Legality of Bitcoin in the Perspective of Figh Muamalah

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ABSTRACT

This study investigates the legality of Bitcoin from the perspective of Fiqh Muamalah through qualitative analysis and literature review. Fiqh Muamalah, an Islamic jurisprudential framework, regulates economic transactions according to Sharia law. The research examines whether Bitcoin, as a digital currency, aligns with Islamic legal and ethical standards by analyzing scholarly articles, religious texts, and fatwas issued by Islamic scholars. Key considerations include Bitcoin's nature as a currency, its speculative role, and potential for illicit activities. Findings reveal diverse scholarly opinions, with some viewing Bitcoin as permissible under specific conditions, while others raise concerns about its speculative nature and lack of intrinsic value. This study aims to provide comprehensive insights into Bitcoin's legality within Fiqh Muamalah, offering valuable information for policymakers, financial institutions, and Muslim investors.

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1. INTRODUCTION

Bitcoin's emergence decentralized digital currency has sparked debates across finance, technology, and law [1], [2]. The compatibility of Bitcoin with Islamic law, particularly Figh Muamalah, is a topic of interest due to its unique characteristics ethical and potential offers implications [3]. While Bitcoin transparency and security, its pseudoanonymity has raised concerns about potential misuse for illicit activities like terrorist financing and money laundering, leading to varied regulatory responses globally [4]. In Indonesia, for example, while Bitcoin is legalized, its use as a payment method is restricted due to concerns about currency value preservation and regulatory risks [5]. The ongoing debate surrounding the ethical permissibility of Bitcoin transactions under Islamic law highlights the need for a nuanced understanding of how digital currencies align with religious and ethical principles in the realm of financial transactions.

Fiqh Muamalah, a branch of Islamic jurisprudence, emphasizes promoting fairness, preventing exploitation, and ensuring transparency in economic dealings [6]. The incorporation of Islamic economic principles is crucial in financial management to establish an ethical and moral foundation, economic sustainability, and distributive justice in society [7]. Islamic teachings advocate for ethical earning, robust wealth

protection through cybersecurity measures, and socially responsible wealth distribution in the digital economy, aligning with Sharia principles [8]. Furthermore, the principles of Islamic finance encourage prudent risk management, avoiding excessive speculation and interest-based transactions [7]. When assessing the compliance of Bitcoin with and Islamic legal ethical standards, considerations must include its classification as a currency, involvement in speculative trading, and potential for facilitating illicit activities, all scrutinized through the lens of Fiqh Muamalah [8].

This paper aims to explore the legality of Bitcoin from the perspective of Fiqh Muamalah through qualitative analysis and literature review methodologies. By examining scholarly articles, religious texts, and fatwas (Islamic legal opinions) issued by esteemed Islamic scholars, the study seeks to provide a comprehensive understanding of the various views and interpretations regarding Bitcoin's permissibility in Islamic finance.

2. LITERATURE REVIEW

2.1 Overview of Bitcoin

Bitcoin, introduced in 2009 by the Satoshi Nakamoto, mysterious the pioneering decentralized cryptocurrency that operates without a central authority, utilizing a peer-to-peer network for transaction validation [9], [10]. Its foundation, blockchain technology, ensures transparency security through a distributed ledger system, revolutionizing various industries beyond finance [11]-[13]. The rapid growth of the Bitcoin market, now valued at around 887 billion dollars, has attracted significant attention from both researchers and malicious entities seeking to exploit vulnerabilities for financial gain [5]. This decentralized nature has raised debates globally regarding the regulation and legal status of Bitcoin, reflecting the ongoing struggle to find a balance between innovation and oversight in the evolving cryptocurrency landscape [10].

