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Shariah-compliant cryptocurrency: Navigating opportunities and challenges at the intersection of Islamic finance and digital innovation

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ABSTRACT

The emergence of cryptocurrencies, driven by technological advancements and the rise of electronic business (e-business), presents both opportunities and challenges for Islamic finance. Cryptocurrencies, such as Bitcoin, have introduced novel digital assets that facilitate fast, borderless, and secure transactions without traditional financial intermediaries. However, their compatibility with Islamic finance principles governed by Shariah law remains a subject of debate. While some scholars argue against cryptocurrencies because of speculation and lack of intrinsic value, others explore the potential for Sharia-compliant solutions backed by tangible assets. Despite challenges, such as regulatory uncertainty and value fluctuations, blockchain technology offers transparency and security, aligning with Islamic finance's emphasis on ethical and equitable dealings. Recommendations include continued research, the development of Shariah-compliant cryptocurrencies, education initiatives, regulatory clarity, and embracing innovation to enhance financial inclusion. By implementing these recommendations, Islamic finance can navigate the complexities of cryptocurrency integration, while upholding Shariah principles and fostering inclusive economic growth.

Keywords: *Cryptocurrency, Islamic Finance, Sharia Issue, Bitcoin, Blockchain.*

1. INTRODUCTION

Electronic business, also known as e-business, has transformed the way trade and general exchanges are conducted, and the advent of cryptocurrencies has further revolutionized the financial landscape. By incorporating digital technologies and the Internet, businesses can now operate online, reach a global audience, and conduct real-time transactions, greatly reducing geographical and temporal barriers. Cryptocurrencies, such as Bitcoin, offer a novel form of digital asset that can be exchanged over the Internet without the need for traditional financial intermediaries, enabling direct peer-to-peer transactions that are fast, borderless, and often incur lower fees than conventional banking. The underlying blockchain technology provides a secure, transparent, and tamper-resistant ledger that enhances the trust among users in the digital space.

The integration of cryptocurrency in e-business extends the concept of digital transactions by offering an alternative to traditional currencies (S.-I. Kim & Kim, 2023). Businesses accepting cryptocurrency can leverage the benefits of attracting a growing demographic of tech-savvy consumers, who value the anonymity, security, and global nature of digital currency payments. This is particularly significant in the Islamic finance industry, where adherence to the Shariah principles plays a crucial role in financial transactions. As the digital era continues to evolve, there is growing interest in understanding the implications of Shariah-compliant cryptocurrency. This emerging field presents both challenges and opportunities for Islamic finance, as it navigates the complexities of integrating technological advancements with traditional principles. The unique characteristics of cryptocurrencies, such as decentralization and borderless transactions, have prompted discussions within the Islamic finance community about their compatibility with Islamic law (Haridan et al., 2020).

As the financial technology landscape undergoes rapid transformation, it has become increasingly important to explore the potential impact of Shariah-compliant cryptocurrency on the principles and practices of Islamic finance. This exploration will involve considering the religious, ethical, and practical considerations that shape the adoption and regulation of Sharia-compliant cryptocurrency (Kirchner, 2020). As Islamic finance grapples with the implications of digitization, it is crucial to examine how these developments align with the principles of Shariah law and ethical finance. Furthermore, understanding the potential implications of Shariah-compliant cryptocurrencies in the digital era requires a multifaceted approach that encompasses legal, regulatory, and technological perspectives.

By delving into these complexities, Islamic finance can better navigate the opportunities and challenges presented by the intersection of cryptocurrencies and Shariah compliance. As the demand for Shariah-compliant financial products and services continues to grow, the emergence of a Shariah-compliant cryptocurrency holds great potential for Islamic finance to expand its reach and cater to the needs of tech-savvy Muslim consumers (Haridan et al., 2020).

