and enterprises. to make tax evasion, money laundering, and illegal activity financing easier. Although the goal of this study is to look into the benefits of cryptocurrencies and the factors that are preventing them from being a widely used currency, it does not go into great detail about all that is going on in the growing global financial ecosystems. As a result, future studies may provide new insights by taking a holistic approach to different study directions.

Future Directions/ Implications

As institutional money enters the market, several economists foresee a significant shift in crypto. Furthermore, there is a chance that crypto will be listed on the Nasdaq, which would provide legitimacy to blockchain and its usage as a substitute for traditional currencies. Some believe that all cryptocurrency need is a validated exchange-traded fund (ETF). Although an ETF would make it easier for consumers to invest in Bitcoin, there must still be a demand for cryptocurrency, which may not be generated automatically by a fund.

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