2.2 Principles of Figh Muamalah

Figh Muamalah, the Islamic jurisprudence economic governing transactions, is deeply rooted in principles such as the prohibition of Riba (Usury), Gharar (Uncertainty), Maysir (Gambling), the distinction between and Halal (Permissible) and Haram (Forbidden) activities [14]-[16]. These principles aim to ensure justice, transparency, and avoidance of harm in financial dealings. When evaluating modern financial instruments like cryptocurrencies such as Bitcoin, adherence to these principles is crucial to determine their compliance with Sharia law [7], [17].For instance, cryptocurrencies are deemed not permissible in Islam due to their lack of inherent value and susceptibility to regulatory oversight, raising concerns about their alignment with Islamic financial principles [17].

2.3 Scholarly Opinions on Bitcoin

The Islamic scholarly community remains divided on the permissibility of with three main perspectives Bitcoin, emerging from the literature. The first perspective argues that Bitcoin is permissible under certain conditions, emphasising its potential to facilitate financial inclusion and provide an alternative to the interest-bearing banking system. Proponents of this view state that Bitcoin, as a decentralised digital currency, does not inherently violate Islamic principles as long as it is used for halal transactions and not for speculation [17], [18]. They highlight the benefits of blockchain technology, which underlies Bitcoin, to enhance security and enable smart contracts, thus conforming to the ethical standards of Islamic finance [3], [19]. The second perspective views Bitcoin as impermissible (haram) due to its speculative nature and potential to be used for illegal activities. Critics argue that Bitcoin's high volatility constitutes gharar (excessive uncertainty), and its use in unregulated markets can lead to unethical practices, including money laundering and terrorist financing [4], [20]. This viewpoint is supported by various fatwas, such as those issued by the Indonesian Ulema Council (MUI), which cite concerns over speculative trading and its links to illegal activities [19], [20]. The third perspective offers a conditional licence, suggesting that Bitcoin could be allowed if a regulatory framework is established to mitigate its risks. Experts advocating this middle ground emphasise the need for comprehensive guidelines to ensure that Bitcoin transactions comply with ethical standards and Islamic law [5], [21]. They argue that with proper oversight and clear regulations, Bitcoin can be used in a manner consistent with Islamic principles, especially if it demonstrates clear benefits such as financial inclusion and technological advancement [3], [21]. This conditional approach also considers Bitcoin's potential to revolutionise industries by improving security and efficiency, provided it is backed by underlying assets and regulated to prevent abuse [19], [22]. Overall, the debate within the Islamic scientific community reflects the broader discourse regarding the compatibility of cryptocurrencies with Islamic finance, which highlights the need for ongoing research and dialogue to address the ethical and legal implications of digital currencies [18], [23].

2.4 Analysis of Fatwas on Bitcoin

The legality of Bitcoin and other cryptocurrencies in Islamic finance has been the subject of extensive debate among scholars, reflecting diverse opinions and interpretations of Shariah law. Mufti Taqi Usmani's caution against Bitcoin due to its speculative nature is in line with concerns raised by other scholars about the risks and volatility inherent in cryptocurrencies [5], [20]. Sheikh Assim Al-Hakeem's recognition of Bitcoin's innovative potential, provided it is properly regulated, is in line with the views of those who see the advancement of blockchain technology as beneficial, despite the risk of misuse for illegal activities such as money laundering and terrorist financing [3], [4]. The International Islamic Figh Academy's call for further research and consultation underscores the continuing need for a comprehensive understanding of the compliance cryptocurrencies with Shariah principles,

especially regarding issues of usury, gharar (uncertainty), and transparency [18], [24]. Some scholars are of the opinion that cryptocurrencies may be permissible if they fulfil certain conditions, such as having a clear underlying asset and legal benefits, which would align them with Shariah's objective of promoting public welfare (maslahah ammah) [21]. In contrast, other parties, such as the Indonesian Ulema Council, have issued fatwas stating that digital currencies are haram due to their speculative nature and potential harm (mafsadat), emphasising the need for sound legal reasoning and consideration of technological benefits [3], [19]. The debate has also touched on the classification of cryptocurrencies, with some viewing them as digital assets or commodities rather than traditional currencies, affecting the perception of their legality under Islamic law [17], [25]. The varied attitudes reflect the broader discourse on the compatibility of modern financial innovations with Islamic ethics, highlighting the importance of ongoing scholarly dialogue and empirical research to address the ethical dilemmas posed by digital currencies [24]. Ultimately, the permissibility of Bitcoin in Islam remains a complex issue, dependent on the evolving interpretation of Sharia law and the dynamic nature of digital financial technology.