2. THE EVOLUTION OF CRYPTOCURRENCIES

Cryptocurrency has its roots in the 1980s when Dutch researchers and David Chaum of UC Berkeley started exploring digital currencies (Reiff, 2022). However, the first successful cryptocurrency, Bitcoin, was introduced in 2009 by an anonymous group known as Satoshi Nakamoto (Finley, 2018) Bitcoin's market capitalization has reached over $1 trillion, making it the most prominent cryptocurrency to date. Cryptocurrencies have gained prominence through their ability to destabilize conventional financial institutions by providing a decentralized counterpart to centrally issued currencies, facilitating quicker, safer, and cost-efficient transactions. Cryptocurrencies are generated via a method known as mining, wherein computers are employed to solve intricate mathematical challenges to produce fresh units of Bitcoin.. The emergence of cryptocurrencies has also led to the development of blockchain technology, a decentralized distributed ledger that records every transaction and maintains an updated database of existing users and their digital portfolios.

The emergence of cryptocurrencies has not been a challenge. Critics argue that the lack of oversight and volatility in nascent industries can empower criminal groups and contribute to market volatility. Regulators have started to address these concerns by introducing regulations and considering the introduction of their own central bank digital currencies (CBDCs). Despite these challenges, the emergence of cryptocurrencies has created new opportunities for global exchanges, enabling faster and more affordable cross-border transactions. As of January 2024, 130 countries, including the United States, are considering implementing their own CBDCs to rival the surging popularity of cryptocurrencies.

3. TYPES AND FEATURES OF CRYPTOCURRENCY

Although there are thousands of cryptocurrencies currently in existence, each with its unique features and applications, according to data from Coinmarketcap (*Central Bank Digital Currency (CBDC)*, 2021) (*All Cryptocurrencies*, 2023), there were approximately 22,932 cryptocurrencies in existence as of January 2024, with a total market capitalization of $1.1 trillion. Various types of cryptocurrencies exist, including Bitcoin, Ethereum, Ripple, and Litecoin (Fang et al., 2020). Cryptocurrencies vary in terms of their underlying technology, purpose, and features. For instance, some cryptocurrencies, such as Bitcoin and Litecoin, are digital currencies that can be used as a medium of exchange for goods and services. Conversely, others such as Ethereum have a broader scope and offer a platform for developers to build decentralized applications and execute smart contracts.

Moreover, cryptocurrencies often possess features that distinguish them from traditional financial assets. For example, cryptocurrencies are commonly decentralized, indicating that they function on a network of computing devices instead of being governed by a single authority, such as a government or a financial organization. Additionally, cryptocurrencies offer transparency and immutability through the use of blockchain technology, ensuring that all transactions are recorded and cannot be altered or tampered with (Reiff, 2021) In conclusion, cryptocurrencies represent a new asset class and a revolutionary record-keeping and transfer mechanism through blockchain technology. They have the potential to revolutionize financial systems and empower individuals with more control over their money.

4. ISLAMIC LAW ASPECT ON CRYPTOCURRENCIES

From a perspective of Islamic law, discussions and debates regarding the legality of cryptocurrencies persist (Alshater et al., 2022) Adherence to Islamic finance principles, governed by Shariah law, which emphasizes ethical considerations in financial transactions, is a key concern for scholars. Some argue that cryptocurrencies are not compliant with these principles, primarily due to the speculation and gambling (maisir) associated with cryptocurrency trading, which is forbidden in Islam. Moreover, their use in illegal activities and lack of intrinsic value also raise concerns about their permissibility. The Grand Mufti of Egypt and the Fatwa Center of Palestine, as well as the Turkish government, have expressed concerns, aligning with the views of scholars who believe cryptocurrencies are haram (forbidden) (Hasan et al., 2020) On the other hand, some scholars and institutions are exploring the potential for cryptocurrencies developed in compliance with Shariah principles. This would involve considering aspects of Shariah Law, such as the principle of preserving wealth and the prohibition of usury (riba). Additionally, suggestions for backing cryptocurrencies with real assets, such as gold or silver, and controlling them by authorities are also being explored to ensure compliance (Iman & Samsuri, 2022). Some scholars argue that cryptocurrencies, such as Bitcoin, could potentially be designed to comply with Shariah principles. This would require structuring Bitcoin transactions in accordance with Islamic ethical guidelines, such as avoiding haram activities and ensuring transactions are backed by physical assets or services to add tangible value (Hasan et al., 2020) It is worth noting that Bitcoin lacks intrinsic value, exists only in digital form, and is not controlled by any central bank or company.