3. METHODS

3.1 Research Design

The research adopts a qualitative design to provide a comprehensive understanding of the various scholarly opinions on Bitcoin's legality. This approach is particularly suitable for exploring complex and nuanced topics like the intersection of modern financial technologies and traditional religious frameworks. By analyzing existing literature and thematic content, the study aims to elucidate the key arguments and principles that inform the debate on Bitcoin within Fiqh Muamalah.

3.2 Data Collection

Data for this study were collected from various sources to ensure a comprehensive analysis, including scholarly articles on Bitcoin, Islamic finance, and Figh Muamalah for academic insights, religious texts like the Quran and Hadith for foundational principles, official religious rulings for contemporary viewpoints, and relevant books on Islamic jurisprudence and financial technologies. The literature analysis involved systematically reviewing these sources to synthesize key arguments and themes related to Bitcoin's legality in Figh Muamalah, organizing them into thematic categories, and integrating findings for a cohesive narrative. Thematic analysis was conducted to identify and interpret key themes, involving steps like familiarization, coding, theme development, reviewing, and defining themes.

3.5 Data Analysis

The analysis involved triangulating the findings from the literature and thematic analyses to draw meaningful conclusions about Bitcoin's legality in the context of Figh This process Muamalah. included comparative analysis of different scholarly opinions and fatwas to identify areas of consensus and disagreement, contextual interpretation of the findings within the broader context of Islamic finance and contemporary financial technologies, and a critical evaluation of the arguments for and against Bitcoin's permissibility, considering both traditional Islamic principles and modern economic realities.

4. RESULTS AND DISCUSSION

4.1 Arguments for Permissibility

A substantial segment of the scholarly literature suggests that Bitcoin can be considered permissible (halal) under Islamic law, contingent upon certain conditions. The arguments supporting this view include:

Decentralization in blockchain technology, as exemplified by Bitcoin [26], not only eliminates intermediaries and reduces costs but also enhances fairness and reduces exploitation in financial transactions. This aligns with Islamic principles of justice and equity, promoting an inclusive financial system accessible to all individuals [26]. Furthermore, the use of blockchain in various

sectors, including finance, education, and healthcare, offers solutions to credit risk, transaction uncertainty, and regulatory imperfections [27]. Additionally, social decentralized media platforms powered by blockchain technology provide users with more ownership, privacy, and control over their content, fostering a democratic and censorship-resistant environment [28]. These advancements in decentralized technologies underscore the potential for creating fairer and more that inclusive systems resonate with principles of justice and equity across different domains.

Blockchain technology, with inherent features like mathematical hash functions, elliptic curve cryptography, and zero-knowledge proofs [29], plays a pivotal role in ensuring transparency and security in various sectors, including finance, food safety, and information security [30]-[32]. By providing immutable and secure transaction records, blockchain enhances trust among stakeholders and reduces the risks of fraud and corruption, aligning well with Sharia's principles of clear and honest transactions [30]. The decentralized and transparent nature of blockchain allows for real-time visibility and traceability, empowering consumers to make informed choices about the products they consume while deterring any attempts at tampering with data, thus fostering accountability and integrity in transactions [31]. Additionally, the robust encryption mechanisms and data integrity offered by blockchain technology contribute significantly to maintaining a high level of security in information systems, making it a valuable tool for ensuring trust and reliability in various industries [32].

Bitcoin can facilitate financial inclusion for the unbanked and underbanked populations, providing them with access to financial services that comply with Islamic principles. This aspect is particularly relevant in regions where traditional banking services are inaccessible or non-existent.

4.2 Arguments for Prohibition

Conversely, several scholars argue that Bitcoin is impermissible (haram) due to its inherent characteristics that conflict with Islamic principles.

Several scholars argue that Bitcoin is impermissible (haram) due to its inherent characteristics that conflict with Islamic principles. One of the primary concerns is its speculative nature, which aligns with the concept of gharar (excessive uncertainty) and maysir (gambling). Bitcoin's high volatility speculative create trading environment where investors can incur substantial losses, akin to gambling, which is prohibited in Islam [5], [17], [33]. The significant price fluctuations of Bitcoin are seen as a form of gharar, leading to ambiguity and uncertainty in transactions, which is against Islamic principles [34]. Additionally, the potential for illicit activities facilitated by Bitcoin's pseudonymous nature is another major concern. Bitcoin transactions can be used for money laundering, terrorism and other illegal operations, financing, conflicting with the ethical and moral standards of Islam, which strictly prohibit involvement in any form of unlawful activities [4], [35]. The misuse of Bitcoin for such activities has been documented, further supporting the argument against permissibility [4]. Furthermore, the lack of inherent value in cryptocurrencies and their susceptibility to regulatory oversight make them non-compliant with Sharia law, as they do not meet the criteria for a valid and stable medium of exchange [17], [33]. Islamic finance principles emphasize the importance of transparency, fairness, and the avoidance of excessive risk, all of which are compromised by the speculative and volatile nature of Bitcoin [18]. The Indonesian government, for instance, has legalized crypto assets in commodity futures trading but restricts their use as a payment method due to concerns about preserving the value of its national currency and the prevalence of existing ewallets and mobile banking systems [5]. This regulatory stance reflects the broader Islamic perspective that prioritizes preventing harm

over potential benefits, as the speculative Bitcoin trading introduces nature of significant risks and uncertainties [34]. Moreover, the divergence in viewpoints among Islamic scholars further complicates the issue, with some categorically prohibiting its use while others endorse it, leading to confusion within the Muslim community [36]. Despite the potential benefits of Bitcoin, such as facilitating online payment transactions without a third party and its use as a hedge for Islamic stocks during the COVID-19 pandemic, the risks and ethical concerns associated with its use outweigh these advantages [37]. Therefore, the consensus among many Islamic scholars is that Bitcoin is haram due to its speculative nature, potential for illicit activities, and non-compliance with Sharia principles, making it an unsuitable medium of exchange or investment in the context of Islamic finance [4], [5], [17], [18], [20], [33]–[37].

Some scholars argue that Bitcoin lacks intrinsic value and is not backed by any tangible asset, which raises concerns about its legitimacy as a form of currency. In Islamic finance, the value of money should be stable and represent a tangible commodity or service, which Bitcoin does not necessarily fulfill.

4.3 Conditional Acceptance of Bitcoin

The debate over the permissibility of Bitcoin in Islamic finance is multifaceted, with a middle-ground perspective suggesting conditional acceptance if specific regulatory measures and guidelines are applied. This view is supported by experts who argue that a robust regulatory framework can mitigate the risks associated with Bitcoin's volatility and potential for misuse. For instance, Sheikh Haitham al-Haddad emphasizes importance of regulation and supervision to ensure that Bitcoin transactions are ethical and comply with Sharia principles [17], [18]. This aligns with the broader Islamic finance goal of promoting well-being and preventing harm, as outlined by Mufti Taqi Usmani, who advocates for the use of Bitcoin in legitimate and lawful activities such as remittances and