Moreover, Bitcoin exhibits attributes that make it acceptable under Islamic law (Sharīʿah) when assessed for its acceptance as a valued, advantageous, recognizable, and transferable form of ownership. Nevertheless, it fails to meet the criteria set by (Abubakar et al., 2019) For being classified as a commodity with inherent value during the screening test. According to their perspective, Islam does not consider money to be a commodity with inherent value, as commodities may possess varying traits. However, money is solely regarded as having quantifiable value or functioning as a vehicle of exchange. In addition, (Jaffar et al., 2017) contend that the value of fiat money is derived from its widespread acceptance, rather than the intrinsic value of the materials it is made of. Furthermore, they assert that fiat money is acknowledged as a medium of exchange in Islamic law, known as the Sharīʿah. Bitcoin exhibits the characteristics of money, including being a unit of account, medium of exchange, and store of value, and is widely and universally acknowledged (Yuneline, 2019). These characteristics correspond to the acknowledgement of Islamic law (Sharīʿah) that gold and silver coins are considered a standard of worth and a means of transaction based on customary and societal agreement. While current cash can be used to acquire these coins, it cannot be used on a postponed basis. Nevertheless, Bitcoin does not meet the criteria for being officially acknowledged as legal money by any government.

However, it is important to acknowledge that under the Gold Standard, the responsibility for creating money rested with Goldsmiths Merchants rather than with the government. The Goldsmiths exerted substantial influence on individuals, businesses, and even countries. During the seventeenth and eighteenth centuries a group of influential individuals, such as merchants, bankers, government officials, and philosophers, contended in their works that an economy prosperity and power could only be achieved by amassing surplus gold (J. Kim, 2011).

Upon analyzing whether Bitcoin qualifies as a financial asset, it is evident that although it possesses ownership rights over actual assets, it cannot be classified as a financial asset because of the absence of tangible asset support. Unlike Sukuk, which are supported by tangible assets, this is distinct from other financial assets (Radzi, 2018) Nevertheless, several experts contend that Islamic banks can contemplate the inclusion of cryptocurrencies within the framework of fiduciary currency regulations. These cryptocurrencies, known as fiduciary cryptocurrencies, can resemble instruments such as drafts or checks. In this scenario, the Islamic bank commits to exchanging or transferring cryptocurrency for fiat money upon the request of the holder.

Islamic scholars do not uniformly accept the recognition of cryptocurrencies. Divergent viewpoints exist within both the Islamic finance community and other stakeholders regarding the ramifications of cryptocurrencies for Islamic finance and its progress (Alshater et al., 2022) Furthermore, ongoing discussions and arguments persist on the conformity of cryptocurrencies with Sharia law. Some academics suggest that the current functioning of cryptocurrencies might be rendered Sharia-compliant by supporting them with valuable metals, such as gold and silver.

This viewpoint aligns with the argument made by proponents who advocate the inclusion of an inherent value element in money, including the existing fiat currency. Therefore, the suggested Sharīʿa Compliant Precious Metal Cryptocurrency (SCPMC) is considered more relevant for achieving the purposes of Islamic law (Maqāsid al-Sharīʿah) because of its ability to preserve wealth and serve as a store of value (Amri & Mohammed, 2019). This is apparent because of the combined attributes of an effective means of transaction in the current implementation of cryptocurrencies and an effective means of preserving wealth linked with tangible precious metals, such as gold and silver. By combining these two features, it is argued that a new approach can offset the inflationary nature of fiat currency and, consequently, existing cryptocurrencies. The primary function of SCPMC is to facilitate payments and receive deposits. However, it does not provide loans to avoid a fractional reserve banking system. Only benevolent loans, known as Al-Qard Al-Hasan, are considered. Nevertheless, the application of this approach is not devoid of present-day challenges, which encompass government backing, information technology infrastructure, accounting, and financial matters (Mansori et al., 2015).