charitable donations, rather than speculative trading [3], [18]. The integration of blockchain technology in Islamic banking can enhance transparency, and security, efficiency, addressing concerns related to fraud and manipulation while ensuring adherence to [38]. However, standards speculative nature of cryptocurrencies like Bitcoin poses significant challenges, highlighted by the Indonesian context, where Bitcoin is legalized as an asset but restricted as a payment method due to its volatility and potential for speculative abuse [5]. Islamic legal philosophy also plays a crucial role in this discourse, with scholars like Jasser Auda suggesting that cryptocurrencies can be considered halal if they have clear benefits, such as underlying assets and government regulation, which contribute to the general benefit (maslahah ammah) [21]. Conversely, cryptocurrencies lacking clear regulations and asset backing are deemed haram due to the potential for harm (mafsadat) [21]. The ethical implications Bitcoin are further of complicated by its use in illicit activities, such as money laundering and terrorist financing, which have led to varied government responses ranging from outright bans to passive tolerance [4]. This inconsistency the need for a underscores balanced regulatory framework that protects consumers while encouraging innovation in Islamic digital finance [39]. The development of Islamic crypto assets (ICAs) offers a solution, potential with regulatory frameworks in countries like Indonesia, Malaysia, and the UK providing a model for integrating digital assets into the Islamic finance ecosystem [39]. Additionally, the alignment of Islamic principles with modern cybersecurity norms highlights importance of privacy, honesty, and harm prevention in digital transactions, further supporting the need for inclusive and culturally sensitive regulatory approaches [23]. Ultimately, the conditional acceptance of Bitcoin in Islamic finance hinges on the establishment of comprehensive regulatory measures that ensure ethical use, transparency, and adherence to Sharia

principles, thereby balancing the benefits of digital innovation with the ethical and legal requirements of Islamic finance [3]–[5], [17], [18], [21]–[23], [38], [39].

Raising awareness and educating the Muslim community about the principles of Fiqh Muamalah and the conditions under which Bitcoin can be considered permissible. This can help individuals make informed decisions and use Bitcoin in ways that align with Islamic values.

4.4 Comparative Analysis

The comparative analysis of scholarly opinions reveals both areas of consensus and divergence. Scholars generally agree on the necessity of transparency, security, and ethical use in financial transactions. They emphasize the importance of aligning Bitcoin's use with Islamic principles to ensure justice and prevent harm. This consensus underscores a shared commitment to maintaining ethical standards in financial practices, reflecting the core values of Islamic finance.

However, there is significant divergence regarding Bitcoin's speculative nature and its potential for misuse. Some scholars view these issues as insurmountable barriers to its permissibility, citing concerns over volatility and the risk of exploitation. Others, however, believe these challenges can be addressed through proper regulation and oversight, suggesting that a structured approach could mitigate the risks associated with Bitcoin.

Interpreting these findings within the broader context of Islamic finance and contemporary financial technologies, several key insights emerge. The introduction of Bitcoin and other cryptocurrencies challenges traditional financial systems and necessitates innovative approaches to regulation and compliance. Islamic finance, with its emphasis on ethical and transparent transactions, can adapt to these changes by developing new guidelines that integrate modern technologies with traditional principles.

Ethical considerations play a paramount role in determining the permissibility of Bitcoin under Islamic law.

Ensuring that Bitcoin transactions do not involve speculation, exploitation, or illicit activities is crucial for aligning its use with the objectives of Fiqh Muamalah. This alignment is essential for maintaining the integrity and ethical standards of Islamic financial practices in the evolving landscape of digital currencies.

4.5 Policy, Practice Implications and Limitations

The findings of this study have significant implications for policymakers, financial institutions, and Muslim investors. For policymakers, developing comprehensive regulatory frameworks that address the risks associated with Bitcoin while promoting its ethical use can facilitate its integration into Islamic finance. Such frameworks should aim to balance innovation with adherence to Islamic principles. Islamic financial institutions can explore the potential of Bitcoin and other cryptocurrencies for providing inclusive and transparent financial services, particularly in areas with limited access to traditional banking. Additionally, educating Muslim investors about principles of Figh Muamalah and conditions under which Bitcoin can be considered permissible can help them make informed decisions and use Bitcoin in ways that align with Islamic values.

This study has several limitations that should be acknowledged. The analysis is based on available literature and fatwas, which may not capture all perspectives on Bitcoin's legality. Further research is needed to explore the views of a broader range of scholars and institutions. Moreover, the rapidly evolving nature of cryptocurrencies presents challenges for regulatory frameworks and scholarly interpretations. Ongoing research and dialogue are necessary to keep pace with these developments, ensuring that the findings remain relevant and applicable as the cryptocurrency landscape continues to change.