5. FEATURES OF ISLAMIC FINANCE CONTRACTS

Islamic finance contracts, often referred to as Islamic commercial contracts, adhere to the principles of Sharia law and are structured to comply with the prohibitions against usury, speculation, and other activities deemed haram in Islam. These contracts encompass various types, such as Mudarabah, a profit-and-loss-sharing partnership; Musharakah, a joint venture with shared profit and loss; Murabahah, a cost-plus contract for goods or property; Ijarah, a leasing agreement where the lessor retains ownership until full payment; and Salam, where full payment is made upfront for later delivery (Archer & Karim, 2009). These contracts finance trade, real estate, and infrastructure projects, ensuring that financing is tied to tangible assets without excessive leverage or speculation. Islamic finance has experienced significant growth, with assets expanding by around 20% annually over the last decade, although it still represents a small fraction of global financial assets.

6. THE ISSUE OF CRYPTOCURRENCY FLUCTUATIONS IN RELATION TO DEVELOPMENT OF ISLAMIC FINANCE

Islamic finance does not support the use of cryptocurrencies, as they are digital assets with volatile value changes, making them speculative investments prohibited under Islamic law. Furthermore, cryptocurrencies, namely stablecoins like USD Coin (USDC) and Tether (USDT), which support tangible asset reserves, could be considered appropriate for Islamic finance's focus on money backed by assets. However, to ensure compliance with Sharia law, a detailed review by a Shariah supervisory board is necessary to assess whether cryptocurrencies comply with Islamic law's prohibition against interest and speculation as well as other activities deemed haram. Additionally, transparency and disclosure requirements in Islamic finance pose challenges for transactions involving cryptocurrencies because blockchain transactions are anonymous and difficult to track. Finally, while digital assets allow for ethical and equitable financial transactions without intermediaries, which aligns with Islamic finance principles, there are concerns about the potential misuse of cryptocurrencies in criminal activities due to the lack of regulation in the cryptocurrency market.

7. CONCLUSIONS

The advent of cryptocurrencies has both advantages and disadvantages in Islamic finance. While these digital assets provide the possibility for innovative financial transactions and global accessibility, their compliance with the Shariah principles remains a topic of discussion. The shifting values of cryptocurrencies raise issues regarding speculation and adherence to Islamic finance principles, especially regarding the prohibition of interest and asset backing. Nevertheless, the transparency and security features of blockchain technology have the potential to enhance trust in digital transactions, which aligns with Islamic finance's emphasis on ethical and equitable dealing. As the digital era continues to advance, the exploration of Shariah-compliant cryptocurrencies constitutes a vital step toward merging technological breakthroughs with traditional Islamic finance principles. By addressing the intricacies of regulatory compliance and ethical considerations, Islamic finance is well positioned to harness the transformative potential of cryptocurrencies, while upholding its core values of fairness, transparency, and financial inclusion.

8. RECOMMENDATIONS

Based on the comprehensive examination conducted, multiple suggestions have been discovered to efficiently tackle the difficulties and take advantage of the possibilities of the convergence of cryptocurrencies and Islamic finance. Continued research and collaboration among scholars, practitioners, regulators, and technology specialists is crucial to enhance understanding and create creative solutions that align with the Shariah principles and maximize the advantages of digital banking. To this end, efforts should be directed towards the development of Shariah-compliant cryptocurrencies, backed by tangible assets and equipped with controls to prevent speculation and ensure transparency. Education and awareness initiatives are crucial to inform stakeholders about the potential of Shariah-compliant cryptocurrency solutions and to provide guidance on their implementation. Regulatory clarity is essential for providing stable and supportive frameworks for the integration of cryptocurrencies into Islamic finance.

Businesses and financial institutions need to prioritize transparency and compliance with Shariah standards. Embracing innovation, engaging with the technology community, and adapting to technological advancements will enable Islamic finance to enhance efficiency, broaden financial inclusion, and meet customers' evolving needs in the digital era. By implementing these recommendations, Islamic finance can navigate the complexities of cryptocurrency integration, uphold Shariah principles, and seize the opportunities presented by digital finance to foster inclusive and sustainable economic growth

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