Future research can build on these findings by conducting empirical studies to assess the practical implications of Bitcoin use in Islamic finance and its impact on economic inclusion and transparency. Comparative analyses of the regulatory approaches to Bitcoin in different Islamic countries can also be valuable, helping to identify best practices and areas for improvement. These efforts will contribute to a deeper understanding of how Bitcoin and other cryptocurrencies can be ethically and effectively integrated into Islamic financial systems.

5. CONCLUSION

This study analyzes Bitcoin's legality from the perspective of Figh Muamalah, revealing diverse scholarly opinions. It identifies three primary views: those who find Bitcoin permissible, those who deem it impermissible, and those who conditionally accept it with specific regulations. Proponents highlight Bitcoin's potential decentralization, fairness, transparency, and financial inclusion, aligning with Islamic finance principles. Opponents cite concerns over its speculative nature, potential for illicit activities, and lack of intrinsic value, conflicting with Sharia principles. A middleground perspective suggests that proper regulation could align Bitcoin with Islamic ethical and legal standards. The findings suggest that policymakers should develop robust frameworks to address Bitcoin's risks while promoting ethical use. Islamic financial institutions could leverage cryptocurrencies to offer inclusive, transparent services, especially where traditional banking is limited. Educating Muslim investors on the conditions for Bitcoin's permissibility can help them make informed decisions aligned with Islamic values.

REFERENCES

- [1] Y. Li, "Bitcoin: The Fintech Revolution from Its Origins to the Future," *Adv. Econ. Manag. Polit. Sci.*, vol. 84, pp. 182–190, May 2024, doi: 10.54254/2754-1169/84/20240807.
- [2] B. Yu, "Research on the Features and Functions of Bitcoin and Digital Currencies," Adv. Econ. Manag. Polit. Sci., 2024.
- [3] H. M. ud din Qadri, F. A. Malik, M. M. ul Hassan, and M. A. Abbasi, "Exploring Crypto Currency through the Lens of the Sharī 'a Law: A Comparative Analysis of Scholarly Evaluations," J. Islam. Thought Civiliz., vol. 13, no. 2, pp. 324–334,

- 2023.
- [4] E. Fletcher, C. Larkin, and S. Corbet, "Countering money laundering and terrorist financing: A case for bitcoin regulation," Res. Int. Bus. Financ., vol. 56, p. 101387, 2021.
- [5] I. Arifin, D. F. P. Arismanto, and M. Rizal, "Hukum dan Eksistensi Jual Beli Crypto untuk Investasi Dalam Perspektif Ekonomi Islam dan Ekonomi Sosial" Studi Literasi dan Komparasi pada Masyarakat"," J. Justisia Ekon. Magister Huk. Ekon. Syariah, vol. 7, no. 2, pp. 869–881, 2023.
- [6] T. Hidayat, A. Admi, A. Yonata, E. Eldaneti, R. Siska, and S. A. Nasution, "Islamic Business Ethics in Fiqh on the Transaction of Corn Crops by Estimation System in Nagari Sumanik, Salimpaung District, Tanah Datar Regency," ARRUS J. Soc. Sci. Humanit., vol. 4, no. 1, pp. 43–48, 2024.
- [7] A. A. M. U. Alam *et al.*, "Implementasi Prinsip-Prinsip Ekonomi Islam Dalam Pengelolaan Keuangan Keluarga," *J. Econ. Bus.*, vol. 2, no. 1, pp. 34–42, 2024.
- [8] S. U. Okanlawon, H. Zagoon-Sayeed, and T. M. Salisu, "Diagnosing Qur'ānic Precepts on Wealth Creation in Digital Age," Invest J. Sharia Econ. Law, vol. 4, no. 1, pp. 1–20, 2024.
- [9] S. Hossaion, M. Bairagi, J. Aktar, U. Honey, and S. A. Mithy, "The Evolution of Bitcoin: A Historical Analysis and Future Prospects," iRASD J. Econ., vol. 5, no. 2 SE-Articles, pp. 241–252, Jun. 2023, doi: 10.52131/joe.2023.0502.0124.
- [10] J. Kumar, Y. Madan, and D. Mehta, "The Evolution of Bitcoin and Other Cryptocurrencies," Int. J. Adv. Res. Sci. Commun. Technol., pp. 13–16, Apr. 2023, doi: 10.48175/IJARSCT-9363.
- [11] G. Singh, V. Garg, and P. Tiwari, "Introduction to Blockchain Technology," in *Transforming Cybersecurity Solutions using Blockchain*, Springer, 2021, pp. 1–18.
- [12] I. Varese, "Bitcoin, Blockchain, Smart Contracts, and Real Use Cases," IEEE Technol. Eng. Manag. Soc. Body Knowl., pp. 369–380, 2023.
- [13] M. Conti, A. Gangwal, C. Lal, and S. Ruj, "Bitcoin Blockchain System: An Overview of Security and Privacy Aspects," Blockchains A Handb. Fundam. Platforms Appl., pp. 75–108, 2023.
- [14] P. A. A. Putra, "Aplikasi Kaidah Lâ Dharara Wa Lâ Dhirâr Dalam Hukum Ekonomi Syariah," Al-Kharaj J. Ekon. Keuang. Bisnis Syariah, vol. 6, no. 2, pp. 2164–2179, 2024.
- [15] R. Amalia and S. Sudistina, "Examining Ushul Fiqh Principles on the Surrogacy-based In Vitro Fertilization Program," KnE Soc. Sci., pp. 664–677, 2024.
- [16] M. Zuhirsyan and A. A. Tambunan, "Borrowing Without Clear Agreements from the Fikih Muamalah Perspective (Study of the Utilization of People's Wealth)," Afkar J. Islam. Civilis. Stud., vol. 1, no. 1, pp. 6–11, 2024.
- [17] M. Nabeel K and S. Mohan, "Navigating the Halal Frontier: The Legality of Cryptocurrency in Islamic Finance," Int. J. Adv. Res. Sci. Commun. Technol., pp. 469–474, Feb. 2024, doi: 10.48175/IJARSCT-15465.
- [18] M. I. Birjaman, S. A. Marits, and S. Herman, "Cryptocurrency in Islamic View: Sentiment Analysis Method Approach," J. Ilm. Manaj. Kesatuan, vol. 12, no. 1, pp. 27–32, 2024.
- [19] Faizi, "Are Cryptocurrencies Ḥaram? A Critical Analysis toward MUI's Fatwā," AL-IHKAM J. Huk. Pranata Sos., vol. 18, pp. 420–442, Dec. 2023, doi: 10.19105/al-lhkam.v18i2.8290.
- [20] A. I. S. Negara, "The Phenomena of The Cryptocurrency Fall in The Sharia Economic View," Open Access Indones. J. Soc. Sci., vol. 7, no. 2, pp. 1391–1397, 2024.
- [21] K. Abadi, A. Taufiq, and R. Roikhana, "Cryptocurrency and Crypto Assets in the Perspective of Islamic Legal System Philosophy," *Hikmatuna J. Integr. Islam. Stud.*, vol. 9, no. 2, pp. 131–146, 2023.
- [22] H. Fatarib and M. Meirison, "CRYPTOCURRENCY AND DIGITAL MONEY IN ISLAMIC LAW: Is it Legal?," JURISDICTIE, vol. 11, pp. 237–261, Jan. 2021, doi: 10.18860/j.v11i2.8687.
- [23] K. Komaruddin, A. S. Utama, E. Sudarmanto, and S. Sugiono, "Islamic Perspectives on Cybersecurity and Data Privacy: Legal and Ethical Implications," West Sci. Law Hum. Rights, vol. 1, no. 04, pp. 166–172, 2023.
- [24] A. Bashori and W. N. H. W. Jusoh, "Epistemology of Fatwas on Digital Transaction in Indonesia," J. Huk. Islam, vol. 21, no. 2, pp. 231–278, 2023.
- [25] M. Hasan and M. Ahsan, "আধুনিক আর্থিক লেনদেনে ক্রিপ্টোকারেন্সির আইনসিদ্ধাতা: ইসলামী আইনে এর প্রাসঙ্গিকতা ও প্রযোজ্যতা নিরূপণ। Legality of Cryptocurrency in Modern Financial Transactions: Assessing its Relevance and Applicability in Islamic Law," ইসলামী আইন ও বিচার। Islam. Ain O Bichar, vol. 20, no. 77, pp. 35–56, 2024.
- [26] J. M. P. Afonso, "On Fairness Concerns in the Blockchain Ecosystem," arXiv Prepr. arXiv2405.18876, 2024.
- [27] X. Hu and H. Chen, "Design and Analysis of an Anonymous and Fair Trading Scheme for Electronic Resources with Blind Adaptor Signature," in 2023 16th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics (CISP-BMEI), IEEE, 2023, pp. 1–5.
- [28] S. Shreya, S. Kumar, S. Tirkey, S. K. Agarwala, and L. K. Gupta, "Decentralized Social Media Application Based On Blockchain And NFT Technology," in 2023 International Conference on Integrated Intelligence and Communication Systems (ICIICS), IEEE, 2023, pp. 1–7.
- [29] X. Wang, "Blockchain security and applications: A comprehensive analysis from hash functions to consensus algorithms," *Theor. Nat. Sci.*, vol. 31, pp. 292–298, Apr. 2024, doi: 10.54254/2753-8818/31/20240862.
- [30] E. O. Udeh, P. Amajuoyi, K. B. Adeusi, and A. O. Scott, "The role of Blockchain technology in enhancing transparency and trust in green finance markets," Financ. Account. Res. J., vol. 6, no. 6, pp. 825–850, 2024.
- [31] S. V. S. Kumar, V. S. Avinash, and S. Gowri, "Tracking of Food Products from Source to consumption, Enhancing Transparency and Food Safety using Blockchain," in 2024 International Conference on Inventive Computation Technologies (ICICT), IEEE, 2024, pp. 1573–1578.
- [32] I. Andrushchak, "ASPECTS OF BLOCKCHAIN TECHNOLOGY AS A COMPONENT OF INFORMATION

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- SECURITY," 2024, pp. 292-300. doi: 10.46299/ISG.2024.MONO.TECH.1.9.1.
- [33] E. S. Siregar *et al.*, "Kepastian Hukum Aset Kripto sebagai Instrumen Investasi dalam Persfektif hukum islam dan Hukum Positif," *El-Mujtama J. Pengabdi. Masy.*, vol. 4, no. 1, pp. 181–192, 2024.
- [34] A. Wahid, "Riba dan Gharar dalam Bitcoin pendekatan Qaidah Fiqh," Rayah Al-Islam, vol. 7, no. 1, pp. 358–384, 2023.
- [35] S. K. BASARUD-DIN and N. I. K. S. N. I. K. ABDULLAH, "Can Bitcoin be used for Zakat Payment?," Int. J. Econ. Manag., vol. 17, no. 2, 2023.
- [36] M. N. Alias *et al.*, "A Comprehensive Analysis of The Varied Interpretations among Islamic Scholars Concerning Bitcoin Transactions".
- [37] S. J. Lim and A. Z. K. Neoh, "Does Bitcoin Provide A Hedge To Islamic Stock Markets During and post-COVID-19 Outbreak? Evidence from Asia based on a multivariate-GARCH approach," *Asian Econ. Lett.*, vol. 4, no. 2, 2023.
- [38] A. C. P. Wati and M. Yazid, "Blockchain Technology in Financial Transactions under Sharia Banking Practice," *EkBis J. Ekon. dan Bisnis*, vol. 7, no. 2, pp. 81–91, 2023.
- [39] J. Wiwoho, I. Trinugroho, D. B. Kharisma, and P. Suwadi, "Islamic crypto assets and regulatory framework: evidence from Indonesia and global approaches," *Int. J. Law Manag.*, vol. 66, no. 2, pp. 155–171, 2024.